§201-3

Section 200
EARTHWORK

SECTION 201 - CLEARING AND GRUBBING

201-1 DESCRIPTION

201-1.01 General. This work shall consist of clearing, grubbing, removing and disposing of all trees, brush, stumps, fences, debris, and miscellaneous structures not covered under other contract items within the construction area and such other areas as specified or directed. The Contractor shall clear such additional areas within the limits of the right-of-way and easement lines as specified or directed.

201-1.02 No Burning Requirement. Materials generated by the work, including construction and demolition debris, shall not be disposed of by burning on or off the site. Off site burning in a permitted solid waste incinerator or in another lawful manner as refuse derived fuel will be permitted.

201-2 MATERIALS (Not specified)

201-3 CONSTRUCTION DETAILS

201-3.01 Limits of Work Areas. The Engineer will establish the limits of areas to be cleared and grubbed, to be cleared but not grubbed, or areas, objects or features that are designated to remain undisturbed. In general, the work areas shall include the road section, stream channels, ditches, temporary approaches to bridges, detours and other areas as shown in the contract documents or directed by the Engineer. The Engineer will designate fences, structures, debris, trees and brush to be cleared where grubbing is not required. Clearing beyond the areas of construction shall be done only where specified or directed.

201-3.02 Clearing and Grubbing. During the life of the contract the Engineer may order the clearing of any trees within the R.O.W. that the Engineer determines to be hazardous or dead and unsightly.

The Contractor shall carefully prune all branches of trees less than five (5) meters above any part of the roadway and all branches which have been broken or injured during construction. The work shall be done as specified under §614-3.01A Equipment and B. Pruning.

Whenever trees are felled or trimmed on/or adjacent to highways, all wood shall be immediately removed from the roadway or any area that would present a hazard to traffic. Grubbed stumps shall be moved immediately at least ten (10) meters from the edge of pavement. No trees, tree trunks, stumps or other debris shall be felled, sidecast or placed outside the limits of the road section. No grubbing will be required beneath the embankment where the finished grade will be two (2) meters or more above the original ground surface unless otherwise specified in the contract documents. Where trees or existing stumps are cleared and grubbing is not required, the tree trunk or existing stump shall be cut off not more than 150 mm above the original ground surface unless otherwise approved. Exposed stumps not required to be removed but which are within ten (10) meters of the edge of the pavement or are in a built-up area shall be chipped out to a depth of not less than 150 mm below the finished grade and the holes backfilled if directed by the Engineer. This work shall be completed within one week after start of work on the tree.

201-3.03 Disposal

A. General. All wood including grubbed stumps shall be removed from the contract site or otherwise disposed of.

B. Methods of Disposal of Wood and Brush.
1. Disposal (No Burning). All wood and brush shall be disposed of within fifteen (15) days after cutting or felling unless otherwise approved. No burning of land clearing materials that result from the clearing and grubbing operations, except in a permitted solid waste incinerator or as refuse derived fuel, will be permitted. The Contractor will have the following options or combination of options for disposal of this material:

   a. The Contractor shall make every effort to salvage marketable timber as specified in paragraph B4 of this subsection.

   b. When permitted by a note in the contract documents, disposable material may be placed at locations approved by the Engineer within the right-of-way but outside of the embankment area.

      When permitted by a note in the contract documents, disposable material may be placed in the embankment side slope area. The contract documents will define the embankment side slope area and the procedures for the concurrent construction of the embankment and disposal section.

      This type of disposal will require certain preparatory work. Preparation for direct burial of woody materials shall consist of cutting main trunks and limbs and chipping smaller limbs, branches, foliage and brush. Under conditions when disposal space and earth cover are limited in size and quantity, stumps will have to be ranked in size and placed in layers so as to make best use of the space available and the quantity of materials to be buried.

   c. The Contractor may bury disposable material off the right-of-way at locations obtained by the Contractor at no expense to the State. Such locations are to be approved in writing by the Engineer. The disposal work will require the same preparatory work as stated in option b. above except that the Engineer may waive such requirements for miscellaneous work which may be accommodated in a satisfactory manner by other methods. The disposal area is to be covered with earth as hereinafter specified.

   d. The Contractor may reduce all woody materials to chips and dispose of the chips as specified in paragraph B2 of this subsection.

   e. The material may be sent to a refuse derived fuel processing facility or to other processing facility for eventual beneficial re-use as fuel or for other lawful re-use.

      Under no circumstances is disposal to be made in swamp or wet lands. When the disposal area is within the embankment section or is formed by flattening the embankment slopes, the elevation of the normal embankment construction shall always equal or exceed that of the disposal area. There is to be absolutely no end dumping of disposable material over the sides of the embankment. All disposal areas are to be finally covered with a minimum of 600 mm of earth and graded to drain properly.

2. Chipping. Wood may be reduced to chips by the use of an approved chipping machine or stump grinder. Chips shall be 15 mm maximum thickness or of other approved thicknesses. Chips resulting therefrom may be disposed of by being stockpiled and used as mulch for planting, by distribution on the ground surface in wooded areas within the right-of-way as approved by the Engineer, or by disposal at a location off the contract site satisfactory to the Engineer.

3. Burying. No tree trunks, stumps or other debris shall be buried inside the right-of-way limits without the written approval of the Engineer. Disposal areas outside the right-of-way limits shall be approved in writing by the Engineer and shall be acquired by the Contractor at no expense to the State.

4. Salvage of Marketable Timber. In the interest of conservation, the Contractor shall make
every effort possible to salvage marketable timber produced as a result of clearing operations, provided the amount of timber is great enough to make the hauling practical. In general, marketable timber is construed to mean logs 2.5 to 5 m in length, plus appropriate trimming allowance, having a diameter inside the bark, at the small end, of approximately 250 mm. In the event that the Contractor is not successful in salvaging marketable timber, the Contractor shall advise the Engineer, in writing, of the efforts to salvage and indicate the reason why the timber could not be salvaged.

Any wood that is cut up in firewood lengths or other marketable lengths may be neatly piled adjacent to the right-of-way in an area provided by the Contractor for periods in excess of one week but shall be removed prior to completion of the contract.

201-3.04 Protection and Restoration. The Contractor shall comply with the following specification requirements of Section 107, Legal Relations and Responsibilities to Public; 107-08, Preservation of Property; 107-10, Restoration of Disturbed Areas Outside the Right-of-Way, 107-11, Restoration of Disturbed Areas Within the Right-of-Way.

201-4 METHOD OF MEASUREMENT

201-4.01 Per Hectare. Payment for Clearing and Grubbing will be made at the unit price bid per hectare computed to the nearest one one hundredth hectare.

201-4.02 Per Lump Sum. Payment for Clearing and Grubbing will be made on a lump sum basis for work satisfactorily completed. Monthly payments will be made in proportion to the amount of work done as determined by the Engineer.

201-4.03 Borrow Areas. Borrow pits or other pit areas from which material is secured shall not be included for measurement of clearing and grubbing.

201-5 BASIS OF PAYMENT.

201-5.01 Clearing and Grubbing. Payment will be made at the contract price to furnish all materials, labor and equipment necessary to satisfactorily complete the work as specified. No separate payment will be made for any excavation, backfill or earth cover necessary to complete the work of disposal outside the embankment area nor for the work in handling, storing, rehandling and hauling of disposable material within or outside the right-of-way.

Payment will be made under:

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<th>Item No.</th>
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<th>Pay Unit</th>
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<td>201.06</td>
<td>Clearing and Grubbing</td>
<td>Lump Sum</td>
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<td>201.07</td>
<td>Clearing and Grubbing</td>
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SECTION 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

202-1 DESCRIPTION. This work shall consist of the removal and disposal, wholly or in part, of all buildings, structures, pavements, obsolete utility lines and tanks which are released to the Contractor in accordance with the provisions of these specifications. The work includes the demolition of existing superstructures, substructures, supporting bents and columns, surrounding material, and the removal of old bituminous concrete overlay and bituminous patches, within the right-of-way, listed in the itemized proposal, or directed by the Engineer. It also includes salvaging and storing designated materials, relocating designated buildings and backfilling resulting trenches, holes, pits, and cellars.
202-2 MATERIALS  (Not specified)

202-3 CONSTRUCTION DETAILS

202-3.01 General and Safety Requirements. The Contractor shall conduct all demolition operations in a safe, legal, and responsible manner and shall ensure that any equipment, material, or method used shall be safe for the workers and the public. All laws, rules, regulations, and local building codes shall be followed. Local building code shall mean, outside of New York City, a code enacted or adopted by competent local officials or bodies at least as stringent in its requirements as the “New York State Fire Prevention and Building Code” and its associated reference standards. In New York City, Local Building Code shall mean the New York City Building Code.

Prior to demolition operations, an engineering survey as outlined in Title 29 Code of Federal Regulation, Part 1926, Subpart T-Demolition, Safety and Health Regulations for Construction (OSHA), shall be made by a competent person of the building, bridge, or other structure to determine its condition and possibility of collapse of any portion. As defined in Title 29 Code of Federal Regulation, Part 1926, Subpart C-General Safety and Health Provisions (OSHA); “Competent Person” means someone employed by the Contractor who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are or will be unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. For purposes of this contract a competent person for bridge structures longer than twenty feet shall mean a registered professional engineer experienced in the design, construction or demolition of such structures unless waived in the contract documents. For buildings, other than ordinary wood frame construction, shall mean a registered professional architect or registered professional engineer experienced in building design, construction, or demolition.

Adjacent buildings or structures, within 30 meters of the building or structure, shall also be included in the survey if directed by the Engineer. The findings and recommendations of this survey shall constitute a “removal plan.” Removal plans that are required to be prepared by a registered professional engineer or architect shall be submitted to the Engineer thirty (30) days prior to the commencement of demolition. Other removal plans shall be submitted fifteen (15) days prior to demolition. The removal plan shall include a description of the type, size, weight, and location of all equipment to be used and a sequence of removal activities. The removal plan shall be filed with the Project Safety and Health Plan prepared, pursuant to §107-05 Safety and Health Requirements for the project.

The Engineer may return the removal plan and require additional engineering surveys and studies to be conducted if the removal plans do not adequately identify and address obvious safety and other identified conditions. However, the Engineer’s failure to return any removal plan for additional studies and recommendations shall not relieve the Contractor from the obligation of preparing an adequate removal plan and conducting adequate engineering surveys that safeguard the workers and public.

The competent person shall frequently and on a continuing basis perform monitoring to reassess the structural condition of the surveyed buildings and structures. This shall be accomplished by observing them for the presence of excessive vibrations; measuring and recording the width, extent, and progression of cracks; by measuring and recording the plumbness and integrity of structural elements and bracing; and by making other observations as necessary. Should the results of these assessments indicate that potential for collapse of a structure or building to be demolished exists, the competent person shall recommend and cause measures to be taken to ensure safety. Should the results of these assessments indicate that the work is causing damage to or diminution of structural condition of a structure or building that is to remain either wholly or in part one that is to be relocated, the competent person shall recommend and cause to be undertaken measures to prevent additional damage or diminution of structural condition from occurring and, if directed by the State, shall recommend and cause to be undertaken measures necessary to reverse the diminution or repair the damage. The findings and recommendations of these monitoring assessments shall be made part of the removal plan prepared for the work and shall be provided to the Engineer promptly.
§202-3

Before any structure or building served with or having utilities thereon is demolished or relocated all telephone, cable, electric, gas, water, steam, or any other service shall be shut off at the street and capped, or otherwise made safe and controlled, outside the building or off the structure before the general demolition work is started. Remediation work of asbestos or other hazardous material however may proceed before services are cut, except that all electric circuitry in any work area that is humid, wet, or will become wet or humid during the work shall be shut down and locked out. If power is required in such places, temporary power and light circuits may be brought into the work area provided such circuits have ground fault interrupters at their sources. In each case, the utility companies involved shall be notified, in writing, at least five (5) working days, or longer if indicated elsewhere in the contract documents, in advance of the work. The Contractor will be held fully responsible for any claim arising from failure to do so.

All severed sewer lines or drains emanating from the building or structure shall be capped or otherwise tightly sealed to prevent the entry of foreign materials into the main sewer or drain.

The Contractor shall protect power, water, or other utility lines during demolition. If such lines cannot be protected in place they shall be temporarily relocated, as necessary, and protected prior to undertaking any demolition work that might affect them. Unless indicated otherwise, all utility relocation work will be performed by, and at the expense of, its respective owners upon adequate notice.

During the periods that personnel are required to work on, in, or around a building or structure to be demolished or relocated which is in a damaged or deteriorated condition by fire, flood, explosion, weather, or other cause, its elements shall be adequately braced to prevent collapse. Details of the bracing shall be provided in the removal plan previously mentioned in connection with the engineering survey and shall be included with the Project Safety and Health Plan for the project.

All asbestos materials or other hazardous materials shall be removed from or otherwise remediated on each structure or building before the general demolition work on that building or structure begins. The requirements and payment for this work will be as indicated elsewhere in the contract documents and as outlined in the asbestos or hazardous material remediation plan prepared by the State or others for the project.

Where a falling hazard exists to personnel, the openings shall be protected to a height of approximately one meter. All floor or deck openings not used as material drops shall be covered over with materials substantial enough to support the weight of any loads which may be imposed upon them. Such materials shall be properly secured to prevent accidental movement.

When excavation is required, the safety of the workers and the public shall be the responsibility of the Contractor. Protection of the workers shall conform to the requirements contained in Title 29 Code of Federal Regulations, Part 1926, Safety and Health Regulations for Construction (OSHA) while protection for the public shall conform to that specified in Subsection 107-05 Safety and Health Requirements Paragraph F.

The Contractor shall repair or replace in kind, at no cost to the State and in a manner as approved by the Engineer, sidewalks, curbs, roadway and other materials designated to remain in place which are damaged by or as a result of the work.

202-3.02 Disposal Of Buildings. Any building designated for disposal and released to the Contractor thirty (30) days or earlier before the contract completion date, shall become the property of the Contractor and shall be promptly demolished at its site. Any proposal to allow such building or any portion thereof to remain standing at the site, or to be relocated to another site, shall be referred to the Director of the Real Estate Division for approval and shall be accomplished under terms and conditions established by the State. An appropriate extension of time may be allowed for work resulting from demolition of buildings released to the Contractor after the date indicated above. All abandoned equipment, material other than those of a hazardous nature, and fixtures of any kind remaining on the property after it is released to the Contractor shall become the Contractor’s property and shall be removed as part of the building disposal. Materials of a hazardous nature shall be removed or remediated as indicated below. All the requirements of §202-3.01 General and Safety Requirements shall apply
together with the following:

A. Unauthorized Entry. The Contractor shall immediately inspect all buildings released for demolition and shall prevent unauthorized entry to these buildings by boarding up or otherwise blocking potential entrances. If material blocking entrances is removed, the Contractor shall, after determining the building to be vacant, replace the removed material in such a manner as to keep the buildings from being re-entered.

B. Hazardous Material. Asbestos, hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous materials in the building or on the property shall be removed and disposed of or otherwise remediated in accordance with all applicable rules, regulations and laws concerning the handling and disposal of Hazardous Materials or Hazardous Wastes. Payment and requirements for such disposals and/or remediations shall be as indicated elsewhere in the contract documents. Petroleum products in storage tanks shall be removed in accordance with and paid for under the pay item for Disposal of Petroleum Storage Tanks.

C. Rodent, Insect, and Wildlife Control. The Contractor shall exterminate rodents and insects in each building so infested, as determined by the Engineer, City, County or District Office of the State Department of Health. The Contractor or Subcontractor performing the exterminating work shall, upon request, show at least five (5) years experience at extermination of the kind required. If the building or structure to be demolished is inhabited by wildlife, the Regional Office of the Department of Environmental Conservation or the local animal control officer shall be contacted and given the opportunity to remove such wildlife before extermination or demolition operations are commenced. If inhabited by domesticated animals, the local animal control officer shall be given the opportunity to arrange for their removal.

The work of extermination shall be performed in accordance with the requirements of the City, County or District Office of the State Department of Health.

Bait shall be placed at least thirteen (13) calendar days but not more than thirty (30) calendar days before actual demolition is started, or at such other times as required by the City or County Health Department. Insects shall be controlled by spraying or fumigating. If it is necessary to seal the building for the treatment to be effective or to prevent migration of insect, pest, or vermin, the Contractor shall seal the building.

If extermination is being conducted because it was ordered by the City, the County, or the State Department of Health, then the Contractor shall notify that office that the extermination has been completed and shall obtain their written concurrence that the extermination work was satisfactorily completed. Demolition work shall not proceed until the Engineer receives a copy of the written concurrence of the City, County or District Office of the State Health Department stating the extermination has been satisfactorily performed.

D. Glass. Glass that will create a hazard if fragmented shall be removed.

E. Demolition of Party Wall Structures. In the event that the demolition of one or more units of a group of party wall structures leaves a wall or walls exposed, the Contractor shall comply with the following requirements:

1. Furring, plaster, chimneys which are directed to be removed, projecting parts, and the like shall be removed.
2. The walls shall be made self-supporting, safe and weatherproof with construction similar to or consistent with the remaining building. The supports and bracing details necessary to accomplish this shall be included as a recommendation contained in the removal plan.

The walls shall be left in a presentable and sound weatherproof condition compatible in appearance with the remaining building and in conformance with local building codes, as determined by the Engineer.
3. The roof shall be properly flashed, repaired, or otherwise treated to prevent leaks.

4. The Contractor shall provide and place on solid foundation any shoring necessary to prevent damage to adjacent property. Necessary details of the foundation and shoring shall be included in the Removal Plan. The Contractor shall be held responsible for any claim arising out of failure to prevent damage to adjacent properties.

5. All work shall be in conformance with local building codes.

**F. Demolition of Buildings.** Unless mechanically demolished, the demolition of multi-story buildings herein defined as consisting of more than 2 1/2 stories shall be accomplished story by story without accumulating rubble on the floors of the partially demolished structure.

If mechanical demolition is used, during actual operations no worker shall be permitted at any location onto which debris may fall or which may become unstable or collapse as a result of the demolition operations. Only the minimum number of workers actually necessary for the performance of the work shall be permitted in those locations at other times until such time as the operations are complete and the debris has been removed.

If debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with substantial barricades nominally one meter high, or higher if directed, and placed not less than two (2) meters back from the projected edge of the opening above. If the hole is to be used by machines as a material drop, substantial timber or other curbing shall be securely anchored around the hole. The barricades, but not the curbing, may be moved aside temporarily during periods that the machines are actually using the hole. Barricades shall be promptly restored to their proper locations when the machines have ceased actually using the hole.

Signs warning of the hazard and of falling materials shall be posted at each level.

Demolition and removal activities shall not be permitted in lower areas until debris handling ceases above.

The locations and details of any signs, barricades, curbs, and decking used to cover over holes in the flooring shall be indicated in the removal plan prepared for the building.

**G. Partial Demolition of Buildings.** If the work involved consists of demolishing only a portion of a building, the Contractor shall cooperate with the owner(s) of the remaining portion so that annoyance and inconvenience is minimized.

The competent person shall survey the site of the partial demolition and shall recommend any measures necessary to prevent the work from affecting adjacent property. Any measures recommended shall be included in the Removal Plan.

The Contractor shall close the open ends of the buildings being partially demolished with construction similar to the remainder of the building and shall furnish and install supporting members, framing, and foundations to support the remaining structure. All construction necessary to close the openings shall be of a strength and type to meet the local building codes. Structural supports shall be of the same materials as the existing supporting members to which they frame or with which they share load or shall be compatible with them. The Contractor may use salvaged lumber for sheathing provided that such lumber is sound and suitable, as determined by the Engineer. New kiln dried timber and lumber shall be used for all other purposes. The supporting members, framing and foundation etc, necessary to accomplish this shall be submitted as a recommendation of the previously mentioned engineering survey and included with the Removal Plan for the building.

**H. Demolition of Foundation.** Unless indicated otherwise or their removal would endanger adjacent improvements, the Contractor shall remove the foundation walls to the depth of the lowest cellar floor and shall break up any cellar floor, backfill the hole and grade the site to the satisfaction of the Engineer immediately after demolition of the structure.
§202-3

I. Dust Control. Provisions shall be made at every demolition site to control the quantity of dust resulting from demolition operations by wetting the debris and the immediate work area with water or other appropriate spraying agents or by means acceptable to the Engineer. Dust control measures shall be included in the Removal Plan.

J. Maintenance and Protection of Traffic, Including Pedestrians. The Contractor shall, for the duration of the contract, maintain and keep safely passable and free from debris, snow and ice, all public walkways adjacent to the properties on which buildings to be demolished are located.

Active entrances to two or more story buildings being demolished shall be completely protected by sidewalk sheds, canopies or other means detailed in the Removal Plan and approved by the Engineer. Protection shall be provided a minimum distance of 2.5 meters from the face of the building. All such protection shall extend a minimum of 0.3 meters beyond each side of the building entrances or openings and shall be capable of sustaining a load of 7.2 kilopascals.

All sidewalks or other walkways subject to falling objects as determined by the Engineer or within 2.5 meters of a two story or taller building, or greater distance if indicated in the contract documents, upon which traffic is to be maintained shall be protected by sidewalk shed or canopy designed by a professional engineer registered to practice in the State of New York to withstand the loading as required above. For single story buildings, these requirements may be waived if in the opinion of the Engineer the work may be satisfactorily and safely completed without these protective devices. No canopy or shed shall contain design features that will deflect falling material into an area where they could cause harm or injury to person or property.

K. Disposal of Materials. Disposal of all materials shall be in accordance with all federal, state, and local laws, rules, and regulations, any provision found elsewhere in the contract documents, and most specifically in §107-16 A “Construction and Demolition Debris”, if included in the contract, and shall be subject to the approval of the Engineer.

L. Removal of Salvaged Materials. All salvaged materials shall be removed from the site of the work prior to the final acceptance of the project. The Contractor shall not hold any sales, public or private, of salvaged equipment, material, or articles on State owned land. The State does not guarantee the number of fixtures, quantity or quality of equipment or any other material of value existing in the building to be present after its release to the Contractor. The Contractor waives all claims against the State because the salvage value of any building has decreased at the time of disposal.

M. Use of Non-State Owned Land. If any material is to be placed upon non-state owned lands, written permission from the owner thereof shall be furnished to the Engineer prior to the use of such lands.

N. Removal of Buildings by Others. The State reserves the right to clear the Right of Way of any building by permitting the owner thereof to remove it from the site. Should any building be removed or demolished by its owner, the Contractor shall demolish the foundation and grade the site as indicated in §202-3.02H Demolition of Foundation.

O. Deletion of Buildings from Contract. The State reserves the right to delete any building demolition work from the Contract. There will be no compensation for claims of lost profits.

P. Explosives. Unless specifically authorized in the contract documents, demolition shall be accomplished without the use of explosives.

Q. Domestic Sewage Facilities. Septic tanks, leaching basins, cesspools and other similar facilities associated with buildings being demolished or those that will be abandoned shall be pumped free of septage or sewage, removed, and the resulting hole shall be backfilled in lifts of compacted suitable material. If permitted by the Engineer, the facilities may be collapsed in place.
after pumping instead of removal. Septage recovered from the pumping operation shall be handled, transported, and disposed of in accordance with 6 NYCRR Part 364.

202-3.03 Relocating Buildings. The Contractor shall, if directed by the Engineer, relocate specified buildings to sites designated by the owner and approved by the Department. The Contractor shall do all work in accordance with applicable State and local requirements and shall obtain necessary permits. All the applicable requirements of §202-3.01 General and Safety Requirements, §202-3.02 Disposal of Buildings and the following shall apply:

A. Preparation of Site. The Contractor shall construct all necessary foundations and cellar floors for the relocated building to meet applicable local building codes but not less than equivalent in construction to the existing features. The Contractor shall also grade the new site, and construct necessary driveways and sidewalks, topsoil and/or seed the area and perform other incidentally required items of work to prepare the site as indicated in the contract documents or by the Engineer.

B. Moving Buildings. The Contractor shall move the building safely and in a manner so as to cause the least possible damage to the building and the least possible interference with or inconvenience to its occupant(s). The Contractor shall also arrange for any temporary rerouting of overhead lines or relocating guide wires and for the clearance of other obstructions. The Contractor shall be responsible for the repair of any damage that may occur to the building, pavement and other features within and around the area of the move as a result of the move.

C. Service Connections. At the building's final location, the Contractor shall reconnect or arrange for the reconnection of necessary plumbing, gas, heating, electrical, sanitary, water supply and other services at least equivalent in construction to those existing. The work shall be accomplished in such a manner as to cause the least possible disruption to the properties affected. All work shall be in conformance with the requirements of the various utilities and local building codes. Payment and requirements for such work shall be as indicated elsewhere in the contract documents.

D. Restoration Work. The Contractor shall restore all portions of the building, including steps, porches, railings, lean-tos, and other appurtenances, to as good and serviceable condition, in accordance with local building codes, as existed prior to its relocation as determined by the Engineer. Any property damaged or destroyed during the execution of the work shall be repaired or replaced, as determined by the Engineer at the Contractor’s expense to the satisfaction of the Engineer.

E. Demolition of Old Foundations. The Contractor shall remove old foundation walls in compliance with the provisions of §202-3.02H Demolition of Foundation.

F. Expenses and Liabilities. The Contractor shall save the State and the owner harmless as to all costs, expenses, and liabilities in connection with carrying out the work, and shall not hold the State liable for any claim on account of any delay or interferences with any part of the work due to relocating buildings.

G. Furnishing Sites. Sites to which the buildings are to be moved will be furnished without cost to the Contractor.

H. Removal of Building by Others. The State reserves the right to clear the Right of Way of any building by permitting the owner thereof to remove it from the site.

Should the building be removed or demolished by its owner, the Contractor shall demolish the foundation and grade the site as indicated in §202-3.02H Demolition of Foundation.
202-3.04 Disposal of Petroleum Storage Tanks. Subsection 202-3.01 General and Safety Requirements and the following shall apply to this work.

All tanks containing petroleum liquids shall be removed in accordance with the requirements of the local fire and police officials, and those of the New York State Department of Environmental Conservation in general and 6 NYCRR Part 613 in particular. In addition, the following requirements shall apply:

A. Explosion Meter. The Contractor shall supply an explosion meter to monitor the tank atmosphere.

B. Emptying Tanks Before Removal. Before the removal of any tank is commenced, it shall first be pumped completely dry. All water obtained from this operation shall be transported and disposed of in accordance with applicable laws. All product obtained shall be either disposed of according to applicable laws or used or recycled at the Contractor's option. During the emptying operation the following restrictions shall apply:

1. Smoking shall be banned in the area.
2. All open-flame and spark producing equipment within the area shall be shut down.
3. All electrical and internal combustion equipment, unless it is designed to be "explosive proof", shall be removed from the area.
4. Only "non-sparking" tools shall be used.
5. Static electricity shall be controlled.
6. The work area shall be secured.

C. Additional Safety Precautions. After the excavation work of underground tanks has been completed, but before removal of the tank, the Contractor shall distribute a minimum of one kg of crushed dry ice for 500 liters capacity (approximately one pound crushed dry ice for 60 gallons capacity) in the tank. Removal work shall not start until the readings from the explosion meter indicate that a safe and non-explosive tank atmosphere has been achieved as evidenced by readings less than ten percent (10%) of the lower explosive or flammable level at all elevations within the tank. Removal work shall be progressed diligently and expeditiously without interruption until its completion. The explosion meter shall be used to take subsequent readings periodically or continuously as directed by the Engineer as work is progressing. If any reading indicates a dangerous level is approaching, work shall cease, the workers shall exit the tank, and additional carbon dioxide shall be introduced into the tank until safe conditions are restored to all levels within the tank.

The Contractor shall permit only trained and properly equipped personnel to enter the tank. Tanks shall not be entered unless personnel have and use proper self contained breathing apparatus and standby personnel similarly equipped are present at the site to safeguard and protect those working in the tank. Workers in the tank shall also have and use appropriate harnesses and lifelines connected to personnel retrieval equipment fully rigged, and ready for use.

D. Removal of Contaminated Soil. Contaminated soil shall be removed and paid for in accordance with provisions found elsewhere in the contract documents.

E. Backfilling. The Contractor shall backfill any resulting holes and trenches with suitable material placed and compacted as indicated in §202-3.02H Demolition of Foundation and regrade the area to drain as directed by the Engineer.

F. Removal of Supporting Structures. Tank supports shall be removed and disposed of in a manner approved by the Engineer.

G. Cleaning of Tanks. All tanks shall be cleaned prior to disposal, either on-site or off, of all residue and product clinging to their surfaces. All product, cleaning solvents, and water generated by the operation, shall be transported by a transporter permitted under 6 NYCRR 364 and, if
disposed of in New York State, disposed of at a site regulated by the New York State Department of Environmental Conservation.

**H. Transportation of Tanks.** Unless cleaned, tanks shall be transported only by transporters permitted under 6 NYCRR 364. Prior to transporting an uncleaned tank, all holes shall be plugged and the tank shall be placarded. The tank shall be vented by means of a three millimeter hole in one of the plugs. The tank shall be securely fastened to the transporting vehicle oriented so that the plug with the hole in it is uppermost on the tank. Cleaned tanks need not be transported by permitted transporters nor is it necessary to placard a cleaned tank.

**I. Disposal of Tanks.** All tanks shall be cleaned prior to disposal. All non-metal tanks shall be disposed of (or recycled) at facilities permitted by the New York State Department of Environmental Conservation. Metal tanks shall be disposed of only by recycling.

**202-3.05 Demolition of Structures.** General. §202-3.01 General and Safety Requirements shall apply to this work and in addition the following also apply:

Except as noted below, any structure designated for demolition and released to the Contractor shall be demolished at its site. Any proposal to allow such structure or any portion thereof to remain standing on the site or to be relocated to another site, shall be referred to the Deputy Chief Engineer, Structures for approval and accomplished under terms and conditions established by the State.

Colored tapes, barricades, marking paint, and signs shall be used to mark all areas that could become subject to collapse or that could become unstable as a result of demolition activity. Such areas are to be designated as non-access areas, and are to be identified by the previously mentioned Engineering Survey. Personnel and equipment with operators on board shall remain outside these designated non-access areas at all times during demolition operations or at any time the area is subject to collapse.

During the course of demolition work, the Contractor shall cause the structure to continue to be monitored by a competent person, as defined in §202-3.01, and the designated non-access areas or any additional non-access areas identified during the course of the work shall be appropriately marked and signed.

In accordance with state policy, steel and other metals other than those embedded in concrete or otherwise inseparable from articles being discarded shall be disposed of in a manner that ensures their salvage or beneficial re-use.

For steel structures coated with lead-based paint, the contractor shall comply with the provisions of 29 CFR 1926.62 and all other applicable worker Health and Safety Regulations. In addition, the contractor shall comply with all applicable regulations controlling the release of lead-based paint into the environment. Prior to the beginning of any steel removal operations, the paint shall be removed for a minimum distance of four inches on each side of the centerline of cut, bolt row, or weld as applicable. The paint removal work shall be done in accordance with the requirements of Section 741. In cases where the contractor can clearly demonstrate through exposure monitoring that other work practices and engineering controls, under the oversight of a certified industrial hygienist, can effectively maintain actual worker exposure below the permissible exposure level, exception to this requirement may be granted by the Engineer.

**202-3.06 Dismantling and Storing of Existing Superstructures.** In accordance with §202-3.01 General and Safety Requirements, §202-3.05 Demolition of Structures-General and the following, all concrete and paving material and other materials as directed shall be carefully removed from the structure in a manner so as to not damage materials to be stored. If not incorporated into the work the removed materials shall be disposed of by the Contractor in a manner approved by the Engineer and as outlined in §202-3.02K Disposal of Waste Materials. The parts of superstructure designated to be stored shall be dismantled, protected, and stored on site or at the locations designated without damage. All stored steel members and other stored members as directed shall be adequately marked to permit reassembly.
§202-3

Any parts of the structure designated for storage which are damaged during the course of the operation or during storage shall be repaired or replaced at the direction of the Engineer at the Contractor's expense.

202-3.07 Removing Existing Superstructures. In accordance with §202-3.01 General and Safety Requirements, §202-3.05 Demolition of Structures-General and the following, all concrete and paving material shall be removed from the structure and if not incorporated into the work shall be disposed of by the Contractor in a manner in accordance with laws, rules or regulations and as approved by the Engineer and as outlined in §202-3.02K Disposal of Waste Materials.

The rest of the material removed under this work will become the property of the Contractor and, except for materials incorporated into the work, shall be removed from the site of the work and disposed of in a manner approved by the Engineer.

202-3.08 Removing Old Bituminous Concrete Overlay. The Contractor shall remove the old bituminous concrete overlay and bituminous patches indicated in the Contract Documents in a manner approved by the Engineer. If the Contract Documents indicate that the overlay or patch to be removed contains asbestos, but not more than one percent by volume, the material shall be softened by radiant heat and removed while still hot, or in a thoroughly wet condition by means other than cold milling, or in accordance with the blanket variance for the removal of bituminous pavement containing asbestos.

Should the percentage asbestos be greater than one percent (1%) by volume, the material is defined as Asbestos Containing Material by Industrial Code Rule 56 and shall be removed and paid for as indicated elsewhere in the Contract Documents.

202-3.09 Removal of Substructures. The appropriate construction details specified for Section 203, Excavation and Embankment, as stated in §203-3.01 General through and including §203-3.08 Disposal of Surplus Excavated Material shall apply. The excavation shall be dewatered and kept free from water, snow and ice when necessary.

Sheeting or piling shown on the Contract Plans which is integral with the substructure and is designated to remain in place shall be cut off at the elevations shown on the plans. If indicated in the Contract Documents, existing sheeting or piling shall be extracted.

The Contractor may, with the permission of the Engineer, extract sheeting or piling not shown to be extracted or designated to remain in place rather than cutting it off at the elevations shown on the plans at no additional cost to the State.

If excavation protection is required solely to ensure the safety of workers and the public, it shall be the Contractor's responsibility to provide workers protection in accordance with the requirements of 29 CFR 1926. The selection of protection system materials shall be the Contractor's option. The Engineer may reject any system that is unsafe. Public safety shall be provided in accordance with the requirements specified in §107-05 Safety and Health Requirements Paragraph F. If the protective system is necessary also to protect structures or other improvements, or if the alternatives of laying back slopes or benching are not available, the support system shall be as indicated in the contract documents. Payment will be made under the designated respective item.

If directed, the resulting hole shall be backfilled with suitable material placed in lifts and compacted as indicated in §202-3.02H Demolition of Foundation to the satisfaction of the Engineer and the area shall then be regraded as directed, topsoiled, and/or seeded.

202-4 METHOD OF MEASUREMENT

202-4.01 Relocating or Disposal of Buildings. The work will be measured on a lump sum basis for the relocation or disposal of the given building in accordance with the provisions of these specifications. Monthly estimates of the percentage completion will be made in proportion to the amount of work satisfactorily completed.

If a property owner, upon agreement with the Department, removes the building, the Contractor shall
§202-5

demolish the existing foundation, cellar floors, walks and other facilities to properly complete the work, and will be paid 20% of the bid price.

202-4.02 Disposal of Buildings (Credit Item). The bidder may provide a credit bid price for this work in the event that the estimated salvage value of the building materials exceeds the cost of demolition. When a credit bid price is intended for this work, it shall be identified by the bidder as follows:

A. Where the unit bid price is written in words in the proposal the words “a credit to New York State of” shall be written by the bidder preceding the bid price in words.
B. The bidder shall insert the word “credit” where the unit bid price and amount bid are written in numbers.

202-4.03 Disposal of Petroleum Storage Tanks. This work will be measured as the number of tanks within the indicated size range removed and disposed of in accordance with the provisions of these specifications.

However, if the tank owner, upon agreement with the Department, removes the tank or tanks, the Contractor shall remove any supporting structures and backfill the resulting hole and/or trenches with suitable material, placed and compacted in accordance with §202-3.02H Demolition of Foundation, and will be paid 20% of the bid price in compensation for backfilling any resulting hole or for removing and disposing of the tank supporting structure.

202-4.04 Dismantling and Storing Existing Superstructures. The work will be measured on a lump sum basis for “Dismantling and Storing Existing Superstructures.” Monthly estimates of the percentage completion will be made for this work in proportion to the amount of work satisfactorily completed.

202-4.05 Removing Existing Superstructures. The Contractor will be paid the lump sum price bid for “Removing Existing Superstructures.” Monthly estimates of the percentage completion shall be made for this work in proportion to the amount of work satisfactorily completed.

202-4.06 Removing Old Bituminous Concrete Overlay. The quantity to be measured will be the number of square meters of bituminous concrete overlay removed in accordance with the plans or as approved by the Engineer.

202-4.07 Removal of Substructures. The quantity of material removed and disposed of shall be the number of cubic meters of material computed from the payment lines shown on the Contract Plans irrespective of the excavation protection method chosen by the Contractor under 202-3.09.

202-5 BASIS OF PAYMENT

202-5.01 Disposal of Buildings. Except as indicated in the following the lump sum bid for Disposal of Buildings shall include the cost of all labor, materials and equipment necessary to satisfactorily complete the work. Unless indicated otherwise, asbestos and hazardous waste removal or remediation work shall be paid for under separate pay items. Suitable or select material obtained from other than the demolition site used to fill cellars will be paid for separately. Water used for dust control or compaction shall also be paid for separately if a pay item for water is included in the contract.

The cost of extermination work shall be included in the price bid if the contract documents indicate that extermination work is required for the given building; otherwise the work of extermination will be paid for as extra work.

202-5.02 Disposal of Buildings (Credit Item). When a credit price is bid for this work, the total or gross sum bid for the contract shall be the sum of all the bid amounts for the various items, not including those credit bids, reduced by the total bid amount involving credit bid prices.
§202-5

202-5.03 Relocating Buildings. Except as indicated in the following the lump sum price bid shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work including the cost of any excavation necessary at the old or the new building site, and any incidentals. Suitable or select material obtained off-site to backfill the original cellar hole will be paid for separately. Water used for dust control or for compaction shall be paid for separately only if an item for water exists in the contract. Sidewalks, driveways, topsoil, and turf reestablishment will also be separately paid. The cost of extermination work shall be included in the price bid if the contract documents indicate that extermination work is required for the given building: otherwise the work of extermination will be paid for as extra work.

Unless indicated otherwise, the work of reconnecting and providing services for the relocated building at its new site shall be performed and paid for under separate pay items.

202-5.04 Disposal of Petroleum Storage Tanks. The unit bid price for the removal and disposal of Tanks within the indicated size range shall include the cost of all labor, materials, and equipment necessary to satisfactorily perform the work except that suitable or select material obtained from other than the tank site used to fill the resulting hole will be paid separately. Removing and disposing of contaminated soil, except that contaminated during the tank removal operations, will be separately paid.

202-5.05 Dismantling and Storing Existing Superstructures and Removing Existing Superstructures. The lump sum bid shall include the cost of all labor, materials, and equipment necessary to complete the work. The lump sum bid shall also include the cost of repair or replacement of any element designated to be stored that is damaged during the operation and any protective system(s) required to ensure the safety of the workers or the public unless indicated on the plans. Support or protection systems when indicated on the plans, the extraction of existing sheeting designated to be extracted, topsoiling, and seeding will be paid for separately under their respective items. Water used for compaction or to control dust will also be paid for separately if a pay item for water is included in the Contract. Backfilling with select material or with suitable materials that must be obtained off-site will be separately paid.

202-5.06 Removal of Substructures. Except as indicated below, the unit price bid per cubic meter for this work shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work, including the cost of cutting existing sheeting or piling the protective system(s) required to ensure the safety of the workers and the public, unless indicated on the plans, and keeping the site dewatered and free of water, ice and snow when necessary. Support or protection systems when indicated on the plans, Topsoiling, and/or Seeding will be paid for separately under their respective items. Backfilling with select materials or with suitable materials which must be obtained off-site will be separately paid. Water will be paid for separately only if the pay item for Applying Water is in the contract. If the Contract Plans indicate that the sheeting or piling is to be extracted, payment for the extraction shall be made separately.

202-5.07 Removing Old Bituminous Concrete Overlay. The unit price bid per square meter shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, except the cost of removing Asbestos Containing Material shall be paid for separately.

Payment will be made under:

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<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Pay Unit</th>
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</thead>
<tbody>
<tr>
<td>202.01nnn M</td>
<td>Disposal of Buildings</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>202.02nnn M</td>
<td>Disposal of Buildings (Credit Item)</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>202.03nnn M</td>
<td>Relocating Buildings</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>202.05xx M</td>
<td>Disposal of Petroleum Storage Tanks (various size ranges)</td>
<td>Each</td>
</tr>
<tr>
<td>202.11nnn M</td>
<td>Dismantling and Storing Existing Superstructures</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS of January 2, 2002
§203-1

202.12 Mnnn Removing Existing Superstructures Lump Sum
202.19 M Removal of Substructures Cubic Meter
202.20 M Removing Old Bituminous Concrete Overlay Square Meter

NOTE: Mnnn denotes serialized pay item for each building or structure; see §101-02 Definitions of Terms under “Specifications”. xx -see Catalog of Standard Pay Items or Proposal for complete description.

SECTION 203 - EXCAVATION AND EMBANKMENT

203-1 DESCRIPTION. This work shall consist of excavation, disposal, placement and compaction of all materials that are not provided for under another section of these Specifications, and shall be executed in conformance with payment lines, grades, thicknesses and typical sections specified in the contract documents.

203-1.01 Unclassified Excavation. Unclassified excavation shall consist of the excavation and disposal of all materials, of any description, encountered in the course of construction, unless otherwise specified in the contract. Estimated limits and descriptions of subsurface deposits and formations which may be shown on the plans, are supplied in accordance with §102-05, Subsurface Information.

203-1.02 Embankment. The embankment is the portion of a fill section situated between the embankment foundation and the subgrade surface, excluding any material placed under another section of these specifications.

203-1.03 Embankment Foundation. The embankment foundation is the surface upon which an embankment is constructed after all work required under §203-3.09 has been completed.

203-1.04 Subgrade Surface. The subgrade surface is the surface of the road section upon which the select materials and/or subbase are placed.

203-1.05 Subgrade Area. The subgrade area is that portion of an embankment situated above either of the following, but excluding any material placed under another section of these specifications.

A. A line located 0.6 m below the subgrade surface and extended to the intersection with the embankment side slopes, or

B. The embankment foundation, whichever is higher.

The material and compaction requirements for the subgrade area in embankments are found in §203-2.02 and §203-3.12, respectively.

In cut sections, the subgrade area is not defined except where undercut and backfill with a select material item is specified or ordered: in such cases, the payment lines for undercut work shall define the subgrade area.

203-1.06 Embankment Side Slope Area. The embankment side slope areas are those cross-sectional areas of an embankment situated outside of lines projected downward and outward on a one on one slope from the edges of the subgrade surface to their intersection with the embankment foundation, but excluding any portion lying within a subgrade area.

203-1.07 Topsoil. See Section 613, Topsoil.

203-1.08 Suitable Material. A material whose composition is satisfactory for use in embankment construction is a suitable material. The moisture content of the material has no bearing upon such designation. In general, any mineral (inorganic) soil, blasted or broken rock and similar materials of natural or man made (i.e. recycled) origin, including mixtures thereof, are considered suitable materials.