

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.

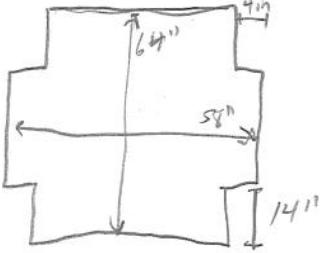
2-Inspect the wall using the attached form. Questions that require a 'Yes' answer should be documented by noting the extent of the problem in the right most column and photo documentation. Photo documentation should consist of wall or bridge number, nature of problem, date, photo number for wall, and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

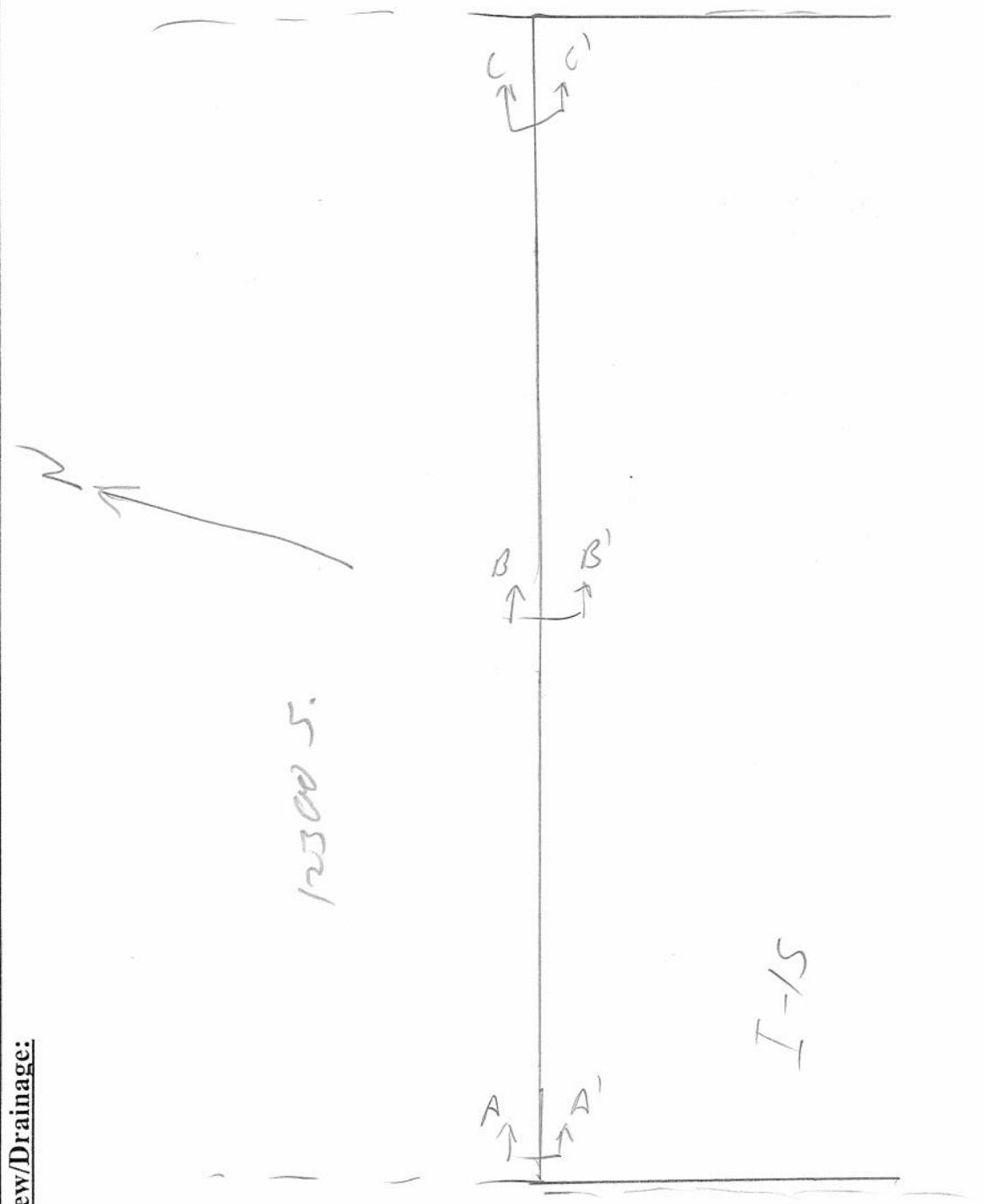
Region	Z	Identifying Road/Intersection	12300 S., I-15, SLC
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MSE WALL CHARACTERISTICS

MSE Wall at Bridge	<input checked="" type="radio"/> N	Bridge Number if applicable:		Wall Number	R-411-E	
Surrounding Structures					Maximum Height of Wall (ft)	18 ft
Distance to Each Structure					One Stage, Two Stage or Block Wall	
State Route Number					Estimated Max Length of Wall Abutment:	132 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:	0
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						

Summary of Key Observations:

Plan View/Drainage:



Cross Sections:



Cross Sections:



1.5 ft

B-B'

A-A'

NISE WALL DRAINAGE											
Measurement/Extent of Problem/Location/Photo Numbers											
Required Test:	Nilex Multi-Wire Duct-Cuts Camera										
Yes	No	N/A	UNKN	Dripping	/ O-No	1%	5%	10%	25%	50%	75%
V	N	N/A	UNKN	1-is there an active water source near the toe of the wall (i.e. the wall meets a body of water with water potential?)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	2-if applicable, are the cracks at the base of the wall blocked?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	3-Are there subsidence protruding through the wall?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	4-Are there vertical cracks that travel through the backfill?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	5-is there erosion at the base of the wall or leveling pad? (Photo 12)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	6-is there erosion along the wing-wall?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	7-Are there any signs of water flow along the base of the wall?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	8-is there less than 14 feet between irrigation sprinklers and wall?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	9-Does the backfill or joint material appear to be saturated?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	10-is there vegetation growing in joint joints? (Photo 87)	Blocked	Partial	Clear	/ O-No	1%	5%	10%
V	N	N/A	UNKN	11-can the backfill and soil at the top of the wall be blocked? (Photo 14)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	12-Can water enter the wall when seeping and soak (i.e. Ditch Apparatus)?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	13-is there evidence at discharge point of fill washing through drain pipe?	/ O-No	1%	5%	10%	25%	50%	95%
NISE WALL JOINTS											
Measurement/Extent of Problem/Location/Photo Numbers											
Required Test:	Long LevelString/Camera/Cuts										
Yes	No	N/A	UNKN	Joint	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	1-is there horizontal cracking out of joints or are there piles of backfill at the base of the wall? (Photo 2 & 3)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	15-is the joint width enough to see fibers or backfill behind panels when looking into joints? (Photo 5) If yes record the approximate maximum joint width in inches.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	16-is there horizontal backfill visible in the horizontal joints? (Photo 4)	/ O-No	1%	5%	10%	25%	50%	95%
V	S	N/A	UNKN	17-Is there fiber visible in the joints? Is there evidence of backfill or water leaking through joints? (Do not include additional damage to fibers)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	18-Do the joints have a non-uniform vertical spacing? Are some vertical joints larger/wider than others? (Photo 6)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	19-Do the joints have a non-uniform vertical spacing? Are some vertical joints larger/wider than others? (Photo 7) If yes, record the approximate maximum difference.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	20-are the panels offset at the joints either in or out of the wall? (Photo 8) If yes, record the approximate maximum offset.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	21-Does the fabric appear brittle or appears as if it has undergone excessive UV exposure?	/ O-No	1%	5%	10%	25%	50%	95%
NISE WALL FACING											
Measurement/Extent of Problem/Location/Photo Numbers											
Required Test:	Long LevelString/Camera/Cuts/Crank/Crate										
Yes	No	N/A	UNKN	Wall Facing	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	22-Are the panels "flap-up"? Is there excessive cracking in the panels?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	23-Are there cracks that continue vertically through adjacent panels? (Photos 9 & 10) If yes, record the approximate number of joints in the wall with cracking.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	24-Are there cracks that continue horizontally through adjacent panels? (Photos 9 & 10) If yes, record the approximate number of joints in the wall with cracking.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	25-Are the panel corners cracking entities with each other? If yes, record the approximate number in the wall.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	26-Are the panels offset at the joints either in or out of the wall? (Photo 11) If yes, record the approximate maximum offset.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	27-Does crack spacing suggest Differential Settlement?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	28-Does the overlaying coating exhibit Vertical Offsets?	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	29-are the original and repaired joints or patching? If yes, it may be appropriate to contact UDOT if determined severe environmental.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	30-are the panels at danger of falling off? (If potential exists contact appropriate UDOT region).	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	31-is the panel bulging (bowing horizontally)? If yes, record maximum deflection from acceptable coating to existing pads. (Photo 11)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	32-are there signs of settling at the top or bottom of the wall? Record maximum degree of settling from existing panels to original level and affected areas.	/ O-No	1%	5%	10%	25%	50%	95%
NISE TOP OF WALL OBSERVATIONS											
Measurement/Extent of Problem/Location/Photo Numbers											
Required Test:	Long Level/Crank/Cuts/Crate										
Yes	No	N/A	UNKN	Top Of Wall	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	33-Are there evidence of settlement at the top of the wall? (Ground cracking, etc.)	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	34-Are there any open cracks in the concrete coating (top/bonding)? If yes, record the approximate maximum crack width.	/ O-No	1%	5%	10%	25%	50%	95%
V	N	N/A	UNKN	35-Are the construction joints in the concrete coating spalled up? (Photo 6) If yes, record the maximum	/ O-No	1%	5%	10%	25%	50%	95%

Required Test: Structural/Cross-Section						
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Y N A USN 36) Is there a large gap between the approach slab and the approach pavement? (Photo 15) Often this produces a burrowing condition as the dry grass is exposed. Record the approximate maximum gap size.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 37) At the abutment, has the joint between the wall coping and the abutment opened up significantly? If so record minimum distance.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N X USN 38) Is the coping or wall pulling away from pavement roadway section? Please record maximum displacement for wall.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Required Test: Structural/Cross-Section						
NISE STABILITY						
Y N A USN 39) Where is the location depth of 1 (levelling point) and 2 (soil located 2 inches from wall in a trench) maximum depth of 2 1/2 inches? (2 1/2 inches is the minimum depth for NISE Wall)						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 40) Is there cracking in the trench path? If so, record environment crack size with grade.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 42.5) There is four feet branch (level) directly along the wall before the slope change (Terrain). 43.5) There is a larger corner than V-1 to H-1 in front of the wall? Please record slope and height of V-1 to H-1 above level of wall.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 44) Is there a step greater than V-1 to H-1 below the wall? Please record slope and height of V-1 to H-1 below the wall.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 45) Is there excessive degradation of paved face?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Required Test: Structural/Cross-Section						
NISE DILETAL COMBUSTION						
Y N A USN 46) Are excessive corrosion on guardrails or other exposed metal that might indicate corrosive conditions?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 47) Are there major rust stains on the face panels? Along joints? If so, record total number.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 48) Are any internal webs exposed? Does there appear to be corrosion on these? If applicable please record the total number of arms affected.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 49) Was a relatively simple skin of exposed soil? If so, please indicate depth in inches.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 50) Skins show any indication of lateral corrosion (swelling back, rust, exposed metal inside epoxy coating)? If yes please record the total number of panels affected.						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Required Test: Structural/Cross-Section						
NISE IMPACT COLLISION PROTECTION						
Y N A USN 51) Are granular/wall protections in place at base of the wall (or project if from potential test site boundary)?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 52) Does it appear that the wall has been involved in an accident (crushed panel, recent frag in the wall)?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 53) Does it appear the walls functionality and integrity has been compromised by a collision or accident?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Required Test: Drawing/Computer						
NISE AS BUILT DIFFERENT FROM DESIGN						
Y N A USN 54) Are there any obstructions in Reinforcement Geometry?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 55) Are there any irregularities, voids, or holes in the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 56) Are there any irregularities, voids, or holes in the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Required Test: Drawing/Computer						
NISE AS BUILT DIFFERENT FROM DESIGN						
Y N A USN 57) Are there any irregularities, voids, or holes in the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 58) Was GEC/Ton used in the construction of the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 59) Are there any irregularities, voids, or holes in the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 60) Are there any irregularities, voids, or holes in the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 61) Have there been any excavations or evidence of excavation near the wall?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 62) Have local property owners changed the dynamics of the wall (addition structures, irrigation, vegetation, etc.)?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y N A USN 63) Are there piles located in the wall (bridge abutments)?						/ O-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /