

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PROPOSED ROADWAY PROJECT INVOLVES THE REALIGNMENT AND FULL DEPTH RECONSTRUCTION OF APPROXIMATELY 3,900 FEET OF U.S. ROUTE 5 AND SIDE STREETS. THE PROJECT ALSO INCLUDES THE CONSTRUCTION OF A GROUND ANCHORED SOLDIER PILE WALL, A SHEET PILE RETAINING WALL, THE INSTALLATION OF TRAFFIC SIGNALS AT THE PROPOSED RELOCATED HIGHLAND AVENUE AND WORCESTER AVENUE, NEW WATER MAINS AND SERVICES, SEPARATION OF STORM DRAINS FROM THE EXISTING COMBINED SEWER SYSTEM, CONSTRUCTION OF NEW SANITARY SEWERS AND INSTALLATION OF NEW DRAIN INLETS, PIPES, AND OUTFALLS.

THE TOTAL DISTURBED AREA FOR THE PROPOSED PROJECT IS 9.7 ACRES. BASED ON THE DETAILED RISK EVALUATION WORKSHEET IN APPENDIX A OF CGP 3-9020(2006), THIS PROJECT FALLS INTO THE MODERATE RISK CATEGORY. THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS WERE DEVELOPED IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT REQUIREMENTS TO MINIMIZE IMPACTS TO THE RECEIVING WATERS.

THERE ARE TWO OUTFALLS LOCATED WITHIN THE PROJECT AREA. BOTH OUTFALLS DISCHARGE STORMWATER RUNOFF COLLECTED BY EXISTING DRAIN INLETS FROM THE RESIDENTIAL AND COMMERCIAL PROPERTIES ALONG THE PROJECT AND U.S. ROUTE 5. ONE OUTFALL IS LOCATED ALONG THE NORTH BANK OF THE WHITE RIVER NEAR THE BEGINNING OF THE PROJECT. THE WHITE RIVER IS A CLASS B WATER AND IS NOT STORMWATER IMPAIRED OR AN OUTSTANDING WATER RESOURCE AS DETERMINED BY THE VERMONT WATER QUALITY STANDARDS. THE OTHER OUTFALL IS LOCATED NEAR THE END OF THE PROJECT AND DISCHARGES INTO AN EXISTING NATURAL DRAINAGE SWALE. WETLAND IMPACTS ARE NOT ANTICIPATED UNDER THIS PROJECT.

US ROUTE 5 WITHIN THE PROJECT AREA BEGINS AT THE INTERSECTION OF VT14 AND US ROUTE 4. US ROUTE 5 ASCENDS STEEPLY AT APPROXIMATELY 11% FOR APPROXIMATELY 1500 FEET TO A SECTION OF THE ROAD KNOWN AS "TAFTS FLATS". THE "TAFTS FLATS" PORTION IS FLAT WITH SLOPES LESS THAN 1%. SURROUNDING SITE TOPOGRAPHY IS ALSO GENERALLY FLAT IN THIS AREA. A REVIEW OF THE NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) SOIL SURVEY MAPS WAS CONDUCTED TO DETERMINE THE TYPES AND LOCATIONS OF THE SOILS UNDERLYING THE PROJECT AREA. THE TABLE BELOW OUTLINES THE SOILS THAT WERE DETERMINED TO BE LOCATED WITHIN OR ADJACENT TO THE PROPOSED PROJECT LIMITS. SOIL SURVEY GIS DATA FROM THE VERMONT CENTER FOR GEOGRAPHIC INFORMATION (VCGI) WAS DOWNLOADED AND OVERLAID ONTO THE DESIGN PLANS TO DETERMINE THE EXTENT OF THE SOILS (REFER TO THE PRE-CONSTRUCTION PLAN SHEETS). NEARLY THE ENTIRE PROJECT SITE IS UNDERLAIN WITH URBAN-LAND-WINDSOR-AGAWAM COMPLEX SOILS WHICH HAVE A SOIL ERODIBILITY COEFFICIENT ('K' VALUE) OF 0.17. THE OTHER SOIL TYPE WITHIN THE PROJECT AREA IS THE ELDRIDGE FINE SANDY LOAM, WHICH HAS A 'K' VALUE OF 0.43. A VEIN OF THIS SOIL RUNS PERPENDICULAR TO US ROUTE 5 AT THE HILL. ALL DISTURBED AREAS WILL REQUIRE IMMEDIATE SOIL ROUGHENING, HAY MULCHING AND PROMPT SEEDING.

SOIL DESIGNATION	HYDROLOGIC SOILGROUP CLASSIFICATION	SOIL ERODABILITY COEFFICIENTS
32B URBAN LAND-WINDSOR-AGAWAM COMPLEX, 0% TO 8% SLOPES	NOT RATED	0.17 NOT HIGHLY ERODABLE
45E ELDRIDGE FINE SANDY LOAM, 25% TO 50% SLOPES	C	0.43 HIGHLY ERODABLE

THE GROUND ANCHORED SOLDIER PILE WALL ALONG THE EAST SIDE U.S. ROUTE 5 ALONG THE HILL WILL BE CONSTRUCTED FIRST; FOLLOWED BY THE INSTALLATION OF SEPARATED DRAINAGE AND WIDENING OF THE EXISTING ROADWAY IN THE TAFTS FLATS SECTION AND THEN THE INSTALLATION OF THE NEW UTILITIES IN THIS ORDER: WATER AND SANITARY SEWER. THE PROPOSED ROADWAY PROFILE GRADES WILL CLOSELY MATCH THE EXISTING TOPOGRAPHY IN THE TAFTS FLATS SECTION. THE EXISTING OUTFALLS WILL BE REPLACED AT THEIR CURRENT LOCATIONS. THE PLACEMENT OF STONE FILL AT BOTH OUTFALLS AND HEAVY RIP-RAP AT THE WHITE RIVER OUTFALL IS PROPOSED FOR ENERGY DISSIPATION AND SCOUR PROTECTION. A STREAM ALTERATION PERMIT FOR THE PROPOSED WORK AT THE WHITE RIVER OUTFALL WAS ISSUED ON 9/28/2006, THE PERMIT NUMBER IS HD-1-0414.

PROPOSED EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AND REQUIREMENTS

TO PREVENT CONSTRUCTION EQUIPMENT FROM UNNECESSARILY DISTURBING SOIL OR VEGETATION THE CONTRACTOR SHALL INSTALL PROJECT DEMARCATION FENCING (PDF) AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER; GENERALLY JUST BEYOND THE PROPOSED SILT-FENCE OR 10' OFF OF THE REQUIRED SOIL DISTURBANCE LIMIT IF SILT FENCE IS NOT PROPOSED. THE LIMITS OF THE PDF ARE SHOWN ON THE PLANS. THE PDF PROVIDES A PHYSICAL BOUNDARY THAT THE CONTRACTOR MUST NOT DISTURB BEYOND. THE PDF MUST BE INSTALLED AT THE BEGINNING OF THE PROJECT. WHENEVER DAMAGED; THE CONTRACTOR MUST IMMEDIATELY REPAIR OR REPLACE THE PDF. PDF IS NOT REQUIRED ACROSS LAWNS.

PROPOSED EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AND REQUIREMENTS (CONTINUED)

THE CONTRACTOR SHALL DESIGNATE AN ON-SITE EROSION CONTROL COORDINATOR WHO WILL BE RESPONSIBLE FOR THE MAINTENANCE, INSPECTION AND RECORDS PROGRAM FOR ALL CONTROL MEASURES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DEVELOPING A DETAILED EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND TIMETABLE WHICH WILL BE COORDINATED WITH THE ACTUAL PROJECT CONSTRUCTION SCHEDULE AND PHASING FOR REVIEW AND APPROVAL BY VTRANS. THE FINAL EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND TIMETABLE SHALL BE SUBMITTED AND APPROVED BEFORE THE CONTRACTOR CAN COMMENCE WORK.

ALL MAJOR GRADING AND EARTHWORK OPERATIONS SHALL BE CONDUCTED IN DRY-WEATHER CONDITIONS BETWEEN APRIL 15TH AND OCTOBER 15TH WHENEVER PRACTICAL. NO MAJOR GRADING WORK SHALL BE PERFORMED BY THE CONTRACTOR IN THE WINTER BETWEEN OCTOBER 15TH AND APRIL 15TH WHEN SOILS ARE TYPICALLY SATURATED WITH WATER OR FROZEN IN THE COLDER MONTHS. TO ASSURE A VIGOROUS CATCH OF VEGETATIVE COVER, SEEDING AND MULCHING SHALL BE COMPLETED BY SEPTEMBER 15TH TO THE EXTENT POSSIBLE, OR AS DIRECTED BY THE RESIDENT ENGINEER. WINTER-RYE SEED SHALL BE USED TO ESTABLISH TEMPORARY VEGETATIVE COVER WHENEVER DISTURBED AREAS CAN NOT BE IMMEDIATELY PERMANENTLY SEEDED. ALL SEDIMENT AND EROSION PREVENTION AND CONTROL MEASURES SHALL BE COMPLETED AND BE IN PLACE BEFORE THE BEGINNING OF WORK. TO ENSURE SOIL STABILITY ALONG THE HILL AND PREVENT EROSION AND SEDIMENT TRANSPORT DURING CONSTRUCTION OF THE GROUND ANCHORED SOLDIER PILE AND LAGGING RETAINING WALL THE FOLLOWING BASIC LEVEL "TOP-DOWN" CONSTRUCTION SEQUENCE IS REQUIRED:

- 1) THE CONTRACTOR SHALL CONSTRUCT THE UPSLOPE STONE LINED DRAINAGE DITCH TO COLLECT AND DIVERT THE OFFSITE RUNOFF AROUND THE WALL CONSTRUCTION SITE,
- 2) CONSTRUCT TEMPORARY STONE CHECK DAMS AT LOCATIONS SHOWN IN THE PLANS,
- 3) DRILL THE SHAFTS AND PLACE SOLDIER PILES,
- 4) EXCAVATE THE FRONT FACE OF THE WALL FROM THE TOP DOWN IN FOUR FOOT VERTICAL STEPS. INSTALL TIEBACKS AND TREATED TIMBER LAGGING AND STABILIZE SOILS BEFORE EXCAVATING NEXT FOUR FOOT INCREMENT.
- 5) REPEAT STEP 4 UNTIL THE WALL IS COMPLETED.
- 6) INSTALL LANDSCAPING AND PERMANENT VEGETATION ABOVE WALL.

PROPOSED EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AND REQUIREMENTS (CONTINUED)

THE CONTRACTOR, PRIOR TO THE START OF WORK, SHALL WRAP NON-WOVEN GEOTEXTILE FABRIC FOR FILTERS OVER ALL EXISTING DRAIN INLET GRATES WITHIN AREAS SUBJECT TO VEHICULAR TRAFFIC WHERE INDICATED IN THE PLANS AND MAINTAIN THEM UNTIL SUCH TIME AS THE PROJECT IS COMPLETED OR THE DRAIN INLET IS REMOVED. THE CONTRACTOR SHALL INSPECT THESE INLET PROTECTION MEASURES DAILY AND REMOVE ANY COLLECTED DEBRIS OR REPAIR OR REPLACE THE INLET PROTECTION MEASURES AS REQUIRED TO PROMOTE PROPER DRAINAGE. PROPOSED DRAIN INLETS WITHIN AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL ALSO BE PROTECTED IN THIS MANNER. THE CONTRACTOR SHALL PROVIDE ENOUGH OVERLAP IN THE FABRIC TO ALLOW THE MATERIAL TO SET BETWEEN THE GRATE AND THE FRAME, USING THE WEIGHT OF THE GRATE TO HOLD THE FABRIC IN PLACE. DRAIN INLETS IN AREAS NOT SUBJECT TO VEHICULAR TRAFFIC SHALL BE PROTECTED WITH THE ROCK BARRIER TYPE INLET PROTECTION MEASURE AS SHOWN IN THE DETAIL SHEETS OR ENGINEER APPROVED EQUAL. THE CONTRACTOR SHALL INSPECT THESE INLET PROTECTION MEASURES WEEKLY AND REMOVE ANY COLLECTED DEBRIS OR REPAIR OR REPLACE THE INLET PROTECTION MEASURES AS REQUIRED TO PROMOTE PROPER DRAINAGE.

THE CONTRACTOR SHALL INSPECT THE INSIDE OF ALL EXISTING AND PROPOSED DRAIN INLETS AND CATCH BASINS WEEKLY. IF THE DEPTH OF COLLECTED SEDIMENT IN THE INLETS REACHES 3-INCHES BELOW THE OUTLET PIPE INVERT, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THIS MATERIAL. AT PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY INLET PROTECTION MEASURES, INSPECT THE INLETS FOR SEDIMENTS AND REMOVE AND DISPOSE OF ANY DEBRIS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. MATERIALS SHALL BE DISPOSED OF AT A DISPOSAL SITE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE CONTRACT DOCUMENTS AND THE CGP PERMIT.

THE CONTRACTOR SHALL IMMEDIATELY ROUGHEN ALL DISTURBED SOIL SURFACES TO THE SATISFACTION OF THE ENGINEER BY THE USE OF TRACK DRIVEN BULLDOZERS, SHEEPSFOOT ROLLERS OR OTHER APPROVED METHODS. THE CONTRACTOR SHALL APPLY DUST CONTROL MEASURES OVER EXPOSED SURFACES NOT INTENDED TO BE VEGETATED. THE ON-SITE PLAN COORDINATOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES IN ACCORDANCE WITH THE PRECEDING REQUIREMENTS BUT NO LESS OFTEN THAN AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NOT MORE THAN 24 HOURS AFTER ANY STORM EVENT. EXCEPT FOR THE INLET PROTECTION MEASURES IN AREAS SUBJECT TO VEHICULAR TRAFFIC, INSPECTION FREQUENCY MAY BE REDUCED TO NOT LESS THAN ONE (1) PER MONTH IF THE ENTIRE SITE IS TEMPORARILY STABILIZED.

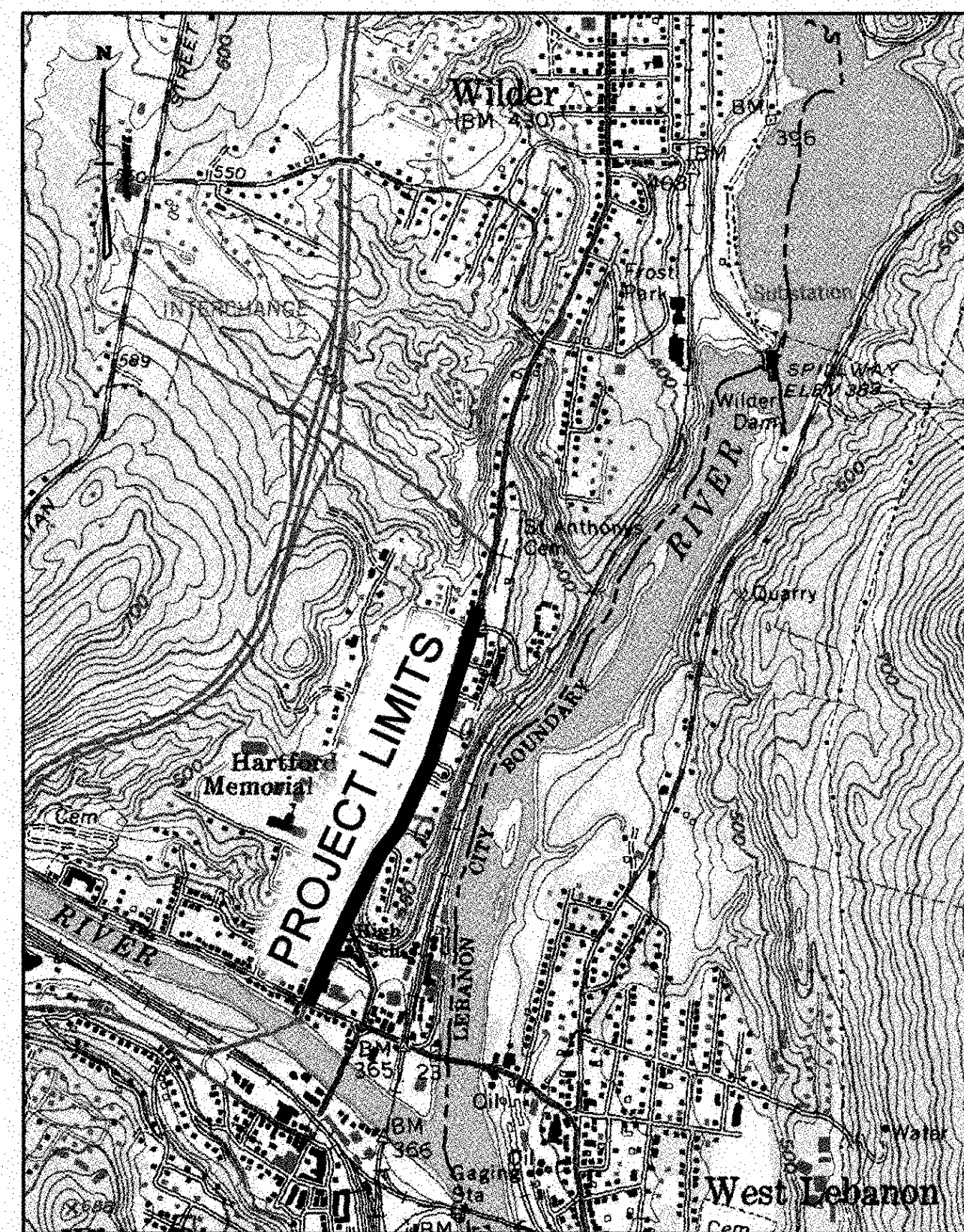
IN ACCORDANCE WITH THE TYPICAL DETAILS, SILT FENCE IS PROPOSED AT THE TOE OF EMBANKMENT SLOPES. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL SILT FENCES AS NECESSARY AND REMOVE COLLECTED DEBRIS AND SEDIMENT WHEN NECESSARY OR AT REGULAR INTERVALS AS DEFINED IN THE MAINTENANCE SCHEDULE OR AS DIRECTED BY THE ENGINEER.

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY: i) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS. ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OF GREATER. THE CONTRACTOR SHALL LIMIT CONCURRENT EARTH DISTURBANCES TO TWO ACRES OR LESS AT ANY ONE TIME.

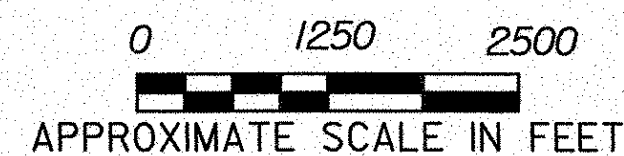
THE PROPOSED STONE LINED DITCH AND DROP STRUCTURE AT THE WHITE RIVER OUTFALL SHALL BE COMPLETED IN IT'S ENTIRETY BEFORE BEGINNING THE REMAINING DRAINAGE WORK. THE OUTFALL AND DROP STRUCTURE INLETS MUST BE PROTECTED AND MAINTAINED FOR THE DURATION OF THE PROJECT. THE DITCH, DROP STRUCTURE AND INLET PROTECTION MEASURES SHALL BE INSPECTED WEEKLY FOR DEBRIS AND ALL DEBRIS WHICH HAS COLLECTED IN THE CHANNEL OR DROP STRUCTURE SHALL BE REMOVED AND BE DISPOSED OF IN ACCORDANCE WITH THE WASTE MATERIAL DISPOSAL REQUIREMENTS SET FORTH IN THE CONTRACT DOCUMENTS. THE DROP STRUCTURE INLET MUST BE PROTECTED WITH THE ROCK BARRIER TYPE INLET PROTECTION MEASURE OR ENGINEER APPROVED EQUAL.

IT IS ANTICIPATED THAT CONSTRUCTION STAGING CAN BE ACCOMPLISHED WITHIN THE EXISTING LIMITS OF WORK. ALL MATERIAL HANDLING AND DISPOSAL WORK SHALL BE IN ACCORDANCE WITH SECTION 105 OF THE STANDARD SPECIFICATIONS AND THE VERMONT AGENCY OF NATURAL RESOURCES (VANR) REQUIREMENTS. WHEREVER POSSIBLE, EXCAVATED SOIL MATERIAL SHALL BE RE-USED WHEN APPROVED BY AND AT THE DISCRETION OF THE ENGINEER TO FORM EMBANKMENTS AND AS OTHER BORROW MATERIALS. EXCESS MATERIALS SHALL BE DISPOSED OF IN WASTE SITES APPROVED BY THE AGENCY TO RECEIVE THESE MATERIALS. THE CONTRACTOR SHALL SUBMIT TO THE AGENCY, FOR REVIEW AND APPROVAL, A "WASTE BORROW STAGING REVIEW SHEET" FOR EACH DISPOSAL SITE HE/SHE WISHES TO USE FOR THIS PROJECT. ANY ADDITIONAL PERMITTING REQUIRED FOR THE DISPOSAL SITES OR PROOF OF COMPLIANCE FOR THESE WASTE SITES MUST BE FURNISHED BY THE CONTRACTOR PRIOR TO USE. TEMPORARY AND PERMANENT STABILIZATION OF ALL STAGING AREAS AND WASTE DISPOSAL AREAS SHALL BE IN ACCORDANCE WITH SECTION 105 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE CGP 3-9020 AND VANR REQUIREMENTS.

PROJECT LOCATION MAP



SOURCE: VCGI AND USGS



APPROXIMATE SCALE IN FEET

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

PROJECT: HARTFORD	PROJECT NO.: RS 0113(40)
DESIGN FILE NAME: z86c027ecarr.DGN	PLOT DATE: 1/31/2007
IPARM FILE NAME:	SURVEYED BY: FANTONI
SURVEYED BY: FANTONI	DRAWN BY: E. ATKINS
SQUAD LEADER: KEN UPMAL	SHEET: 119 OF 239