TOWN OF GLASTONBURY
BID NO. GL-2018-14

HEBRON AVENUE PAVEMENT REHABILITATION AND ROUNDABOUT AT HOUSE STREET

ADDENDUM NO. 1
FEBRUARY 6, 2018

BID DUE DATE: FEBRUARY 9, 2018 11:00 A.M.

The attention of bidders submitting proposals for the above-referenced project is called to the following Addendum to the specifications. The items set forth herein, whether of omission, addition, substitution or other change, are all to be included in and form a part of the proposed Contract Documents for the work. Bidders shall acknowledge this Addendum in the Bid Proposal by inserting its number on Page BP-1.

Make the following modifications to the Contract Documents:

BID PROPOSAL FORM:

The bid proposal form is hereby replaced with the attached form to correct the total quantity column under line items 123, 127, and 128 and to include line item 129 ITEM # 0601446A ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING).

ALL BIDDERS MUST USE THE REVISED BID PROPOSAL FORM.

SPECIAL PROVISIONS:

The Special Provision **NOTICE TO CONTRACTOR–UTILITY GENERATED SCHEDULE** is hereby amended to include the attached work schedule from Frontier Communications.

The Special Provision for **ITEM 0601445A EMBANKMENT WALL (SITE NO. 1)** is hereby replaced with the attached Special Provision that includes both **ITEM 0601445A EMBANKMENT WALL (SITE NO. 1) and ITEM 0601446A ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING).**

CONSTRUCTION PLANS:

The plan entitled “Intersection Improvements Analysis Plan Hebron Avenue and House Street Roundabout at Glastonbury Mews” prepared by Hallisey, Pearson, and Cassidy Civil Engineers and Surveyors LLC, is attached to this addendum and is included as part of the contract as a reference for ITEM 0601446A ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING).

QUESTIONS AND ANSWERS

Q1-1:	Are there any plans and or details for the embankment wall (site No. 1)?
A1-1:	The actual design and detailing of the wall is to be completed by a qualified Professional Engineer licensed in the State of CT to be retained by the Contactor as part of the pay item. A typical wall detail is shown in the typical roadway cross section on sheet TS-2, and the dimensions of the wall are described on Sheets PLN-1, SEC-4, and SEC-5. An additional plan sheet has been provided for the new item created under this addendum ITEM # 0601446A Additional Embankment Wall (Site No. 1) (Non-Participating). Additional requirements for the wall are described in the Special Provisions.
Q2-1:	Should we submit Attachment A Items A-F with our bid?
A2-1:	Yes. As per Item #24 in the Information for Bidders (page IB-4) all of the forms included in Attachment A must be submitted as part of the bid response.

END OF ADDENDUM NO. 1 TEXT

TOWN OF GLASTONBURY * 2155 MAIN STREET * GLASTONURY * CT

BID / PROPOSAL NO: **GL-2018-14** **DATE DUE:** **February 9, 2018**

DATE ADVERTISED: **January 19, 2018** **TIME DUE:** **11:00 AM**

NAME OF PROJECT: **Hebron Avenue Pavement Rehabilitation and Roundabout at House Street**

In compliance with this Invitation to Bid, the Bidder hereby proposes to provide goods and/or services as per this solicitation in strict accordance with the Bid Documents, within the time set forth therein, and at the prices submitted with their bid response.

It is the responsibility of the Bidder to clearly mark the outside of the bid envelope with the Bid Number, Date and Time of Bid Opening, and it is also **THE RESPONSIBILITY OF THE BIDDER TO CHECK THE TOWN'S WEBSITE BEFORE SUBMITTING BID FOR ADDENDA POSTED PRIOR TO BID OPENING.**

THE BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA AS REQUIRED:

Addendum 1 _____(Initial/Date) Addendum 2 _____(Initial/Date) Addendum 3 _____(Initial/Date)

OTHER ITEMS REQUIRED WITH SUBMISSION OF BID PROPOSAL:

The following bid checklist describes items required for inclusion with the above-referenced bid proposal package. It is provided for the convenience of the bidders and, therefore, should not be assumed to be a complete list.

_____ 1. Included Bid Bond as per Section 10 of the Information for Bidders.

_____ 2. Included Disclosure of Past and Pending Mediation, Arbitration, and Litigation cases against the Bidder or its Principals as per Section 17 of the Information for Bidders.

_____ 3. Included Qualifications Statement as per Section 22 of the Information for Bidders.

_____ 4. Included Non-Collusion Affidavit as per Section 23 of the Information for Bidders

_____ 5. Included other required ConnDOT Forms as per Section 24 of the Information for Bidders.

_____ 6. Checked Town web site for Addenda and acknowledged Addenda on page BP-1.

_____ 7. Acknowledged Code of Ethics on page BP-10.

_____ 8. Clearly marked envelope with Bid Number, Date, Time of opening, Bidder's Company Name and address.

_____ 9. Included Affidavit in compliance with Town ordinance prohibiting natural gas waste & oil waste from natural gas extraction activities or oil extraction activities as per Section 26 of the Information for Bidders.

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
1.	0201001	A	Clearing and Grubbing	LS	0.37	0.63	**1**		
2.	0202000	A	Earth Excavation	CY	2,587	3,850	**6,437**		
3.	0202100	A	Rock Excavation	CY	0	50	**50**		
4.	0202451	A	Test Pit Excavation	CY	23	15	**38**		
5.	0202529		Cut Bituminous Concrete Pavement	LF	649	190	**839**		
6.	0209001		Formation of Subgrade	SY	4,436	4,200	**8,636**		
7.	0212000	A	Subbase	CY	1,294	1,254	**2,548**		
8.	0219001		Sedimentation Control System	LF	0	850	**850**		
9.	0219011	A	Sediment Control System at Catch Basin	EA	14	14	**28**		
10.	0303051	A	Brick Pavers On 8" Reinforced Concrete Base Slab	SF	845	3,200	**4,045**		
11.	0303052	A	Granite Pavers on Structural Soil	SF	0	860	**860**		
12.	0303053	A	Granite Pavers on 8" Reinforced Concrete Base	SF	0	1,165	**1,165**		
13.	0303061	A	8" Reinforced Concrete Base For Pavers	SF	845	4,330	**5,175**		
14.	0404101	A	Bituminous Concrete Patching - Partial Depth	SY	30	0	**30**		
15.	0406002	A	Temporary Pavement	SY	0	500	**500**		
16.	0406159		PMA S0.5	TN	814	840	**1,654**		
17.	0406170		HMA S1.0	TN	1,339	1,000	**2,339**		
18.	0406171		HMA S0.50	TN	536	0	**536**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
19.	0406173		HMA S0.25	TN	139	0	**139**		
20.	0406236		Material For Tack Coat	Gal	1,088	1,115	**2,203**		
21.	0406275	A	Fine Milling Of Bituminous Concrete (0 To 4 Inches)	SY	2,302	160	**2,462**		
22.	0406999	A	Asphalt Adjustment Cost	EST	$700	$3,600	**$4,300**	NA	$4,300
23.	0507003	A	Remove Existing Catch Basin	EA	2	2	**4**		
24.	0507007	A	Replace Catch Basin Top	EA	9	0	**9**		
25.	0507012	A	Type "C" Catch Basin Over Existing Pipe	EA	1	1	**2**		
26.	0507120	A	Type "C" Catch Basin with 3' Sump	EA	1	6	**7**		
27.	0507238	A	Special Round Type "C-L" Catch Basin	EA	1	0	**1**		
28.	0507601	A	Manhole	EA	0	4	**4**		
29.	0507777	A	Remove Existing Manhole	EA	0	1	**1**		
30.	0507781	A	Reset Manhole	EA	5	0	**5**		
31.	0507791	A	Rebuild Catch Basin	VF	8	0	**8**		
32.	0507831	A	Convert Catch Basin To Manhole	EA	0	1	**1**		
33.	0601445	A	Embankment Wall (Site No. 1)	LS	0	1	**1**		
34.	0601650	A	Dry laid Stone Sitting Wall	LS	0	1	**1**		
35.	0612994		Concrete Cylinder Curing Box	EA	0	1	**1**		
36.	0651011	A	12" R.C. Pipe	LF	0	60	**60**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
37.	0651012	A	15” R.C. Pipe	LF	22	392	**414**		
38.	0651013	A	18” R.C. Pipe	LF	0	100	**100**		
39.	0811016	A	Precast Concrete Park Curbing	LF	117	0	**117**		
40.	0813012	A	5" X 17" Granite Stone Curbing	LF	1,589	0	**1,589**		
41.	0813013	A	5" X 17" Granite Curved Stone Curbing	LF	599	0	**599**		
42.	0813015		5" X 14" Granite Stone Curbing	LF	141	0	**141**		
43.	0813017	A	5" X 20" Granite Stone Curbing	LF	0	1,430	**1,430**		
44.	0813018	A	5" X 20" Granite Curved Stone Curbing	LF	0	780	**780**		
45.	0813019	A	5" X 20" Granite Stone Curbing - Mountable	LF	20	150	**170**		
46.	0813020	A	5" X 20" Granite Curved Stone Curbing - Mountable	LF	6	190	**196**		
47.	0815001		Bituminous Concrete Lip Curbing	LF	252	110	**362**		
48.	0905011	A	Remove and Reset PVC Fence	LF	20	0	**20**		
49.	0921001	A	Concrete Sidewalk	SF	3,738	3,530	**7,268**		
50.	0921002	A	Concrete Sidewalk - 8" Thick	SF	1,050	250	**1,300**		
51.	0921005	A	Concrete Sidewalk Ramp	EA	14	6	**20**		
52.	0922001	A	Bituminous Concrete Sidewalk	SY	290	50	**340**		
53.	0922500	A	Bituminous Concrete Driveway (Commercial)	SY	388	60	**448**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
54.	0922501	A	Bituminous Concrete Driveway	SY	0	50	**50**		
55.	0922999	A	Inlaid Thermoplastic Pavement Marking System	SF	5,337	340	**5,677**		
56.	0942001		Calcium Chloride For Dust Control	T	0	5	**5**		
57.	0944000	A	Furnishing And Placing Topsoil	SY	790	1,090	**1,880**		
58.	0944105	A	Structural Soil	CY	0	110	**110**		
59.	0945060	A	Pine Bark Mulch	SY	0	135	**135**		
60.	0949074	A	Microbiota Decussata - Siberian Carpet Cypress 18"-24" Spd B.B. Or Cont.	EA	0	58	**58**		
61.	0949085	A	Clethra Alnifolia 'Hummingbird' - Hummingbird Summersweet 18"-24" Cal. B.B.	EA	0	24	**24**		
62.	0949187	A	Fagus Sylvatica 'Dawyck Purple' - Dawyck Purple European Beech 3"-3 1/2" Cal. High Branch B.B.	EA	0	6	**6**		
63.	0949231	A	Ilex Glabra 'Compacta' - Compact Inkberry 30"-36" B.B. Or Cont.	EA.	0	15	**15**		
64.	0949569	A	Perovskia Atriplicifolia - Russian Sage 2 Gal. Cont.	EA	0	31	**31**		
65.	0949757	A	Amelanchier Grandiflora 'Autumn Brilliance' - 'Autumn Brilliance' Serviceberry 10'-12' Hgt. B.B.	EA	0	3	**3**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
66.	0950005	A	Turf Establishment	SY	790	1,090	**1,880**		
67.	0950008	A	Gravel Mulch	SY	0	12	**12**		
68.	0950050	A	Irrigation System	LS	0	1	**1**		
69.	0950060		Erosion Control Matting Type B	SY	0	275	**275**		
70.	0970006	A	Trafficperson (Municipal Police Officer)	EST	$76,800	$198,000	**$274,800**	1	$274,800
71.	0970007	A	Trafficperson (Uniformed Flagger)	HR	240	100	**340**		
72.	0971001	A	Maintenance And Protection Of Traffic	LS	0.37	0.63	**1**		
73.	0975002		Mobilization & Project Closeout	LS	0.37	0.63	**1**		
74.	0976001		Barricade Warning Lights - Low Intensity	DAY	0	1,000	**1,000**		
75.	0976002		Barricade Warning Lights - High Intensity	DAY	2,700	0	**2,700**		
76.	0978002		Traffic Drum	EA	20	105	**125**		
77.	0978003	A	Flexible Delineator Post	EA	0	3	**3**		
78.	0979003		Construction Barricade Type III	EA	10	8	**18**		
79.	0980001		Construction Staking	LS	0.37	0.63	**1**		
80.	0981100		42" Traffic Cone	EA	80	180	**260**		
81.	0981101		Opposing Traffic Lane Divider	EA	0	15	**15**		
82.	1001001		Trenching and Backfilling	LF	65	200	**265**		
83.	1002203		Traffic Control Foundation-Pedestal-Type I	EA	2	0	**2**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
84.	1003621	A	Tree Uplight	LS	0	1	**1**		
85.	1008017		3" Rigid Metal Conduit - Surface	LF	0	50	**50**		
86.	1008115		2" Rigid Metal Conduit In Trench	LF	65	120	**185**		
87.	1008117		3" Rigid Metal Conduit In Trench	LF	0	20	**20**		
88.	1008215		2" Rigid Metal Conduit Under Roadway	LF	0	50	**50**		
89.	1008780	A	4" PVC Duct Bank	LF	200	0	**200**		
90.	1008908	A	Clean Existing Conduit	LF	350	0	**350**		
91.	1010021		Concrete Handhole-Type II	EA	3	0	**3**		
92.	1010060	A	Clean Existing Concrete Handhole	EA	3	0	**3**		
93.	1017102	A	Service Entrance and Cabinet	EA	0	1	**1**		
94.	1107007	A	Pedestrian Push Button and Sign (Piezo)	EA	2	0	**2**		
95.	1111201	A	Temporary Detection (Site No. 1)	LS	1	0	**1**		
96.	1111401	A	Loop Vehicle Detector	EA	1	0	**1**		
97.	1111451	A	Loop Detector Sawcut	LF	240	0	**240**		
98.	1113103		7 Conductor No. 14 Cable	LF	470	0	**470**		
99.	1117102		High Mounted Internally Illuminated Flashing Arrow	DAY	0	105	**105**		
100.	1118012	A	Removal and/or Relocation of Traffic Signal Equipment	LS	1	0	**1**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
101.	1131001	A	Changeable Message Sign	DAY	220	65	**285**		
102.	1206023	A	Removal And Relocation Of Existing Signs	LS	0.37	0.63	**1**		
103.	1208931	A	Sign Face - Sheet Aluminum (Type IX Retroreflective Sheeting)	SF	0	40	**40**		
104.	1208932	A	Sign Face - Sheet Aluminum (Type IV Retroreflective Sheeting)	SF	37	130	**167**		
105.	1209005		Painted Pavement Markings 4" White	LF	1,000	1,600	**2,600**		
106.	1209007		Painted Pavement Markings 4" Yellow	LF	1,500	4,920	**6,420**		
107.	1209009		Painted Pavement Markings 12" White	LF	0	160	**160**		
108.	1209401		Painted Legend, Arrows and Markings	SF	802	235	**1,037**		
109.	1210101		4" White Epoxy Resin Pavement Markings	LF	3,087	1,960	**5,047**		
110.	1210102		4" Yellow Epoxy Resin Pavement Markings	LF	3,014	2,120	**5,134**		
111.	1210104		8" White Epoxy Resin Pavement Markings	LF	0	170	**170**		
112.	1210105		Epoxy Resin Pavement Marking Sym. & Legends	SF	862	310	**1,172**		
113.	1210106		12" White Epoxy Resin Pavement Markings	LF	0	190	**190**		
114.	1211001		Removal of Pavement Markings	SF	0	1,000	**1,000**		
115.	1220013		Construction Signs Bright Fluorescent Sheeting	SF	437	325	**762**		

BIDDER NAME:_____

LINE NO.	ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY 53-001	QUANTITY 53-193	**TOTAL**	UNIT PRICE	EXT
116.	1302061	A	Adjust Gate Box (Water)	EA	7	5	**12**		
117.	1302062	A	Adjust Gate Box (Gas)	EA	7	0	**7**		
118.	1403501	A	Reset Manhole (Sanitary Sewer)	EA	4	3	**7**		
119.	1500209		Reset Manhole (Electric)	EA	2	0	**2**		
120.	1801002		Repair of Impact Attenuation System – Type A Module 700lb	EA	0	2	**2**		
121.	1801003		Repair of Impact Attenuation System – Type A Module 1400lb	EA	0	4	**4**		
122.	1801004		Repair of Impact Attenuation System – Type A Module 2100lb	EA	0	2	**2**		
123.	1802020		Type A Impact Attenuation Module - 700lb	EA	0	1	**1**		
124.	1802030		Type A Impact Attenuation Module - 1400lb	EA	0	4	**4**		
125.	1802040		Type A Impact Attenuation Module - 2100lb	EA	0	2	**2**		
126.	1807104		Relocation of Impact Attenuation System – Type A Module 700lb	EA	0	2	**2**		
127.	1807105		Relocation of Impact Attenuation System – Type A Module 1400lb	EA	0	8	**8**		
128.	1807106		Relocation of Impact Attenuation System – Type A Module 2100lb	EA	0	4	**4**		
129.	0601446	A	Additional Embankment Wall (Site No. 1) (Non-Participating)	LS	0	1	**1**		

TOTAL BID AMOUNT: $_____
(Numeric)

WRITTEN TOTAL BID AMOUNT:_____

CODE OF ETHICS:
I/We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I/We are selected. Yes_____ No_____*

***Bidder is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the Bidder has not agreed to the above statement.**

Respectfully submitted:

Type or Print Name of Individual	**Doing Business as (Trade Name)**
Signature of Individual	**Street Address**
Title	**City, State, Zip Code**
Date	**Telephone Number/Fax Number**
E-Mail Address	**SS# or TIN#**

(Seal – If bid is by a Corporation)

Attest

rev. 5/20/2013

UTILITY WORK SCHEDULE

CTDOT Project Number:	53-193	Town:	GLASTONBURY
Project Description:	ROUNDABOUT @ C/O HEBRON AVE & HOUSE ST		
CTDOT Utilities Engineer:	GREGG HENDRICKSON		
Phone:	(860)594-3264	Email:	GREGG.HENDRICKSON@CT.GOV

Utility Company:	FRONTIER COMMUNICATIONS		
Prepared By:	MARC SWEENEY	Date Prepared:	rev: 6/27/17
Phone:	(860)725-4226	Email:	michael.j.kelly@ftr.com

Scope of Work

The following is a description of all utility work planned to be completed in conjunction with the CTDOT project. The narrative describes all work to be carried out by the utility or its contractor, including temporary and permanent work required by the project as well as any additional utility infrastructure work the utility intends on performing within the project limits during the construction of the project.

This project will require Frontier Communications to replace P16 Hebron Ave to a new location designated on print and replace the existing 45'2 pole with a 50'2 for height and span purposes. We will also need to replace P614 House St to align with the new road way. P4868S will be moved behind the proposed new sidewalk and upgraded to a 40'2 due to the flexability needed at the existing aerial crossing that will be raising due to the 50'2 span pole. We will also set a new 35'2 service pole on the South side of Hebron Ave so we can refeed 330 & 340 Hebron Ave. Pole to be positioned behind the new sidewalk. Appropiate anchors and guying will be provided where needed. Frontier will shift to the new poles and remove the old to complete our aerial work. The effected manhole cover at the corner of House St & Hebron Ave will be adjusted according to finish grade.

Special Considerations and Constraints

The following describes the limiting factors that must be planned for in the scheduling and performance of the utility work. For example, restrictions on cut-overs, outages, limitations on customer service interruptions (e.g. nights, weekends, holidays), seasonal and environmental shutdown periods, long lead material procurements, etc..

PLEASE NOTE THAT ANY TIME FRAME GIVEN AS A START TIME OR DURATION OF WORK CAN BE AFFECTED BY MANY FACTORS INCLUDING, BUT NOT LIMITED TO, MAKE READY WORK, OTHER UTILITIES, PERMIT APPLICATIONS, CHANGES IN SCOPE, INCLEMENT WEATHER, HOLIDAYS AND EMERGENCY SITUATIONS.

UTILITY WORK SCHEDULE

CTDOT Project Number: 53-193

Utility Company: FRONTIER COMMUNICATIONS

Prepared By: MARC SWEENEY

Total Calendar Days: 10.5

Schedule

The following schedule identifies each major activity of utility work in sequential order to be performed by the utility or its contractor. The location of each activity of work is identified by the baseline stationing on the CTDOT plans. All activities identify the predecessor activity which must be completed before a utility work activity may progress. The duration provided is the number of calendar days required to complete the utility work activity based on historical information and production rates.

Location (Station to Station)	Description of Utility Work Activity	Predecessor Activity	Duration (calendar days)
104+10	PLACE NEW 50'2 REPLACEMENT POLE FOR P16 HEBRON AVE	NEW CURB LINE AND CROSSWALK MARKED OUT AND WORK LIMITS DEFINED	1
301+20	PLACE NEW 45'2 REPLACEMENT POLE FOR P614 HOUSE ST	NEW CURB LINE AND SIDEWALK ARE STAKED ALONG WITH THE DRIVEWAY	1
202+20	PLACE NEW 40'2 REPLACEMENT POLE FOR P4868S HEBRON AVE	NEW CURB LINE AND SIDEWALK ARE STAKED	1
203+25	PLACE NEW 35'2 SERVICE POLE FOR 330 & 340 HEBRON AVE	NEW CURB LINE AND SIDEWALK LIMITS ARE STAKED	1
301+25	PLACE SIDEWALK ANCHOR & GUY @ P614	SIDEWALK AND WORK LIMITS ARE STAKED OUT	1
104+10	PLACE SIDEWALK ANCHOR & GUY @ P16	SIDEWALK AND WORK LIMITS ARE STAKED OUT	1
203+25	PLACE ANCHOR & DGUY AT NEW SERVICE POLE	SIDEWALK AND WORK LIMITS ARE STAKED OUT	1
202+20	PLACE NEW ANCHOR & DGUY FOR P4868S	SIDEWALK AND WORK LIMITS ARE STAKED OUT	1
104+10	ATTACH CABLES TO NEW POLE	POLE IS SET	0.5
203+00	REMOVE CABLES FROM P16 (OLD) AND REMOVE POLE	P16 NEW IS IN PLACE AND ATTACHED/ ALL UTILITIES ARE SHIFTED	1
202+20	SHIFT STRANDS TO NEW P4868S AND REMOVE OLD ANC & GUY / REMOVE OLD POLE	NEW P4868S IS IN PLACE & ANC & GUY HAS BEEN DONE/ ALL UTILITIES SHIFTED	1

UTILITY WORK SCHEDULE

CTDOT Project Number: 53-193

Utility Company: FRONTIER COMMUNICATIONS

Prepared By: MARC SWEENEY

Total Calendar Days: 3

Schedule

The following schedule identifies each major activity of utility work in sequential order to be performed by the utility or its contractor. The location of each activity of work is identified by the baseline stationing on the CTDOT plans. All activities identify the predecessor activity which must be completed before a utility work activity may progress. The duration provided is the number of calendar days required to complete the utility work activity based on historical information and production rates.

Location (Station to Station)	Description of Utility Work Activity	Predecessor Activity	Duration (calendar days)
301+25	SHIFT CABLES TO NEW P614 HOUSE ST , PLACE THE DGUY AND REMOVE THE OLD POLE	NEW P614 IN PLACE AND OTHER UTILITIES ARE SHIFTED, NEW ANCHOR IN PLACE	1
102+00	ADJUST MH FRAME & COVER	AREA TO SUBGRADE	2

ITEM # 0601445A EMBANKMENT WALL (SITE NO. 1)

ITEM # 0601446A ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING)

Description:

ITEM #601445A EMBANKMENT WALL (SITE NO. 1) will consist of designing, furnishing and constructing an embankment retaining wall from Station 105+12, 30' Left to Station 105+99, 30' Left to the grades, elevations, dimensions and details shown on the original contract drawings, in accordance with these specifications, and as directed by the Engineer.

ITEM #601446A ADDITIONAL EMBANKMENT WALL (SITE NO. 1) will consist of designing, furnishing and constructing additional embankment retaining wall as required to expand the limits and elevation of the retaining wall from that shown in the original contract drawings and paid for under ITEM #601445A in order to incorporate the additional height of the wall for that portion described in the original contract drawings and the additional length of the proposed retaining wall from Station 103+83, 35' left to Station 105+12, 30' left and Station 105+99, 30' left to 106+05, 35' left, as depicted on the attached additional contract drawing entitled "Intersection Improvements Analysis Plan Hebron Avenue and House Street Roundabout at Glastonbury Mews" prepared by Hallisey, Pearson, and Cassidy Civil Engineers and Surveyors LLC, included as an Attachment to Addendum 1, in accordance with these specifications and as directed by the Engineer.

Retaining Wall Selection: The Contractor shall select the proprietary embankment retaining wall from the Department's current approved list shown below. The Engineer will reject any proposed retaining wall that is not listed below. The following is a list of the proprietary embankment retaining walls for this project:

1. VERSA-LOK Retaining Wall
VERSA-LOK of New England
P.O. Box 6002
Nashua, NH 03063
(603) 883-3042

2. MESA Retaining Wall System
TENSAR Earth Technology, Inc.
227 Ritter Road
Sewickley, PA 15143
(412) 749-9190

3. KeySystem I Retaining Wall
Keystone Retaining Wall Systems
13453 County Road 1
Fairhope, AL 36532
(251) 990-5761

4. Pyramid Modular Blockwall
The Reinforced Earth Company
133 Park Street
North Reading, MA 01864
(978) 664-2830

5. Redi-Rock Retaining Wall-
Cobblestone Face Mold
Redi-Rock Walls-CT Division
68A South Canal Street
Plainville, CT 06062
(860) 793-6805

No other proprietary retaining walls will be allowed for this project. This listing does not warrant that the individual walls can be designed to meet either the dimensional, structural, or geotechnical constraints at each site.

Design:

1 - Design Computations: It is the Contractor's responsibility for the collection of geotechnical data of the soil in the area of the embankment wall to support the design calculations, design, detailing and additional construction specifications required to construct the wall. The actual designer of the retaining wall shall be a qualified Professional Engineer licensed in the State of Connecticut.

2 - Designer's Liability Insurance: The Designer shall secure and maintain at no direct cost to the State, a Professional Liability Insurance Policy for errors and omissions in the minimum amount of Five Hundred Thousand Dollars ($500,000). The designer may, at his election, obtain a policy containing a maximum One Hundred Twenty Five Thousand Dollars ($125,000) deductible clause, but if he should obtain a policy containing such a clause, the designer shall be liable to the extent of the deductible amount. The Designer shall obtain the appropriate and proper endorsement to its Professional Liability Policy to cover the indemnification clause in this contract as the same relates to negligent acts, errors or omissions in the work performed by the Designer. The Designer shall continue this liability insurance coverage for a period of three years from the date of the acceptance of the work by the agency head as evidenced by a certificate of acceptance issued to the contractor or for three years after the termination of the contract, whichever is earlier, subject to the continued commercial availability of such insurance.

The designer shall supply the certificate of this insurance to the Engineer prior to the start of construction of the wall. The designer's insurance company shall be licensed in the State of Connecticut.

3 - Preliminary Submissions: Prior to the start of fabrication or construction, the Contractor shall submit to the Engineer a design package, which shall include, but not be limited to the following:

a. Detailed Plans:

Plan sheets shall be approximately 24" x 36" and Stamped by a licensed Professional Engineer (Connecticut).

Full plan view of the wall drawn to scale. The plan view must reflect the horizontal alignment and offset from the horizontal control line to the face of the wall. Beginning and ending stations, all utilities, signs, lights, etc. that affect the construction along with all property lines and easement lines adjacent to the wall shall be shown.

Full elevation view of the wall drawn to scale. Elevation views should indicate the elevation at the top and bottom of walls, horizontal and vertical break points, and the location of finished grade.

Typical cross sections drawn to scale including all appurtenances. Detailed cross section should be provided at significant reinforcement transitions such as wall ends.

Details of all wall components and their connections such as the length, size and type of soil reinforcement and where any changes occur; facing details; connections; etc.

Certified test reports indicating the connection strength versus normal load relationship for the block-soil reinforcement connection to be used.

Drainage details for embankment backfill including attachment to outlets shown on contract drawings.

Details of any roadway drainage pipe projecting through the wall, or any attachments to the wall. Details of the treatment of drainage swales or ditches shown on the contract drawings.

Design parameters used along with AASHTO references.

Material designations for all materials to be used.

Detailed construction methods including a quality control plan. Construction quality control plans should include monitoring and testing frequencies (e,g, for setting batter and maintaining horizontal and vertical control). Construction restraints should also be listed in the details. Specific requirements for construction around obstructions should be included.

Details of installation of protective fencing where required.

Details of Architectural Treatment where required.

Details of Temporary Earth Retaining System(s) where required.

Details of wall treatment where the wall abuts other structures.

Treatment at underground utilities where required.

b. <u>Design Computations:</u>

Stamped by a licensed Professional Engineer (Connecticut).

Computations shall clearly refer to the applicable AASHTO provisions as stated in the Notes on the Contract Drawings.

Documentation of computer programs including all design parameters.

c. Construction Specifications:

Construction methods specific to the proprietary retaining wall chosen. These specifications should include construction limitations including vertical clearance, right-of-way limits, etc. Submittal requirements for materials such as certification, quality, and acceptance/rejection criteria should be included. Details on connection of modular units and connection of reinforcements such that assurance of uniform stress transfer should be included.

Any requirements not stated herein.

The submissions for proprietary retaining walls shall be treated as working drawings according to Section 1.05 amended as follows:

a. Six sets of each submission shall be supplied to the State

b. The Contractor shall allow 21 days for the review of each submission. If subsequent submissions are required as a result of the review process, 21 days shall be allowed for review of these submissions. No extensions in contract time will be allowed for the review of these submissions.

4 - Final Submissions: Once a proprietary retaining wall design has been reviewed and accepted by the Department, the Contractor shall submit the final plans. The final submission shall include one set of full size (approximately 24" x 36") mylar sheets and five sets of full size blue line copies.

The final submission shall be made within 14 days of acceptance by the State. No work shall be performed on the retaining wall until the final submission has been received by the Department.

Acceptance of the final design shall not relieve the Contractor of his responsibility under the contract for the successful completion of the work.

The actual designer of the proprietary retaining wall is responsible for the review of any shop drawings prepared for the fabrication of the wall. One set of full size blue line copies of all approved shop drawings shall be submitted to the Department's permanent records.

5 - General Design Requirements:

a. All designs for proprietary walls and temporary earth retaining systems shall conform to the latest edition of the American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges and later interims published except as noted otherwise herein:

b. The wall design shall follow the general dimensions of the wall envelope shown in the contract plans.

c. The top of the concrete leveling pad shall be located at or below the theoretical leveling pad elevation. The minimum wall embedment shall be two feet as measured to the top of the leveling pad or as shown on the plans.

d. If footing steps are required, they shall be kept below the minimum embedment depth. Footing steps in addition to those shown on the plans will be permitted at no additional cost to the State.

e. The wall shall be designed to be within all property lines and easement lines shown on the contract drawings. If additional work areas are necessary for the construction of the proprietary retaining wall, the Contractor shall be responsible for obtaining the rights from the affected property owners. Copies of these rights shall be forwarded to the Department.

f. The top of the wall shall be at or above the top of the wall elevations shown on the plans. The top of the wall may be level or stepped to meet the top of the wall line noted. The maximum exposed vertical elevation from the finished grade in front of the wall to the top of the wall shall be less than four feet.

g. Cast-in-place concrete will not be an acceptable replacement for areas noted by the wall envelope, except for minor grouting of pipe penetrations.

h. The mechanical wall height for the purposes of design calculations shall be from the top of the leveling pad to the top of the potential failure surface where the failure surface intercepts the ground surface.

i. The minimum length of internal soil reinforcement shall be as specified in AASHTO 5.8.1, except for the minimum eight (8.0’) foot length requirement.

i. If there are specific surcharges acting on the wall, they shall also be accounted for. The minimum equivalent fluid pressure used to design the wall shall be 33 lbs./ft^2 per linear foot of wall.

j. The maximum allowable bearing capacity of the soil shall be assumed to be 4 ksf unless otherwise shown on the plans. If additional soils information is required by the designer, it must be obtained by the Contractor and will not be reimbursed by the State.

k. For limit state allowable stress computations of extensible reinforcements, the combined factor of safety for construction damage and environmental/aging effects shall not be less than 1.75.

Materials:

Materials shall conform to the following requirements and those not listed below shall be as prescribed within the Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, including supplemental specifications and applicable special provisions.

1 – Facing Block: The facing block can be precast or drycast concrete and shall be the color specified on the plans. The block shall meet the following requirements:

Drycast Concrete:

The minimum compressive strength of the block shall be 4000 psi measured at 28 days.

The maximum water absorption shall be less than five percent.

The Contractor shall submit to the Engineer a certified test report confirming the compressive strength and water absorption conform to the requirements of ASTM C-140.

Precast Concrete: Shall conform to the requirements of Section M.03 and as follows:

The minimum compressive strength of the block shall be 4000 psi measured at 28 days.

All precast concrete components shall be air-entrained composed of portland cement, fine and coarse aggregates, admixtures and water. The air-entraining feature may be obtained by the use of either air-entraining portland cement or an approved air-entraining admixture. The entrained-air content shall be not less than four percent or more than seven percent.

2 - Geosynthetic Soil Reinforcement: The minimum strength of the geosynthetic soil reinforcement shall be based on experimental data. The Contractor shall submit to the Engineer a certified test report confirming the strength of the material when tested according to the methods specified in ASTM D5262 and extrapolated according to ASTM D2837 as outlined in AASHTO Article 5.8.7.2.

3 – Metallic Soil Reinforcement: All soil reinforcement and structural connectors shall be hot dipped galvanized according to the requirements of ASTM A123 (AASHTO M-111). The minimum thickness of the galvanizing shall be based on the service life requirements in the AASHTO Specifications.

Steel strip reinforcement shall be hot rolled to the required shape and dimensions. The steel shall conform to AASHTO M223 (ASTM A572) Grade 65 unless otherwise specified.

Welded wire fabric reinforcement shall be shop fabricated from cold-drawn wire of the sizes and spacings shown on the plans. The wire shall conform to the requirements of ASTM A82, fabricated fabric shall conform to the requirements of ASTM A185.

4 - Metal Connectors: All metal hardware shall be hot dipped galvanized according to the requirements of ASTM A123 (AASHTO M-111). The minimum thickness of the galvanizing shall be based on the service life requirements in the AASHTO Specifications.

5 - Backfill Material: The material for backfill shall be Pervious Structure Backfill conforming to the requirements of Articles M.02.05 and M.02.06.

6 - Facing Sealer: The face of all exposed drycast block shall be coated with clear Penetrating Sealer Protective Compound conforming to the requirements of Article M.03.01-11.

Construction Methods: All construction methods for items not listed below shall be in accordance with the detailed requirements prescribed for the construction of the several contract items entering into the completed structure as specified in the Standard Specifications for Roads, Bridges, Facilities and Incidental Construction.

1 - Installation: The foundation for the structure shall be graded level for a width equal to or exceeding the length of the soil reinforcements, or as shown on the plans. If rock is encountered in the excavation, it shall removed to provide a level area equal to or exceeding the length of the soil reinforcements, but not greater than the pay limits shown on the plans.

Prior to wall construction, the foundation, if not in rock, shall be compacted as directed by the Engineer. Any foundation soils found to be unsuitable shall be removed and replaced.

At each foundation level, an unreinforced concrete leveling pad shall be provided as shown on the plans. The leveling pad shall have nominal dimensions of 6 inch thickness and 24 inch width, and shall be cast using minimum 2,000 psi 28-day compressive strength concrete. The leveling pad shall be cast to the design elevations as shown on the plans. Allowable elevation tolerances are +0.01 foot (1/8 inch), and -0.02 foot (1/4 inch), from the design elevation.

The materials for the wall shall be handled carefully and installed in accordance with manufacturer's recommendations and specifications. Special care shall be taken in setting the bottom course of blocks to true line and grade.

All blocks above the first course shall interlock with the lower courses by means of connecting pins. Vertical joints shall be staggered with each successive course as shown on the working drawings. Vertical tolerances and horizontal alignment tolerances measured from the face line shown on the plans shall not exceed ½ inch when measured along a 8-foot straightedge. The overall tolerance of the wall from top to bottom shall not exceed ½ inch per eight feet of wall height or one inch total, whichever is the lesser, measured from the face line shown on the plans. A bond breaker shall be placed between the blocks and any adjacent cast-in-place concrete.

2 - Backfilling: Backfill placement shall closely follow erection of each course of panels. Backfill shall be placed in such a manner as to avoid any damage or disturbance to the wall materials or misalignment of the facing panels. Any wall materials which become damaged or disturbed during backfill placement shall be either removed and replaced at the Contractor's expense or corrected, as directed by the Engineer. Any backfill material placed within the reinforced soil mass which does not meet the requirements of this specification shall be corrected or removed and replaced at the Contractor's expense.

Backfill shall be compacted to 95 percent of the maximum density as determined by AASHTO T-99, Method C or D (with oversize correction, as outlined in Note 7).

The moisture content of the backfill material prior to and during compaction shall be uniform throughout each layer. Backfill material shall have a placement moisture content less than or equal to the optimum moisture content. Backfill material with a placement moisture content in excess of the optimum moisture content shall be removed and reworked until the moisture content is uniform and acceptable throughout the entire lift. The optimum moisture content shall be determined in accordance with AASHTO T-99, Method C or D (with oversize correction, as outlined in Note 7).

If 30 percent or more of the backfill material is greater than 19 mm in size, AASHTO T-99 is not applicable. For such a material, the acceptance criterion for control of compaction shall be either a minimum of 70 percent of the relative density of the material as determined by a method specification provided by the wall supplier, based on a test compaction section, which defines the type of equipment, lift thickness, number of passes of the specified equipment, and placement moisture content.

The maximum lift thickness after compaction shall not exceed 10 inches, regardless of the vertical spacing between layers of soil reinforcements. The Contractor shall decrease this lift thickness, if necessary, to obtain the specified density. Prior to placement of the soil reinforcements, the backfill elevation at the face shall be level with the connection after compaction. From a point approximately three feet behind the back face of the panels to the free end of the soil reinforcements the backfill shall be two inches above the attachment device elevation unless otherwise shown on the plans.

Compaction within three feet of the back face of the panels shall be achieved by at least three passes of a lightweight mechanical tamper, roller or vibratory system. The specified lift thickness shall be adjusted as warranted by the type of compaction equipment actually used. Care shall be exercised in the compaction process to avoid misalignment of the panels or damage to the attachment devices. Heavy compaction equipment shall not be used to compact backfill within three feet of the wall face.

At the end of each day's operation, the Contractor shall slope the last level of backfill away from the wall facing to direct runoff of rainwater away from the wall face. The Contractor shall control and divert runoff at the ends of the wall such that erosion or washout of the wall section

does not occur. In addition, the Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3 - Face Sealer: After the wall has been erected, the entire exposed face of the wall shall be coated with Penetrating Sealer Protective Compound. The application of the sealer shall conform to the requirements Article 8.18.03. Several samples of the dry cast block shall be sealed prior to sealing the actual wall to ensure that the sealer will not discolor the block. If the sealer does discolor the block, the Contractor shall change to another approved supplier of sealer.

Method of Measurement:

This work will be paid for on a lump sum basis and will not be measured for payment.

Basis of Payment:
This work will be paid for at the contract lump sum for "Embankment Wall (Site No.1)" and "Additional Embankment Wall (Site No. 1) (Non-Participating)", complete in place, which prices shall include all work within the pay limits shown on the original contract plans for EMBANKMENT WALL (SITE NO.1), and all additional work as required to construct the wall to the limits and elevations shown on the additional contract plan included in Addendum 1 for ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING), for the completed retaining wall including but not limited to the following:

Design, detailing, and specifications for the wall. Excavation for the wall. Design and Construction of temporary earth retaining systems for the support of the slope during construction. Construction of the Embankment Wall, including the unreinforced concrete leveling pad. The furnishing, placing and compacting of pervious structure backfill within the maximum payment lines. The furnishing and placing of backfill drainage systems for the wall. Any other work and materials shown on the plans for the construction of the wall.

The price shall also include all materials, equipment, tools and labor incidental thereto.

If bedrock or large boulders (greater than one cubic yard) are encountered in the excavation, the payment for its removal will be made under the item "Structure Excavation - Rock".

Item No.	Description	Unit
0601445A	EMBANKMENT WALL (SITE NO. 1)	L.S.
0601446A	ADDITIONAL EMBANKMENT WALL (SITE NO. 1) (NON-PARTICIPATING)	L.S.

STMH
TF=63.4–HPC

HOUSE STREET

PER MAP REF.

FFL=63

B-D
B-E
2nd sty.
DECK ABOVE
SPKLR. CLOSET
CONT. ENT.
COV. ENT.

3

180'–8"SAN @ 1.0%

12"HDPE OVERFLOW

2

FOUNDATION
BUILDING #4
30 UNITS

TOP OF BRICK SHELF ELEV.= 64.79
TOP OF FOUNDATION ELEV.= 65.47

TOP OF BRICK SHELF ELEV.= 64.30
TOP OF FOUNDATION ELEV.= 65.45

FFL=65.5

FFL=64.0

SERVICE

SL

25 SPACES

PAVEMENT INFILTRATION
5,194 C.F.

17 SPACES

CB#13
TF=61.50
FL=57.50(E)

PROP. GARAGE
6 SPACES
ff=64.3

66.33'

20.67'

12"HDPE OVERFLOW

12"HDPE

267'–8"SAN @ 1.0%

SMH#7
TF=61.50
INV=54.50

190'–8"SAN @ 2.0%

20

AS BUILT
FOUNDATION
BUILDING #

TOP OF BRICK SHELF ELEV.= 63.30
TOP OF FOUNDATION ELEV.= 63.99

14

WATER QUALITY BASIN
BOT ELEV.=55.0

GLASTONBURY EXPRESSWAY (RT.#2)

SPKLR. CLOSET
B-E
B-D
B-C
B-7
6 UNITS
41.00' x 107.08'
B-B
B-A
A
FFL=64.5
4,365 s.f.

SMH#3
TF=64.20
INV=51.83

B-A
B-B
B-C
B-D
B-E
A
B-6
6 UNITS
ROOF INFILTRATION
BUILDING #6
1,344 C.F.

B-E
B-D
B-C
B-B
B-A
A
B-5
6 UNITS
ROOF INFILTRATION
BUILDING #5
1,344 C.F.

FIN. FLR. = 65.0
FIN. FLR. = 65.7
FIN. FLR. = 64.7
FIN. FLR. = 63.0

30' PROPOSED BLDG SET BACK

O.S.#20
TF=57.00
FL=51.50(E)

PROPOSED
SIGN

SMH#2
TF=63.0
INV=51.33

50'–8" SAN

15' SLOPE RTS. IN FAVOR OF
TOWN OF GLASTONBURY

S 60°39'58" E
91.15'

147'–8" SAN
@ 1.0%

EXISTING EDGE OF PAVEMENT

PROP. 102' EXTENTION OF RET. WALL

PROP. S. CONC. SIDEWALK

PROP. CURB LINE

PROP. 10' EXTENTION OF RET. WALL RETURN

PROP. LIMITS OF SLOPE EASE. PER MAP REFERENCE "A"

PROP. HIGHWAY LINE PER MAP REFERENCE "A"

HEBRON AVENUE

PROP. 12H:1V SLOPE (RETAINING WALL)
PER MAP REFERENCE "B"

PROP. BASELINE FOR HEBRON AVE.
PER MAP REFERNCE "A"

NOTE REVISED
TOP OF WALL
ELEVATION
SHOWN IN
GREEN
THROUGHOUT
LENGTH OF WALL

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES:

1. SURVEY NOTES:
   - –This survey has been prepared pursuant to the Regulation of Connecticut State Agencies Section 20–300b–1 Through 20–300b–20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996.
   - –Type Of Survey is LOCATION SURVEY
   - –Boundary Determination Category is DEPENDENT RESURVEY PER MAP REFERENCE
   - –Class of Accuracy is HOR.–"D"
2. MAP REFERENCE: A). "RIGHT OF WAY SURVEY TOWN OF GLASTONBURY MAP SHOWING EASEMENTS ACQUIRED FROM GLASTONBURY DEVELOPERS, L.L.C. #347–349 HEBRON AVE BY TOWN OF GLASTONBURY FOR INTECTION IMPROVEMENTS FOR HEBRON AVENUE ROUNDABOUTS"
   B). "TOWN OF GLASTONBURY, CONNECTICUT INTERSTION IMPROVMENT HEBRON AVENUE ROUNDABOUT HOUSE STREET, GRADING AND DRAINAGE PLAN 1" SCALE: 1"= 20', DATED: SEPT. 08, 2017, PREPARED BY: CDM SMITH / TIGHE & BOND"

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON:

Paul A. Hallisey — OCT. 17, 2017

PAUL A. HALLISEY, LS — LIC. NO. 7761 — DATE

THIS DOCUMENT AND COPIES THEREOF ARE VALID ONLY IF THEY BEAR THE SIGNATURE AND EMBOSSED SEAL OF THE DESIGNATED LICENSED PROFESSIONAL. UNAUTHORIZED ALTERATIONS TO THIS PLAN RENDER THE DECLARATION HEREON NULL AND VOID. VALID ONLY ON MAPS BEARING EMBOSSED SURVEYOR'S SEAL

SCALE: 1"=20'	CHECKED BY: J.P.C.	SHEET: 1 OF: 1	
DATE: OCT. 17, 2017	DRAWN BY: G.T.		REVISIONS:
JOB No.: 2627	ACAD FILE: 2627–HEBRON AVE		

HALLISEY, PEARSON & CASSIDY
CIVIL ENGINEERS & LAND SURVEYORS
35 COLD SPRING ROAD,
SOUTHWAY EXECUTIVE PARK - UNIT #511
ROCKY HILL, CONNECTICUT

INTERSECTION IMPROVEMENTS ANALYSIS PLAN
HERBON AVE & HOUSE STREET ROUNDABOUT
AT
GLASTONBURRY MEWS
HEBRON AVENUE AND HOUSE STREET
GLASTONBURY, CONNECTICUT

STATE OF CONNECTICUT
JAMES F. CASSIDY
NO. 20665
LICENSED
PROFESSIONAL ENGINEER