

Record Drawings
Work completed in general conformance with contract plans.

GENERAL NOTES

1. THE REINFORCED SOIL SLOPE (RSS) EMBANKMENT DESIGN WAS BASED ON THE EXISTING GRADING PLAN PROVIDED BY URS ON NOV 14, 2012, PROPOSED GRADING PLAN PROVIDED BY URS ON MAY 30, 2013, AND THE SUBSURFACE EXPLORATION AND LABORATORY TESTING DATA PROVIDED IN GEODESIGN, INC.'S REPORT, DATED FEBRUARY 2012.
2. DESIGN AND CONSTRUCTION GUIDELINES WERE BASED ON FHWA-NHI-00-043, MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES DESIGN AND CONSTRUCTION GUIDELINES, DATED MARCH 2001.
3. THE DESIGN PRESENTED HEREIN IS BASED ON THE SOIL PARAMETERS, FOUNDATION CONDITIONS, GROUNDWATER CONDITIONS, AND LOADINGS PRESENTED BELOW. IF THE ASSUMED PARAMETERS ARE NOT CONSISTENT WITH ACTUAL CONDITIONS, GEODESIGN, INC. SHALL BE NOTIFIED SO THAT THE DESIGN CAN BE UPDATED. THE CLIENT'S RESIDENT ENGINEER IS RESPONSIBLE FOR VERIFYING ACTUAL SITE CONDITIONS.
4. THE ENDS OF THE EMBANKMENT SHALL BE BLENDED INTO THE PROPOSED/EXISTING GRADES IN A MANNER SATISFACTORY TO THE CLIENT'S SITE REPRESENTATIVE.
5. TESTING METHODS, FREQUENCY AND VERIFICATION OF MATERIAL SPECIFICATIONS AND COMPACTION SHALL BE IN ACCORDANCE WITH FAA AC 150/5370-10D (ITEM P-152 EXCAVATION AND EMBANKMENT) AND IS THE RESPONSIBILITY OF THE CLIENT'S SITE REPRESENTATIVE.
6. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED FOR THE OPERATION OF TRACKED VEHICLES OVER THE REINFORCEMENT. TURNING OF TRACKED VEHICLES SHOULD BE AVOIDED TO PREVENT TRACKS FROM DISPLACING THE FILL AND REINFORCEMENT.
7. RUBBER TIRED VEHICLES MAY PASS OVER THE REINFORCEMENT AT SPEEDS LESS THAN 5 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.
8. AT THE END OF EACH DAY'S OPERATIONS, THE CONTRACTOR SHALL SHAPE THE LAST LIFT OF FILL TO MAINTAIN ADEQUATE DRAINAGE AND PREVENT PONDING. BACKFILL SHALL BE GRADED AWAY FROM THE SLOPE FACE.
9. CONSTRUCTION EQUIPMENT SHALL NOT COME WITHIN 5 FEET OF THE REINFORCED EMBANKMENT SIDE SLOPES.
10. NO CHANGES TO THE REINFORCEMENT LAYOUT; INCLUDING, BUT NOT LIMITED TO, LENGTH, REINFORCEMENT STRENGTH (TYPE), OR ELEVATION, SHALL BE MADE WITHOUT THE EXPLICIT WRITTEN CONSENT OF GEODESIGN, INC. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND/OR IN THE PROJECT DOCUMENTS, THE CONTRACTOR MUST CONTACT GEODESIGN, INC. PRIOR TO PROCEEDING WITH CONSTRUCTION.
11. RSS EMBANKMENT HEIGHTS SHALL NOT EXCEED 39 FEET WITHOUT PRIOR WRITTEN CONSENT FROM GEODESIGN, INC.

DESIGN PARAMETERS

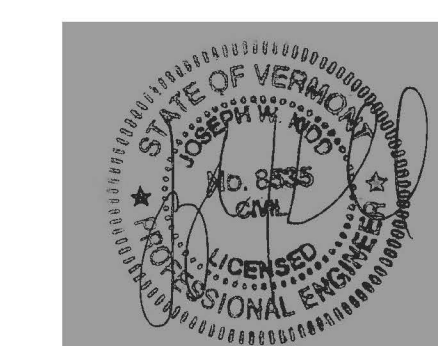
1. THE DESIGN OF THE RSS EMBANKMENT IS BASED ON THE FOLLOWING SOIL AND ROCK PROPERTIES:
 - a. REINFORCED FILL (SELECT BORROW MATERIAL)
 - FRICTION ANGLE = 32°
 - COHESION = 0 PSF
 - MOIST UNIT WEIGHT = 121 PCF
 - b. FOUNDATION (SILTY GRAVELLY SAND)
 - FRICTION ANGLE = 33°
 - COHESION = 0 PSF
 - MOIST UNIT WEIGHT = 125 PCF
2. THE DESIGN OF THE RSS EMBANKMENT IS BASED ON THE FOLLOWING MINIMUM SAFETY FACTORS (PER FHWA):
 - a. STATIC GLOBAL STABILITY = 1.3
 - b. SEISMIC GLOBAL STABILITY = 1.1
 - c. SLIDING = 1.3
 - d. INTERNAL PULLOUT = 1.5
3. THE DESIGN OF THE REINFORCED EMBANKMENT IS BASED ON THE FOLLOWING LOADS:
 - a. TEMPORARY CONSTRUCTION AND MAINTENANCE EQUIPMENT SURCHARGE = 150 PSF
 - b. HYDROSTATIC FORCES = NONE (GROUNDWATER BELOW FOUNDATION ELEVATION)
 - c. SEISMIC FORCES = 0.08G

MATERIALS

1. SELECT BORROW MATERIAL SHALL BE A GRANULAR SOIL AS DESCRIBED IN THE TABLE AND NOTES ON DRAWING SHEET 6.
2. TOPSOIL SHALL MEET THE REQUIREMENTS OF VTRANS ITEM 651 AND INSTALLED AS SHOWN ON THESE DRAWINGS. THE TOPSOIL SHALL BE SALVAGED FROM STRIPPING OR OTHER GRADING OPERATIONS.
3. CONTRACTOR SHALL FURNISH AND INSTALL GEOGRID REINFORCEMENT SIMILAR TO MIRAFI MIRAGRID 2XT REINFORCEMENT GEOGRID OR EQUIVALENT.
4. PRIOR TO COMMENCING CONSTRUCTION OF THE RSS, THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR THE MATERIALS INTENDED FOR USE TO THE ENGINEER FOR APPROVAL.



TECHNICAL REQUIREMENTS

1. THE PROPOSED REINFORCED EMBANKMENT SHALL BEAR ON NATURAL, GRANULAR SOILS OR BEDROCK. ALL VEGETATION, SOIL, LARGE STONES, AND OTHER DEBRIS SHALL BE STRIPPED OR EXCAVATED FROM THE EMBANKMENT AREA PRIOR TO CONSTRUCTION (IN ACCORDANCE WITH ITEM P-152 EXCAVATION AND EMBANKMENT IN FAA AC 150/5370-10D). GEODESIGN, INC. SHALL EVALUATE THE SUBGRADE PRIOR TO CONSTRUCTING THE RSS EMBANKMENT. THE SUBGRADE SHALL BE CUT INTO STEPS AS SHOWN ON THE RSS TYPICAL SECTION AND AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
2. THE BACKFILL AREA FOR EACH REINFORCEMENT ELEVATION SHALL BE LEVEL BEFORE PLACING GEOGRID REINFORCEMENT. UP TO 12 INCHES OF COMPACTED FILL MAY BE PLACED OVER THE SUBGRADE TO CREATE A LEVEL AREA PRIOR TO PLACING THE FIRST (LOWEST) LAYER OF GEOGRID REINFORCEMENT.
3. FILL SHALL BE PLACED IN MAXIMUM 12-INCH THICK LOOSE LIFTS. LIFTS SHALL BE COMPACT TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. FIELD DENSITY TESTS SHALL BE PERFORMED AS THE EMBANKMENT IS CONSTRUCTED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE CLIENT'S SITE REPRESENTATIVE.
4. WHEN PLACING FILL MATERIALS, ONLY HAND TAMP OR VIBRATORY PLATE COMPACTORS ARE PERMITTED WITHIN 4 FEET OF THE EDGE OF THE EMBANKMENT AND NOTHING LARGER THAN A DOUBLE-DRUM OR WALK-BEHIND COMPACTOR MAY BE USED ELSEWHERE.
5. THE GEOGRID REINFORCEMENT SHALL CONSIST OF MIRAFI MIRAGRID 2XT (OR EQUIVALENT) FOR BOTH PRIMARY AND SECONDARY REINFORCEMENT.
6. THE LENGTHS OF SHOWN GEOGRID REINFORCEMENT ARE THE MINIMUM LENGTHS TO BE USED FOR THE EMBANKMENT. THE CONTRACTOR MAY USE LONGER LENGTHS TO EASE INSTALLATION.
7. GEOGRID REINFORCEMENT LENGTHS ARE MEASURED PERPENDICULAR FROM THE EDGE OF THE EMBANKMENT.
8. ORIENTATION (ROLL DIRECTION) OF THE GEOGRID REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND VERIFIED BY THE CLIENT'S SITE REPRESENTATIVE.
9. GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF FILL. NORMAL TENSION SHALL BE APPLIED TO THE GEOGRID REINFORCEMENT AND SECURED IN PLACE WITH STAPLES, STAKES, OR HAND TENSIONING UNTIL THE GEOGRID REINFORCEMENT IS COVERED BY AT LEAST 6-INCHES OF FILL.
10. THE REINFORCED EMBANKMENT AND SIDE SLOPES SHALL BE SEEDED, MULCHED AND FERTILIZED IN ACCORDANCE WITH REQUIREMENTS OF THE PROJECT PLANS AND SPECIFICATIONS.
11. THERE ARE SUBSURFACE UTILITIES THAT MAY BE INSTALLED WITHIN THE GEOGRID REINFORCED ZONE OF THE RSS EMBANKMENT. WE RECOMMEND THESE STRUCTURES BE INSTALLED AS THE EMBANKMENT IS CONSTRUCTED. A STRUCTURAL FRAME SHALL BE INSTALLED AROUND THE STRUCTURE WHICH IS CAPABLE OF CARRYING THE LOAD FROM THE GEOGRID REINFORCEMENTS IN FRONT OF THE STRUCTURE TO THE GEOGRID REINFORCEMENT CONNECTED TO THE STRUCTURAL FRAME BEHIND THE STRUCTURE. SEE DETAIL ON SHEET 19. ALTERNATIVELY, WITH THE APPROVAL OF THE ENGINEER, THE STRUCTURE CAN BE RELOCATED OUTSIDE THE GEOGRID REINFORCED ZONE OF THE EMBANKMENT.



AIP 3-50-0015-34

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 GEODESIGN INCORPORATED Geotechnical Construction Environmental Engineers and Scientists 54 MAIN STREET P.O. BOX 698 WINDSOR, VERMONT 05089-0699 TELEPHONE: 802.674.2033 FACSIMILE: 802.674.5943	DRAWING NO. 2	VERMONT AGENCY OF TRANSPORTATION	
	SHEET 2 OF 2	 URS URS CORPORATION 3 CORPORATE DRIVE, SUITE 203 CLIFTON PARK, NY 12065 (518) 688-0015	PROJECT NAME: RUTLAND SOUTHERN VERMONT REGIONAL AIRPORT CLARENDON, VERMONT
PROJECT NO. 0880-011.01	PROJECT NUMBER: AV14-8018-300		FILE NAME: z07h124NOTES.rss.dgn
		RSS NOTES	DRAWN BY: RPJ / JDC CHECKED BY: JWK / JAG SHEET 20 OF 36

PROJECT RECORD DRAWINGS