City Of Torrington

ENGINEERING DEPARTMENT
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ADDENDUM No. 2

DATE ISSUED: September 2, 2016

RE: HIGHLAND AVENUE DRAINAGE IMPROVEMENTS (BID # HDI 027-090816)

All bidders are hereby advised of the following amendments to the Contract Bid Documents, which are hereby made an integral part of the specifications for the subject project, prepared by The City of Torrington, to the same extent as all other documents. All work shall conform to the standards and provisions of same.

Bids submitted shall be deemed to include the Contract Document information as shown in Addendum No. 2. General bidders shall notify sub-bidders that may be affected by this addendum as applicable. Bidders shall be required to acknowledge receipt of this Addendum in the space provided on the Bid Proposal Form, Page C-10A. Failure to acknowledge this Addendum by the Bidder may result in the rejection of their bid. Bidders are directed to review changes to all portions of the work as changes to one portion may affect the work of another.

1. **Replace Bid Form – Exhibit "A"** page C-11D with the attached revised Bid Form – **Exhibit "A"** page C-11D dated 09/02/2016.

2. **ADD Special Provision 02020 Earth Excavation** pages 02020-01 through 02020-02 dated 09/02/2016.

3. **Replace Special Provision 02220 Trenching, Backfilling, and Compacting** page 02220-03 with the attached revised page 02220-03 dated 09/02/2016.

4. **Replace Detail 4.19 UNDERDRAIN NON-PAVED AREAS Detail on Drawing Sheet 008** with the attached revised **Detail 4.19 UNDERDRAIN NON-PAVED AREAS Detail on Drawing Sheet 008** dated 09/02/2016.

END OF ADDENDUM No. 2

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Item No.	Total Est. Qty.	Description	Unit Price	Total Amount
22	3	Pre-Cast Catch Basin Type II Base, Double Grate Type "C" Top, 0-8' depth the price per each of Dollars and Cents	$	$
23	6	Catch Basin Type "C" Top Only the price per each of Dollars and Cents	$	$
24	8	Bulkhead Existing Pipe End the price per each of Dollars and Cents	$	$
25	3	Paved Invert - Single Catch Basin the price per each of Dollars and Cents	$	$
26	5	6" HDPE Pipe Cleanout the price per each of Dollars and Cents	$	$
27	32	Weep Pipe the price per linear foot of Dollars and Cents	$	$
28	7	Paved Invert - Double Catch Basin or Manhole the price per each of Dollars and Cents	$	$
⇨ 29	392	Earth Excavation the price per cubic yard of Dollars and Cents	$	$
BASE BID SECTION TOTAL				$

SECTION 02020

EARTH EXCAVATION

PART 1 - SCOPE

1.01 Earth excavation shall consist of the removal and satisfactory disposal, in the manner herein required, of all material taken from within the limits of the work contracted for, the removal of which is necessary for the construction of the roadway, subgrade, shoulders, slopes, entrances, retaining walls, gutters, channels and other miscellaneous construction to the dimensions and limits shown on typical details and plans or as ordered by the ENGINEER in the field. It shall also include the formation of embankments, the disposal of surplus or unsuitable material, removal of old foundations, concrete or masonry walls, crib walls, bin walls, stone wall fences or farm wall fences and filling of cellar or other holes, and in the absence of such items in the contract, the clearing and grubbing and the shaping and cleaning of slopes and of shoulders.

PART 2 - MATERIALS

2.01 N/A

PART 3 – CONSTRUCTION METHODS

3.01 Excavation shall be made in conformity with the requirements of typical details and the plans and as ordered by the Engineer. The Contractor shall, when necessary in excavation areas, provide and maintain ditches which are adequate to prevent free water from becoming incorporated in material to be used to form embankments, such ditching to be at the sole expense of the Contractor.

3.02 Wherever portions of existing bituminous concrete pavement are to be removed, they shall be removed to neat lines as shown on the plans or as directed by the Engineer. Where delineated limits of the areas in which such bituminous surfaces are to be removed are adjacent to existing bituminous concrete pavement that is to remain in place, the line of delineation shall be cut by a method approved by the Engineer.

3.03 The CONTRACTOR shall dispose of all surplus and unsuitable materials (including stockpiles) at no cost to the CITY. All surplus excavated material and any material unsuitable for use shall be disposed of offsite, in areas provided by the CONTRACTOR. All disposal areas on properties located within the City of Torrington shall be approved, in writing, by the CITY, prior to use. The CONTRACTOR shall not dispose of surplus materials on wetland or other areas prohibited by the Corps of Engineers or the Connecticut Department of Energy and Environmental Protection.

PART 4 – MEASUREMENT

4.01 Payment lines for earth excavation where required for underdrain pipe installation in non-paved areas will be measured per cubic yard and shall coincide with the slope and subgrade lines or the top of the payment lines for embankment excavation, as shown on typical details and plans or as ordered by the ENGINEER in the field.

4.02 Unsuitable material within the slope and above subgrade lines or the top of the normal payment lines for embankment excavation shall be measured as earth excavation.

4.03 Any stockpiling, re-excavation necessary shall not be measured for payment.

4.04 No separate measurement will be made for excavation for perforated underdrain trench work.

PART 5 – BASIS OF PAYMENT

5.01 Earth excavation will be paid for at the contract unit price per cubic yard for **"Earth Excavation"**, in accordance with the classification given herein and subject to the method of measurement described above. The price shall include all equipment, tools and labor incidental to the completion of the excavation, the formation and compaction of embankments, turf establishment and the disposal of surplus or unsuitable material in accordance with the provisions of the plans and of these specifications.

5.02 No separate payment will be made for excavation for perforated underdrain trench work. The cost of excavation for underdrain trench work shall be included in the unit price for perforated underdrain - non paved areas.

"Earth Excavation" will be paid for under Item 29.

END OF SECTION

SECTION 02220

TRENCHING, BACKFILLING, AND COMPACTING

PART 1 - SCOPE

The work covered by this section of the specifications consists of furnishing all labor, equipment, and materials, and in performing all operations in connection with excavation, trenching, backfilling, compaction, disposal of all unsuitable and surplus materials and grading for storm drains and appurtenances. This work also includes excavation and satisfactory disposal of material for the construction of drainage swales as shown on the drawings. Details of typical trench sections depicting excavation, filling and backfilling requirements are shown on the drawings.

PART 2 - EXCAVATION

2.01 GENERAL:

A. The CONTRACTOR shall perform all excavations for pipes and appurtenant structures of every description and of whatever substances encountered, to the widths and depths indicated on the Drawings and as otherwise specified. During excavations, suitable material for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading and to prevent slides or cave-ins. All excavated materials not required or unsuitable for backfill shall be removed and wasted away from the site. Care shall be taken not to over excavate below the depths indicated unless authorized by the ENGINEER. Unauthorized over-depths shall be backfilled at the CONTRACTOR's expense with bank or crushed gravel material and shall be compacted to not less than 95% of maximum density as defined in PART 3 of this SECTION. Grading shall be done as necessary to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or by other approved methods. Sanitary sewers shall not, at any time, be used for trench drainage.

B. Unless otherwise specified, excavation shall be open cut, except that short sections-of a trench may be tunneled if, in the opinion of the ENGINEER, the pipe can be safely and properly installed and backfill can be properly tamped in such tunnel sections. Excavation for trenches shall be as set out in the following paragraphs.

2.02 TRENCH EXCAVATION - EARTH:

Trench excavation-earth shall comprise all materials including, but not limited to, clay, silt, sand, muck, gravel, hardpan, loose shale, pavements, pavement bases, stone in mass, sidewalks, and boulders measuring less than 1 cubic yard in volume.

2.03 TRENCH EXCAVATION - ROCK:

A. Shall comprise the following: Boulders measuring 1 cubic yard or more in volume, rock material in ledges, bedded deposits, unstratified masses, and conglomerate deposits so firmly cemented that they possess the characteristics of solid rock that cannot be removed without systematic drilling and blasting, and unreinforced/reinforced concrete structures, concrete slabs, excluding sidewalks and paving.

B. Where rock is encountered in the excavation; it shall be removed as required to permit construction as specified. Where explosives and blasting are used, all laws and ordinances of municipal, state and federal agencies relating to the use of explosives shall be complied with. All blasting shall be performed by licensed qualified personnel and proper precautions shall be taken to protect persons, property and the Work from damage or injury.

C. When material is encountered with respect to which the CONTRACTOR may claim removal as Rock Excavation, such material shall be uncovered and exposed and the Engineer notified by the CONTRACTOR before proceeding with the excavation. The CONTRACTOR shall not proceed with the excavation of the material to be removed as rock excavation until elevation of this material has been measured and classified

by the Engineer. Failure on the part of the CONTRACTOR to uncover such material, notify the Engineer and allow time for cross-sectioning the undisturbed surface of such material, will forfeit the CONTRACTOR's right to claim to any classification other than that allowed by the Engineer for the areas of work in which the deposits occur. Broken rock from blasting shall not be used for backfill in the sewer trenches.

D. Rock shall be removed and paid for to a depth of 12 inches below the bottom of the pipe barrel within trench widths defined under section 5.02 Trench Excavation – Rock, and 12 inches below structure bottoms within vertical planes one foot outside of structure walls. Backfill will be with bank or crushed gravel placed in 8-inch lifts and thoroughly compacted. Under sanitary sewer pipe, backfill will be No. 6 crushed stone. All rock excavation shall not be used for backfill and shall be removed from the site.

2.04 EXTENT OF OPEN EXCAVATION:

The extent of excavation open at any one time will be controlled by the conditions, but shall always be confined to the limits prescribed by the ENGINEER. At no time shall excess trench be open if it creates a hazard. CONTRACTOR shall only open sufficient trench for pipe installation. The trench in the street right of way shall not be left open overnight and shall be completely backfilled at the end of each working day. In the grass areas and parking lot areas steel plates will be allowed to cover the trench overnight if the plate size and location is approved by the ENGINEER.

2.05 SEPARATION OF SURFACE MATERIALS:

From areas within which excavations are to be made, topsoil shall be carefully removed and separately stored to be used again for top soiling and seeding as directed; or if the CONTRACTOR prefers not to separate surface materials, he shall furnish topsoil at least equal in quantity and quality to that excavated.

2.06 CUTTING AND REMOVING PAVEMENT:

A. The CONTRACTOR shall remove only as much existing pavement as necessary to do the Work. Where excavations are to be made in paved surfaces, he shall sawcut the pavement ahead of the excavation before breaking it with pavement-breaking apparatus. All pavement shall be cut with a pavement saw. Cutting and removal shall be done so as to produce relatively clean, uniform, vertical edges without damage to the remaining pavement.

B. Pavement removed shall not be mixed with other excavated material, but shall be disposed of away from the site of the work before the remainder of the excavation is made.

C. Existing pavements and base courses that are to remain shall be protected by the CONTRACTOR. All existing pavements and base courses which have been removed beyond indicated lines, or have been disturbed or damaged shall be restored or replaced by the CONTRACTOR to match existing pavements, base courses and grades, at no additional expense to the CITY.

2.07 TRENCH SUPPORT SYSTEMS:

A. The CONTRACTOR shall furnish, put in place and maintain such sheeting, shoring, bracing, etc., as may be necessary to support the sides of the excavation and to prevent any movement of earth other than that intended to be accomplished by the excavation. Such sheeting, shoring and bracing shall be done as may be necessary for the protection of the Work and for the safety of personnel and shall comply with the safety precautions as outlined in the Associated General Contractors of America "Manual of Accident Prevention in Construction".

B. The CONTRACTOR shall be held accountable and responsible for the sufficiency of all sheeting, shoring and bracing used and for all damage to persons or property resulting from the improper quality, quantity, strength, placing, maintaining or removal of the same.

C. The CONTRACTOR shall leave in place, to be embedded in the backfill or concrete, only that sheeting, bracing, etc., which the ENGINEER may direct him in writing to leave in place. Where sheeting or bracing is left in place, it shall be cut off at elevations ordered by the ENGINEER. Elsewhere the removal of sheeting

and shoring shall be coordinated with backfilling operations so as not to impose additional loads on pipe or structures due to increased trench widths or collapse of trench sides. No direct payment will be made for sheeting, shoring, bracing, and compensation for such work and all expenses incidental thereto shall be considered as included in the unit prices bid for the various Items of this CONTRACT unless otherwise noted on the CONTRACT DOCUMENTS.

D. There shall be no obligation on the part of the ENGINEER to issue orders for sheeting, staybracing or sheeting left-in-place and/or to pass upon sufficiency and adequacy of sheeting; nor shall the failure on the part of the ENGINEER to give such orders relieve the CONTRACTOR from liability for damages on account of injury to persons or damage to property occurring from or upon the Work and occasioned by negligence, or otherwise growing out of the CONTRACTOR'S failure to either install sufficient and adequate sheeting and/or staybracing or to leave in place in the excavation sufficient and adequate support to prevent the caving in or moving of the ground adjacent to the sides of the excavation during and after the backfilling operation.

E. 1. Wooden staybracing, shoring and sheeting shall be in conformance with the requirements of the applicable Safety Code.

2. All steel sheeting shall be continuous and interlocking with materials conforming to the provisions of ASTM Specification A-328, approved equal or as specified.

F. Trench side slope can be laid back and/or benched in strict accordance with the latest regulation of Occupational Safety and Health Administration (OSHA) for excavation.

2.08 DRAINAGE AND DEWATERING

A. To insure proper conditions at all times during construction, the Contractor shall provide and maintain ample means and devices with which to intercept and/or remove promptly and dispose properly of all water entering trenches and other excavations. Excavations shall be kept dry until the structures, pipes and appurtenances to be built therein have been completed to such extent that they will not be floated or otherwise damaged. Means of water removal and disposal shall include drains, pumps and well point systems to the extent required by the quantity to be removed and to the extent required to prevent "boils" or softening of the foundation soils.

B. All water pumped or drained from the work shall be disposed of in a suitable manner without undue interference with other work or damage to pavements, other surfaces, or property and to avoid pollution of existing water courses.

2.09 UNSUITABLE EXCAVATION – TRENCH

~~A. Unsuitable Material defined as follows: debris, pieces of pavement, frozen material, organic matter, topsoil, all wet or soft muck, peat, silt or clay, ledge excavation or any material which, as determined by the Engineer, will not provide sufficient support or maintain the completed construction in a stable condition.~~

B. Whenever unstable soil, that is incapable of properly supporting the pipe or structure, is encountered below a depth of 6" inches below the bottom of the pipe barrel or below the bottom of a structure, as determined by the ENGINEER, such soil shall be removed to the full width of the trench and refilled with bank or crushed gravel material as hereinafter specified, placed in 8-inch lifts and thoroughly compacted.

C. No excavation shall be made below the limits of the excavation called for on the plans or herein specified without prior approval by the ENGINEER.

2.10 TEST PIT EXCAVATION AND REFILL:

Where the Contractor is directed by the Engineer, in writing, to excavate test pits or other miscellaneous excavations not specified for payment elsewhere, the Contractor shall perform such excavation and refill with excavated material

as directed. The refill material shall be placed in 8" lifts and each lift shall be thoroughly compacted. Finish grade to be restored to match existing conditions.

2.11 EXCAVATION NEAR EXISTING STRUCTURES AND UTILITIES:

A. Information shown on the Drawings as to location is from best available sources, but no guarantee is inherent or to be assumed that such information is accurate or complete. The Contractor shall exercise special care during his operations to avoid injury to underground utilities and structures. When necessary, the Contractor shall cooperate with and consult with representatives of the owner and the utility companies in order to avoid damage to the utility and structures. The Contractor shall furnish and erect suitable supports and shoring or other means of protection, where required. Hand methods of excavating shall be used around buried utilities.

B Where interferences are shown on the Contract Drawings or found during the work, it shall be the Contractor's responsibility to protect or to remove and re-install these facilities if required (or assist the utility company as necessary) to at least as good a condition as they were prior to the start of construction and to the satisfaction of the Engineer and/or utility company.

C. The Contractor shall, at his own expense, preserve and protect from injury all property either public or private along and adjacent to the line of Work, and be responsible for and repair any and all damage and injury thereto, arising out of or in consequence of any act or omission of the CONTRACTOR. All existing pipes, culverts, poles, wires, fences, mailboxes, bounds, etc., shall be supported in place or otherwise protected from injury, or shall be restored to at least as good condition as that in which they were found immediately prior to start of Work.

2.12 SAFETY AND ACCOMMODATION:

The CONTRACTOR shall provide at his own expense, suitable bridges over trenches where required for the accommodation and safety of the traveling public, and provide facilities for access to private driveways for vehicular use. **No open excavations shall be allowed to remain open during the overnight hours.** He shall erect suitable barriers around the excavation to prevent accidents to the public and shall place and maintain during the night sufficient lights on or near the Work. A space of twenty (20') feet must be left so that free access may be had at all times to fire hydrants and proper precautions shall be taken so that the entrances to fire hydrants and fire stations shall not be blocked or obstructed.

2.13 DISPOSAL OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL:

The CONTRACTOR shall dispose of all surplus and unsuitable materials (including stockpiles) at no cost to the CITY. All surplus excavated material and any material unsuitable for use shall be disposed of offsite, in areas provided by the CONTRACTOR. All disposal areas on properties located within the City of Torrington shall be approved, in writing, by the CITY, prior to use. The CONTRACTOR shall not dispose of surplus materials on wetland or other areas prohibited by the Corps of Engineers or the Connecticut Department of Energy and Environmental Protection.

PART 3 - COMPACTION REQUIREMENTS AND TESTING

3.01 Terms

The term "compacted to not less than a percent of maximum density" shall mean the minimum degree of compaction to be attained expressed as a percentage of the maximum density for the materials at optimum moisture content as determined by the current Tests for Moisture-Density Relationships of Soils, ASTM D1557, Method D. When the term "thoroughly compacted" is used in these specifications, it shall mean compaction to at least 95% of the maximum density of the soil at optimum moisture content when tested in accordance with the above method.

3.02 Testing

The following types of soil tests may be conducted by the CITY, tests shall be taken by qualified personnel approved by the ENGINEER and at locations, depths and on materials directed by the ENGINEER, and all costs in connection therewith shall be borne by the CITY. Tests which do not meet the specified requirements shall be repeated, at the same locations, after remedial actions are taken at the entire expense of the CONTRACTOR until satisfactory test results are obtained.

A. Particle-Size Analysis of Soils and Backfill Material in accordance with ASTM D 422.

B. Moisture-Density Relationship of soil in accordance with ASTM D1557, Method D.

C. In-place Density-Tests of soil in accordance with ASTM D 1556.

PART 4 - BACKFILL

4.01 MATERIALS:

A. Suitable Material:

Suitable material for trench backfill shall be the material excavated during the course of construction, but excluding Unsuitable Material defined as follows: debris, pieces of pavement, frozen material, organic matter, topsoil, all wet or soft muck, peat, silt or clay, ledge excavation or any material which, as determined by the Engineer, will not provide sufficient support or maintain the completed construction in a stable condition. As previously stated broken rock from blasting shall not be used as backfill. No stone or rock over 2" shall be placed in the area between 4" below the pipe and 6" above the pipe. No stone with any side larger than 8" will be placed in the backfill. The trench to be excavated located within the Oak Avenue Street shall include the backfill materials as shown in the appropriate contract drawing typical detail.

B. Imported bank or crushed gravel will be used for trench backfill below Oak Avenue pavement and sidewalk base courses. Bank or crushed gravel shall be clean, well graded from coarse to fine and shall meet grading "B" and the requirements for plasticity and resistance to abrasion indicated in Article M.02.02 of the STANDARD SPECIFICATIONS.

C. Processed Aggregate base course shall meet the requirements of Section M.05.01 of the latest edition of the STANDARD SPECIFICATIONS.

D. Bedding material shall be Crushed Stone to the requirements of M.01.01 of the STANDARD SPECIFICATIONS. Crushed stone shall be No. 6 in size and shall be clean, sound and free of silt or foreign materials as follows:

Sieve Size	Percent Passing by Weight
1 inch	100
3/4 inch	90-100
1/2 inch	20-55
3/8 inch	0-15
No. 4	0-5

E. Filter fabric shall be Amoco Non-Woven Construction Fabric No. 4553, or approved equal. Filter fabric shall be highly permeable and non-biodegradable, suitable for intended installation.

4.02 PROCEDURE.

A. Backfilling around Structures: Excavated material approved by the Engineer shall be used for backfill around manholes and other structures. The backfill shall be thoroughly compacted in 8" lifts.

B. Pipe Bedding: Pipe bedding material will be required below all pipe and all structures. Bedding material shall be placed to the full width of the trench the dimensions shown on the Drawing Details. Material under and around the pipe shall be carefully and thoroughly compacted.

C. Placement of Backfill above Pipe Bedding

1. Backfill above pipe to the bottom of the base material layer (or topsoil where applicable) shall be suitable material from excavation. This backfill material shall be placed, spread and leveled in layers not to exceed 8" in depth. All voids along the sides of the trench, behind sheeting, under bracing or other objects, shall be completely filled, using such fine materials, hand labor and materials as may be necessary. The entire area of each layer shall be compacted by means of mechanical rammers or vibrators or pneumatic tampers. Each layer shall be tamped and compacted before the next layer is placed. The Engineer shall also have the right to approve or disapprove the compaction equipment to be used and also the height of backfill to be compacted in one lift. All backfill materials shall be compacted to a minimum of 95% of the maximum dry density or as directed by the Engineer. Each layer of compacted granular fill shall be compacted at optimum moisture content. No subsequent layer shall be placed until the specified compaction is obtained for the previous layer. This backfill shall be carried up to the bottom of materials specified to be placed for surfacing requirements.

2. At the Engineer's discretion, the Contractor may compact the backfill by means of a Ho-Pac. There must be at least 36" of material above the top of the pipe prior to beginning the Ho-Pac operation. Material the 36" limit shall be compacted by means of mechanical rammers or vibrators or pneumatic tampers When a Ho-Pac is utilized, trench backfill shall be compacted in lifts not to exceed two (2') feet.

3. In areas where the finished surface is to be loam, the CONTRACTOR shall complete the backfilling with the respective specified material to compacted depths as shown.

4. In all roadway areas, the Contractor shall install gravel base course, processed aggregate base course and bituminous concrete pavement as shown on the Contract Drawing Details.

PART 5 - MEASUREMENT

5.01 TRENCH EXCAVATION - EARTH:

Trench Excavation - Earth and Backfill will not be measured for separate payment. Removal and storage of topsoil and suitable material, transporting materials, saw cutting and removing pavement, trench dewatering, trench backfill and compaction, as described in parts 2, 3, and 4 of this Section, and disposal of surplus and unsuitable material will not be measured for separate payment.

5.02 TRENCH EXCAVATION - ROCK:

A. Trench excavation - rock will be measured as the actual number of cubic yards of rock removed within the following trench payment widths and depths. Trench pay limit shall be I.D. + 2 feet for pipe up to 16" in diameter and I.D. + 3 feet for pipes greater than 16" diameter as shown on the typical trench sections on the Contract Drawings. The depth will be measured from the existing surface of the rock to 12 inches below the pipe.

B. Boulders over 1 cubic yard, which are required to be removed within the trench payment limits, shall be measured for payment as Trench Excavation – Rock. Boulders under 1 cubic yard shall be classified for payment under Trench Excavation - Earth and paid accordingly.

C. No separate measurement will be made for bank or crushed gravel (or stone below bedding limits) used to replace excavated rock. The cost of Bank or Crushed Gravel used to replace excavated rock shall be included in the unit price for Trench Excavation- Rock.

5.03 TEST PIT EXCAVATION AND REFILL:

Test pit excavation and refill, as ordered by the Engineer, will be measured by the cubic yard removed.

5.04 TRENCH EXCAVATION - UNSUITABLE:

A. Trench excavation - Unsuitable will be measured as the actual number of cubic yards of material removed below the bottom of bedding limits. The depth will be measured from the bottom of normal bedding limits to the depth as determined by the Engineer.

B. No separate measurement will be made for bank or crushed gravel (or stone below bedding limits) used to replace unsuitable excavation. The cost of Bank or Crushed Gravel used to replace unsuitable excavation shall be included in the unit price for Trench Excavation - Unsuitable.

PART 6 - BASIS OF PAYMENT

6.01 Trench Excavation – Earth, will not be paid for separately. All costs in connection with this work will be included in the unit prices bid for various sizes and types of pipe and various structures.

6.02 Trench Excavation - Rock, will be paid for at the Contract Unit Price bid for **"Trench Excavation – Rock"** per cubic yard regardless of depth, and shall include all materials used to backfill the volume of the rock removed.

6.03 Trench Excavation of unsuitable material below the pipe bedding limits will be paid for at the Contract Unit Price bid for **"Trench Excavation - Unsuitable Material"** per cubic yard to a depth as determined by the Engineer, and shall include its disposal off site. No separate payment will be made for bank or crushed gravel (or stone below bedding limits) used to replace excavated unsuitable material. The cost of Bank or Crushed Gravel used to replace excavated unsuitable material shall be included in the unit price bid.

6.04 Imported "Bank or Crushed Gravel" that shall be used for backfilling trenches below the road and sidewalk bases will not be paid for separately. Payment to be included in the contract unit price bid per linear foot for whichever size and type of pipe indicated and shall include all labor, materials, equipment, tools and all work incidental to complete the item as specified. Where rock or unsuitable material below the bedding limits is excavated, the price of for stone replacement material shall be included in the respective unit price bid for excavation of rock or unsuitable material.

6.05 Material for backfilling trenches outside of road and sidewalk pavement areas shall be backfilled with suitable backfill material excavated from trench as approved by the Engineer and will not be measured for payment. Any imported "Bank or Crushed Gravel" will not be paid for separately.

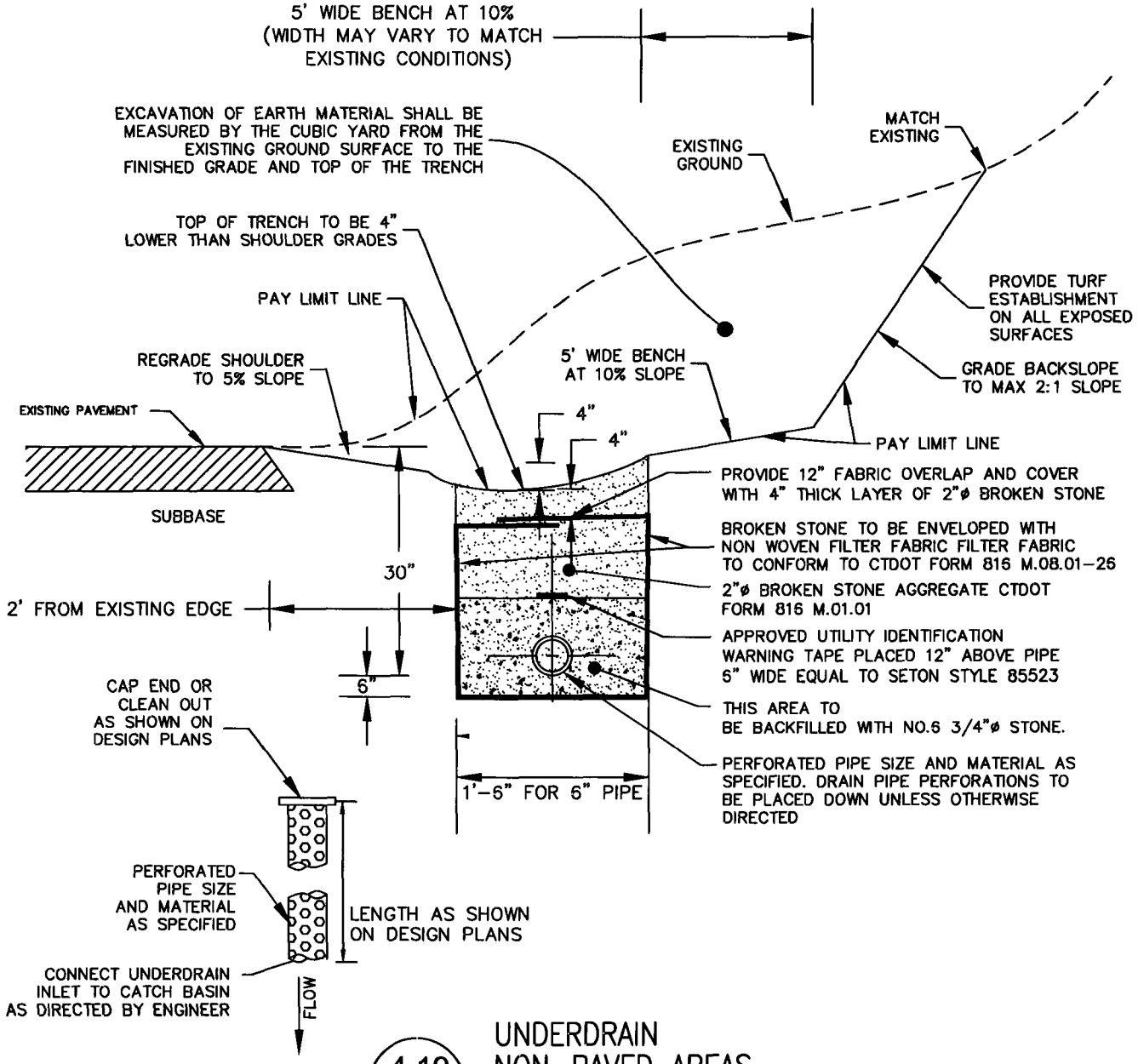
6.06 Saw-cutting Pavement, Driveways and Sidewalks – Payment will not be paid for separately. All cost in connection with this work will be included in the unit price bid for various size and types of pipe and structures.

6.07 "**Test Pit Excavation and Refill**" in Street or Sidewalk Pavements – Payment will be paid for at the Contract Unit Price bid per each regardless of depth, and shall include all Imported Gravel or Crushed Gravel materials used to backfill the excavated volume.

6.08 ~~All costs in connection with the protection and support of utilities shall be included in the lump sum price bid for "Protection and Support of Existing Utilities".~~

6.09 Payment for all of the above work shall include the cost of all labor, materials, equipment, transportation, tools, and all other work incidental or necessary to complete the work as specified.

END OF SECTION



4.19
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UNDERDRAIN
NON-PAVED AREAS

NTS

REVISED FOR ADDENDUM#2 - DATE: 09/02/2016

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