301 Brooklea Drive
Fayetteville, NY 13066
Phone 315-637-3414
Fax 315-637-0713

Deputy Supervisor:
Alissa Italiano

Town Board:
Sara Bollinger
Ingrid Gonzalez-McCurdy
Katelyn Kriesel
Michael Nesci
William Nicholson

Agenda
Town Board Meeting
March 25, 2026
6:30 PM

Use the Manlius Town Board's recurring Zoom Link!
The same link will be used for all meetings.

Join from PC, Mac, iPad, or Android:
https://us02web.zoom.us/j/87987327153

Pledge Of Allegiance

Town Supervisor Resignation

Proclamation

1. Women's History Month
2. Arbor Day

Open Podium

Public Hearing

1. Proposed Local Law - E911 Surcharge Exemption
2. Drainage District #4 - Hoag Lane

Planning & Development

1. Life Safety Inspection Vault - Modification

Town Highway Department

1. Office Furniture

Assessment

1. Esri Renewal Contracat

Muirfield Drainage

1. IDH Contract

Letter of Support - Onondaga County Planning Department

1. 2026 Town of Manlius Watershed Stewards Greenways/Blueways Grant Program Application

Finance

1. Credit Card Policy

Request for Letters of Interest

1. IT Services

Legal Services

1. Engagement Addendum - Generation of a Fire/EMS Report

Human Resources Consulting

1. ProNexus - Letter of Intent

Routine Business

1. Budget Items
2. Announcements
3. Approval of Minutes - March 11, 2026
4. Approval of Abstract

Executive Session

Adjournment

Proclamation

This proclamation is Recognizing Women's History Month
March 2026

Whereas: *Women's History Month is celebrated throughout March to honor the contributions women have made to the United States and the world; and*

Whereas: *The 2026 theme, "Leading the Change: Women Shaping a Sustainable Future," highlights the ongoing leadership of women in creating a better world; and*

Whereas: *Women have been foundational in the fight for equality, from the suffrage movement to modern efforts for gender equity;and*

Whereas: *Matilda Joslyn Gage, whose 200th birthday is celebrated this week, was an advocate for human rights, for women's suffrage and for the rights of Native Americans; and*

Whereas: *Women voted in the referendum to form the Village in Minoa in 1913, years before women were allowed to vote nationally; and*

Whereas: *Marian Loosmann was elected Mayor of Fayetteville in 1992,the first woman to be a Mayor in the Town; and*

Whereas: *it is vital to recognize the intersectional experiences of women, including those from diverse backgrounds, and women with disabilities and*

Whereas: *the people of the Town of Manlius are proud to recognize the accomplishments of women in our community and nation;*

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of Manlius proudly proclaim March 2026 as Women's History Month and urges all citizens to celebrate the accomplishments of women and honor the women who have paved the way for future generations.

IN WITNESS WHEREOF, we have hereunto set our hands this 25th day of March, 2026.

Alissa Italiano *Deputy-Supervisor*	*Sara Bollinger* *Councilor*	*William Nicholson* *Councilor*
Katelyn M. Kriesel *Councilor*	*Michael Nesci* *Councilor*	*Ingrid Gonzalez-McCurdy* *Councilor*

Proclamation

This proclamation is Recognizing Arbor Day
April 3, 2026

Whereas: *In 1872, the Nebraska Board of Agriculture established a special day to be set aside for the planting of trees, and*

Whereas: *this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska, and*

Whereas: *Arbor Day is now observed throughout the nation and the world, and*

Whereas: *trees provide critical environmental functions in the Town that combat the effects of climate change, including capturing and filtering rainwater, reducing the impacts of erosion of our topsoil by wind and water, reducing flooding, providing natural wind barriers, reducing ambient temperatures, and*

Whereas: *trees provide habitat for the Town's local and migratory wildlife, and*

Whereas: *trees provide numerous economic benefits including increased property values, reducing home heating and cooling costs, enhancing the economic vitality of business districts, and*

Whereas: *trees have been proven to have positive impacts on personal and social well-being, including improving immune system function, lowering blood pressure, and increasing community bonds, and*

Whereas: *the community is gathered today for the annual Town of Manlius Fish Stock event which celebrates our community's ongoing commitment to stewardship of our natural resources,*

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of Manlius proudly proclaim April 3, 2026 as Arbor Day in the Town of Manlius by encouraging community participation through a tree seedling giveaway, fostering a family-friendly celebration of this important occasion, and promoting the planting and stewardship of trees in every household so that their environmental, social, and economic benefits may be enjoyed and sustained for present and future generations.

IN WITNESS WHEREOF, we have hereunto set our hands this 25th day of March, 2026.

Alissa Italiano *Deputy-Supervisor*	*Sara Bollinger* *Councilor*	*William Nicholson* *Councilor*
Katelyn M. Kriesel *Councilor*	*Michael Nesci* *Councilor*	*Ingrid Gonzalez-McCurdy* *Councilor*

IN THE MATTER

Of

LOCAL LAW 2026 -___ A LOCAL LAW ENACTED PURSUANT TO THE PROVISIONS OF COUNTY LAW § 334(6) REGARDING THE E911 SURCHARGE EXEMPTION

RESOLUTION ENACTING LOCAL LAW

The **TOWN BOARD OF THE TOWN OF MANLIUS**, in the County of Onondaga, State of New York, met in regular session at the Town Hall in the Town of Manlius, located at 301 Brooklea Drive in the Village of Fayetteville, County of Onondaga, State of New York, and virtually on the platform commonly referred to as Zoom, the Town Facebook page and YouTube on the 26th of March, 2026, at 6:30 p.m.

The meeting was called to order by Deputy Supervisor Italiano, and the following were present, namely:

Alissa Italiano	Deputy Supervisor
Sara Bollinger	Councilor
Michael Nesci	Councilor
Katelyn M. Kriesel	Councilor
William Nicholson	Councilor
Ingrid Gonzalez-McCurdy	Councilor

The following resolution was moved, seconded and adopted:

WHEREAS, a proposed local law to wit: Local Law 2026 - ___, entitled "A Local Law Enacted Pursuant to County Law § 334(6) Regarding the E911 Surcharge Exemption," (the "Proposed Law") was introduced to the Town Board pursuant to subdivision (6) of County Law

§ 334 which exempts municipalities that have enacted a local law pursuant to the provisions of that section from the surcharge imposed thereunder; and

WHEREAS, the language of the Proposed Law is as follows:

LOCAL LAW 2026 -___,
A LOCAL LAW ENACTED PURSUANT TO THE PROVISIONS OF COUNTY LAW § 334(6) REGARDING THE E911 SURCHARGE EXEMPTION

BE IT ORDAINED AND ENACTED by the Town Board of the Town of Manlius, County of Onondaga, State of New York, as follows:

Section 1. Authority.

This local law is enacted pursuant to the provisions of County Law § 334, including subdivision (6) thereof, and the Municipal Home Rule Law.

Section 2. Findings and Purpose.

The Town of Manlius is located within Onondaga County, which operates an enhanced 911 (E911) emergency telephone system pursuant to County Law § 334.

The purpose of this local law is to enact a local law pursuant to County Law § 334(6) in order to qualify the Town of Manlius for the municipal exemption from the E911 surcharge authorized and imposed thereunder.

Section 3. Election of Municipal Exemption.

The Town of Manlius hereby enacts this local law pursuant to County Law § 334(6) and elects the municipal exemption from any E911 surcharge imposed under County Law § 334.

Section 4. Severability.

If any provision of this local law is held invalid by a court of competent jurisdiction, such invalidity shall not affect the remaining provisions of this local law.

Section 5. Effective Date.

This local law shall take effect upon filing with the Secretary of State.

******

WHEREAS, the Town Board scheduled a public hearing on the Proposed Law to be held on March 26, 2026, and provided due notice of the hearing in accordance with applicable law; and

WHEREAS, the Town Board held the duly noticed public hearing on March 26, 2026, at which all interested persons were afforded an opportunity to be heard; and

WHEREAS, the Proposed Law was referred to the Onondaga County Planning Board pursuant to General Municipal Law § 239-m and no disapproval or required modifications were issued; and

WHEREAS, the Town Board determined that the adoption of the Proposed Law constitutes a Type II action under the New York State Environmental Quality Review Act (SEQRA) and is, therefore, not subject to further environmental review; and

WHEREAS, the Town Board now wishes to adopt the Proposed Law as Local Law No. 2026 - ___ of the Town of Manlius;

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of Manlius, County of Onondaga, State of New York, hereby adopts Local Law 2026-__ as set forth in this Resolution; and be it

FURTHER RESOLVED, that the Town Clerk is hereby ordered to file Local Law 2026-__ with the Secretary of State within 20 days of adoption of this Resolution pursuant to Municipal Home Rule Law.

I, CARRIE GREVELDING, Town Clerk of the Town of Manlius, **DO HEREBY CERTIFY** that the preceding Resolution was duly adopted by the Town Board of the Town of Manlius at a regular meeting of the Board duly called and held on the 26th day of March 2026; that said Resolution was entered in the minutes of said meeting; that I have compared the foregoing copy with the original thereof now on file in my office; and that the same is a true and correct transcript of said Resolution and of the whole thereof.

I FURTHER CERTIFY that all members of said Board had due notice of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Manlius, this ____th day of March 2026.

DATED: March ____, 2026
Fayetteville, New York

_____
Carrie Grevelding
Town Clerk of the Town of Manlius
Onondaga County, New York

Exhibit A

Map Plan and Report

[Attached hereto.]

01/27/2026

Project Description
Proposed Woodland Hills Drainage District
Woodland Hills Subdivision 5280 Hoag Lane
Town of Manlius
Onondaga County, New York

It is proposed that Hoag Road Properties, LLC, install 12" HDPE piping, 15" HDPE pipe, 18" HDPE pipe, 24" HDPE pipe, and 30" HDPE pipe, 12 new catch basins, 14 storm inlets, appurtenances, and all stormwater management facilities with outlet structures to serve the Woodland Hills Subdivision located on the south side of Hoag Lane, in the town of Manlius.

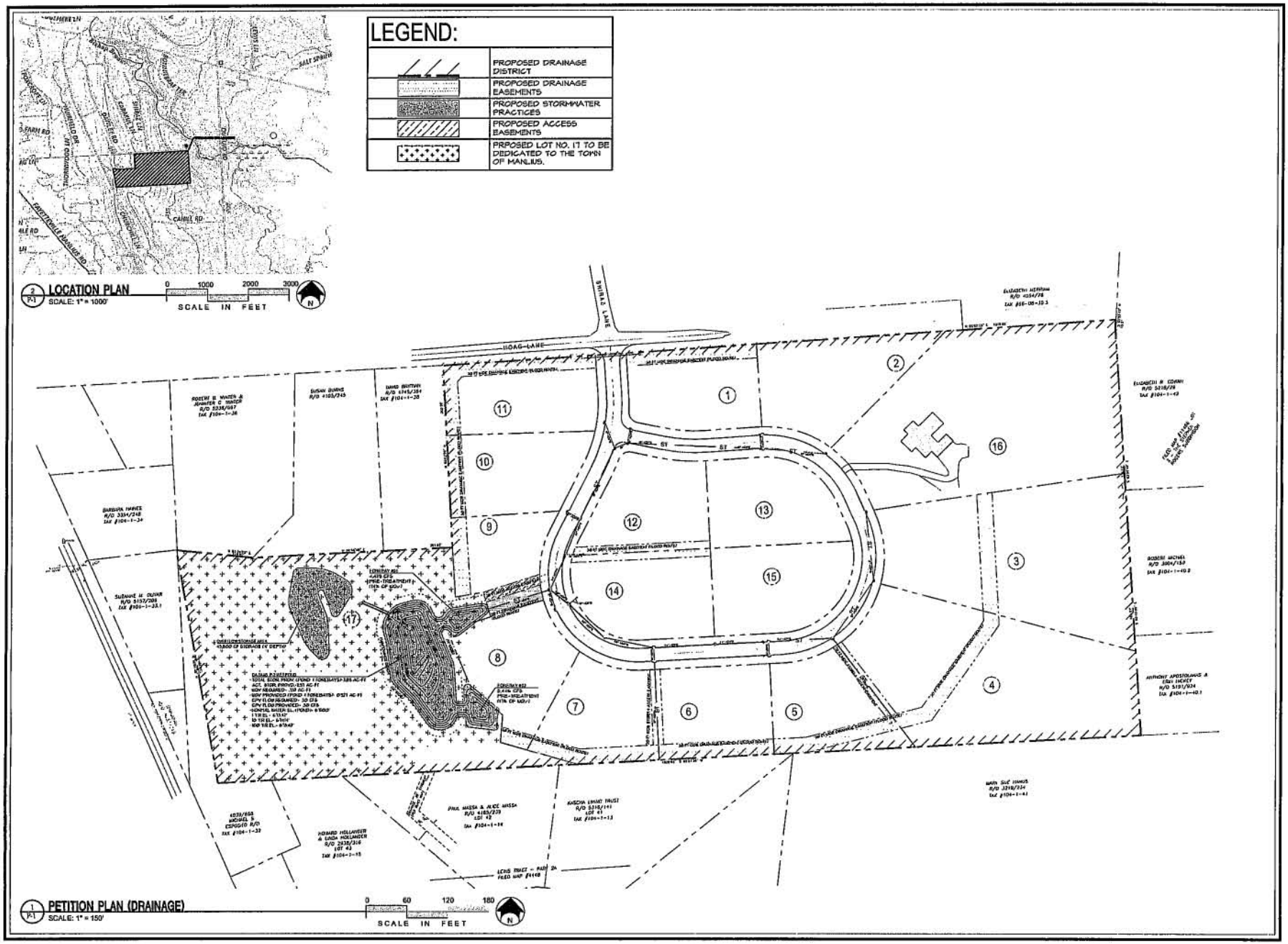
The facilities will be constructed by Hoag Road Properties, LLC located south of Hoag Lane in the town of Manlius, NY and will be dedicated to the Town of Manlius when built to the specification of the Town. The stormwater runoff will be conveyed to all storm water management facilities located in the Woodland Hills Subdivision. For the description of the meets and bounds of the Woodland Hills Subdivision refer to the attached Woodland Hills Subdivision Perimeter Description prepared by SeGuin Land Surveying, P.L.L.C.

In our opinion, the probable construction cost for the storm sewer facilities will be $400,000 +/-. These costs along with district formation costs will be borne by the Developer.

The proposed project is shown on the accompanying plan prepared by RZ Engineering, PLLC, dated October 9, 2025 having File No. 17061.

There will be an annual charge by the Town of Manlius to individual lots within the district for operation and maintenance of the storm sewer system serving this development. There are 16 equivalent dwelling units within the proposed district. The estimated annual cost for operation and maintenance of the storm sewer system serving this District will be $7,500 resulting in an estimated cost of $468.75 per lot (with a total of 16 lots). The Town of Manlius measures residential property as 1 unit per single family lot.

RZ Engineering, PLLC
6320 Fly Road, Suite 20
East Syracuse, NY 13057



RZ Engineering, PLLC
6320 FLY ROAD, SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1009
FAX (315) 995-7981

KEPPLINGER FREEMAN ASSOCIATES
LANDSCAPE ARCHITECTURE & LAND PLANNING

WOODLAND HILLS DRAINAGE DISTRICT

5280 HOAG LANE
TOWN OF MANLIUS ONONDAGA COUNTY

REVISIONS

Drawn By	DPR
Checked By	RLZ
Proj. No.	17061
Date	01/02/2025
Scale	AS NOTED

PETITION PLAN
DRAINAGE

P-1

Exhibit B

Metes and Bounds Description of Drainage District #4

[Attached hereto.]

LEGAL DESCRIPTION

ALL THAT PARCEL OF LAND located in the Town of Manlius, County of Onondaga and State of New York, depicted as being Lot 1 as shown on a certain Survey Map prepared by D. W. Hannig L.S., P.C. dated September 19, 2011, and revised on October 31, 2011, entitled "The Stephen Rogers Subdivision", and filed in the Onondaga County Clerk' Office on December 21, 2011, as Map No 11466, and being described as follows:

BEGINNING AT A POINT, said point being the southeast corner of Hoag Lane;

THENCE South 01 degrees 36 minutes 48 seconds West for a distance of 15.31 feet to a point;

THENCE South 05 degrees 10 minutes 49 seconds East for a distance of 323.12 feet to a point;

THENCE South 05 degrees 05 minutes 00 seconds East for a distance of 485.67 feet to a point;

THENCE South 85 degrees 38 minutes 56 seconds West for a distance of 1809.96 feet to a point;

THENCE North 11 degrees 35 minutes 13 seconds West for a distance of 469.36 feet to a point;

THENCE South 85 degrees 33 minutes 33 seconds East for a distance of 150.60 feet to a point;

THENCE North 84 degrees 57 minutes 25 seconds East for a distance of 391.92 feet to a point;

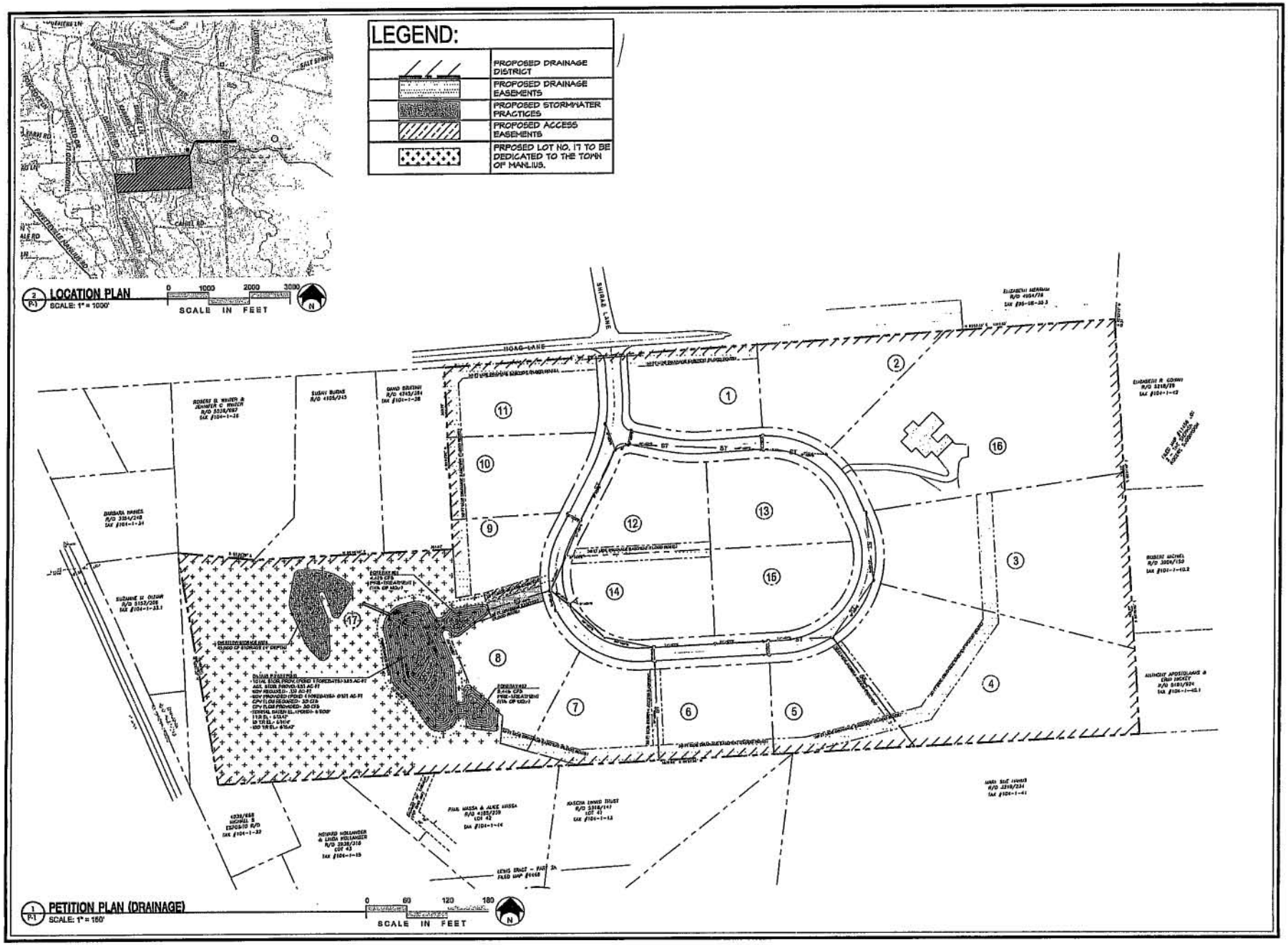
THENCE North 05 degrees 02 minutes 33 seconds West for a distance of 360.76 feet to a point;

THENCE North 84 degrees 57 minutes 30 seconds East for a distance of 1323.48 feet along the southerly line of Hoag Lane **TO THE POINT AND PLACE OF BEGINNING.**

Exhibit C

Map of Improvements

[Attached hereto.]



RZ Engineering, PLLC
6320 FLY ROAD, SUITE 109
EAST SYRACUSE, NY 13057
PH (315) 432-1089
FAX (315) 445-7981

KEPPLINGER FREEMAN ASSOCIATES
LANDSCAPE ARCHITECTURE & LAND PLANNING

WOODLAND HILLS DRAINAGE DISTRICT

5280 HOAG LANE
TOWN OF MANLIUS ONONDAGA COUNTY

REVISIONS

Drawn By	DPR
Checked By	RJZ
Proj. No.	17081
Date	01/07/2025
Scale	AS NOTED

PETITION PLAN
DRAINAGE

P-1

PERMITTING SERVICES ADDENDUM TO MASTER SERVICES AGREEMENT

This Permitting Services Addendum ("**Addendum**"), dated as of _____ ("**Addendum Effective Date**"), is by and between the undersigned Client and Life Safety Inspection Vault LLC, a Delaware limited liability company ("**LIV**"), and is made part of the Master Services Agreement, dated as of January 2, 2025 ("**Agreement**"), between Client and LIV. Capitalized terms used, but not otherwise defined, in this Addendum have the meanings given to them in the Agreement.

This Addendum supplements and modifies the Agreement, as follows:

1. Engagement. In addition to the Services contemplated by the Agreement, Client engages LIV to provide Client with web-based management of the Client's fire-related permitting process (collectively, the "**Permitting Services**"). In accordance with the terms of the Agreement, LIV will provide the Permitting Services through the Vault.

2. Compensation. LIV will receive compensation for the Permitting Services as follows:

(a) Option 1. LIV will collect from each user submitting a permit application a fee of (A) $5 if the permit application fee is less than $50, or (B) 10% of the permit application fee if the permit application fee is $50 or more ("**Permit Fee**"). The Permit Fee will be due and payable by the end user upon submitting a permit application.

(b) Fees Additional. For clarity, the Permit Fees are separate from and in addition to any Fixed Fees LIV will collection in connection with the Services.

(c) Refunds. If Client elects to refund any permit application fees to the applicant it may do so in its discretion. If Client so elects, it shall notify LIV and, if Client so notifies LIV within 30 days after the date that LIV submitted that Permit Fee to Client in accordance with Section **Error! Reference source not found.** of this Addendum ("**Payment Date**"), LIV will refund the applicable Permit Fee to Client. If Client has prepaid any Subscription Fees and thereafter elects to terminate this Addendum, Client may request that LIV refund prepaid Subscription Fees for monthly periods after the effective date of the termination (as described in Section 3 of this Addendum) ("**Termination Date**"). LIV, in its discretion, may elect to refund some or all of those Subscription Fees. LIV is not obligated to honor any refund request made more than 30 days after, as applicable, the Payment Date or the Termination Date.

3. Term; Termination. The term of this Addendum begins on the Addendum Effective Date and continues until terminated by either party. Client may, for any or no reason, terminate this Addendum on written notice to LIV, with the termination being effective as of 11:59 pm (Mountain time) on the last day of the billing period in which Client properly delivers its termination notice. LIV may, for any or no reason, terminate this Addendum on 60 days written notice to Client, with the termination being effective at 11:59 pm (Mountain time) on the 60th day after LIV properly delivers its termination notice to Client. Either party may terminate

this Addendum for cause if the party alleged to be in breach of this Addendum is given written notice of the breach and fails to cure the breach within 30 days after such notice.

4. Interpretation. Headings in this Addendum are for convenience only and will not affect its meaning. Every covenant, term, and provisions of this Addendum must be construed simply according to its fair meaning and not strictly for or against any party. The words "include," "includes," and "including" are deemed to be followed by the words "without limitation;" the word "or" is not exclusive; and the words "herein," "hereof," "hereby," "hereto," and "hereunder" refer to this Addendum as a whole. This Addendum must be construed without regard to any presumption or rule requiring construction or interpretation against the party drafting an instrument or causing any instrument to be drafted.

5. Reaffirmation. Except as expressly amended or modified by this Addendum, all of the terms, conditions, and other provisions of the Agreement will continue in full force and effect in accordance with their respective terms. In the event of any conflict or ambiguity between the terms of this Addendum and those of the Agreement, the terms of this Addendum will control solely with respect to the subject matter of this Addendum from and after the Addendum Effective Date. The Agreement, as amended by this Addendum, constitutes the entire understanding and agreement between the parties with respect to the subject matter herein and therein, and supersedes any and all prior or contemporaneous communications or agreements, whether written or verbal, with respect to such subject matter.

6. Counterparts. This Addendum may be signed by any number of counterparts, each of which will be deemed an original, and all of which constitute the same Addendum. Delivery of an executed counterpart signature page of this Addendum by electronic means (including .pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com, or other electronic means intended to preserve the original graphic and pictorial appearance of a document) has the same effect as delivery of an executed original of this Addendum.

The parties are signing this Addendum as of the Addendum Effective Date.

Client:
The Town of Manlius, a municipal corporation of the State of New York

By: _____

Name:_____

Title:_____

LIV:
Life Safety Inspection Vault LLC,
a Delaware limited liability company

By: _____
Cole Harding, President

syracuse office environments

Proposal

Syracuse Office Environments
375 Erie Blvd W
Syracuse, NY 13202
Phone: 315.476.9091
www.soesyr.com

Order Number	16381
Date	03/06/2026
Customer PO No	
Customer Name	TOWN OF MANLIUS
Salesperson	Joe De Santis
Project Number	
Terms	NET 15
Page	1 of 7

TO
TOWN OF MANLIUS
301 BROOKLEA DRIVE
FAYETTEVILLE, NY 13066

ATTN: ACCOUNTS PAYABLE
Phone: 315-637-3414

SHIP TO
TOWN OF MANLIUS
HIGHWAY GARAGE
5970 CLEMONS ROAD
EAST SYRACUSE, NY 13057

ATTN: KAY BLYTHE
Phone: 315-632-7306
Email: kblythe@townofmanlius.org

Prepared for : Joe De Santis

PRICING PER HON NYS CONTRACT – PC70286

PLEASE MAKE PO OUT TO:
HON
C/O SOE
200 OAK STREET
MUSCATINE IA 52761

Group	Quantity	Description	Unit Price	Extended Amount
A	1.0	CONFERENCE	2,298.49	2,298.49

Line	Quantity	Description	Unit Price	Extended Amount
1	4.00 Each	HIWMU--.Y1-.F-.S-$(1)-.UR-94-.NL-.SB-.T Ign 2.0 Mid-back Upholstered .Y1:Synchro-Tilt W Seat Slider .F:Fixed .S:Black All-Surface Caster $(1):Grade 1 Uph .UR:Contourett 94:Baltic .NL: .SB:Standard Base .T:Black Tag: Tag TG: Conf Tag GC: CONFERENCE ROOM	349.89	1,399.56
2	1.00 Each	HTLC4284--.G-SA-.N-$(L1STD)-.LSA1 84"Wx42"D Rect Shaped Lam Top .G:2MM/Flat SA:Sterling Ash .N:No Grommets $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash Tag: Tag TG: Conf Tag GC: CONFERENCE ROOM	460.01	460.01
3	1.00 Each	HTTLEG84--$(P2)-.PR6 Aluminum T leg for 84" Table Tops $(P2):P2 Paint Opts .PR6:Silver Tag: Tag TG: Conf Tag GC: CONFERENCE ROOM	438.92	438.92

Group	Quantity	Description	Unit Price	Extended Amount
B	1.0	FOREMAN'S OFFICE	2,440.62	2,440.62

Line	Quantity	Description	Unit Price	Extended Amount
4	2.00 Each	H10579--$(L1STD)-.LSA1-LSA1 10500 Series Desk Shell 66W x 30D x 29-1/2H $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash LSA1:Sterling Ash Tag: Tag TG: Foremen	382.30	764.60

		Tag GC: FOREMAN OFFICE		
5	2.00 Each	HIWMM--.Y2-.A-.S-.IM-$(1)-.UR-94-.BL-.SB-.T Ignition 2 Task Mid-back .Y2:Advanced Synchro-Tilt SeatSldr .A:Height and Width Adj. Arm .S:Black All-Surface Caster .IM:4-Way Black $(1):Grade 1 Uph .UR:Contourett 94:Baltic .BL:Black Adjustable Lumbar .SB:Standard Base .T:Black Tag: Tag TG: Formen Tag GC: FOREMAN OFFICE	392.06	784.12
6	2.00 Each	HLSL2428B--$(L1STD)-.LSA1-$(L1STD)-.LSA1-.PR6 24"D x 28" Box/Box/File Pedestal Support $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash .PR6:Silver Tag: Tag TG: Formen Tag GC: FOREMAN OFFICE	445.95	891.90

Group	Quantity	Description	Unit Price	Extended Amount
C	1.0	PRIVATE OFFICE	3,919.02	3,919.02

Line	Quantity	Description	Unit Price	Extended Amount
7	1.00 Each	H105684X--$(L1STD)-.LSA1-LSA1 10500 Series Return Shell 29-1/2H x 60W x 24D $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash LSA1:Sterling Ash Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	336.61	336.61
8	1.00 Each	HHATW3072CT--$(L1STD)-.LSA1-.SA-.X-.P 72W x 30D Rect Worksurface - C/T Base $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash .SA:Sterling Ash .X:No Grommet .P:Black Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	208.43	208.43
9	1.00 Each	HIWMM--.Y2-.A-.S-.IM-$(1)-.UR-94-.BL-.SB-.T Ignition 2 Task Mid-back .Y2:Advanced Synchro-Tilt SeatSldr .A:Height and Width Adj. Arm .S:Black All-Surface Caster .IM:4-Way Black $(1):Grade 1 Uph .UR:Contourett 94:Baltic .BL:Black Adjustable Lumbar .SB:Standard Base .T:Black Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	392.06	392.06
10	2.00 Each	H105532--$(L1STD)-.LSA1-LSA1 10500 Series Bookcase 2-shelf 36Wx13-1/8Dx29-5/8H $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash LSA1:Sterling Ash Tag: Tag TG: Exec Office	250.70	501.40
11	1.00 Each	HLSL2028B--$(L1STD)-.LSA1-$(L1STD)-.LSA1-.PR6 20"D x 28" Box/Box/File Pedestal Support	403.39	403.39

		$(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash .PR6:Silver Tag: Tag TG: Exec Office Tag GC: PRIVATE OFFICE		
12	2.00 Each	HNL30SHR--.X-$(L1STD)-.LSA1 Shroud 30"D .X:No Grommet $(L1STD):L1 Standard Lam Opts .LSA1:Sterling Ash Tag: Tag TG: Exec Office Tag GC: PRIVATE OFFICE	479.14	958.28
13	1.00 Each	HNLAB2SIL--$(P2)-.PR6-.MEM 2 Stage HAT 2 Integrated Leg $(P2):P2 Paint Opts .PR6:Silver .MEM:Memory Preset Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	425.65	425.65
14	1.00 Each	HTLSCUSQRT18MML--.N-$(L1STD)-.P-$(P2)-.PR6-.G Sculpt 18" Sq. Tray Tbl -Med Mtl Legs .N:No Cutout $(L1STD):Grd L1 Standard Laminates .P:Black $(P2):P2 Paint Opts .PR6:Silver .G:Glide Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	515.46	515.46
15	1.00 Each	HUSLMOD1348--$(L1STD)-.LSA1-.SA-.P Laminate Modesty 13h x 48w $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash .SA:Sterling Ash .P:Black Tag: Tag TG: Exec office Tag GC: PRIVATE OFFICE	177.74	177.74

Group	Quantity	Description	Unit Price	Extended Amount
D	1.0	READY ROOM	7,040.70	7,040.70

Line	Quantity	Description	Unit Price	Extended Amount
16	6.00 Each	HMBTLEG24--.G-$(P2)-.PR6 Huddle Fixed Height T-leg bas For 24" tops .G:Glide $(P2):P2 Paint Opts .PR6:Silver Tag: Tag TG: Ready Room Tag GC: READY ROOM	269.45	1,616.70
17	12.00 Each	HMG1--.N-.F-.RE-.PR8 Motivate 4-Leg Stack Chair-Set/2 .N:No Arm .F:Felt Glide .RE:Regatta .PR8:Silver Texture Tag: Tag TG: Ready Room Tag GC: READY ROOM	329.19	3,950.28
18	6.00 Each	HMT3060G--.N-$(L1STD)-.LAHD-.LOFT Huddle 30x60 Table Top w/Edgeband .N:No Grommets $(L1STD):Grd L1 Standard Laminates .LAHD:Handspun Dove .LOFT:Loft Tag: Tag TG: Ready Room	245.62	1,473.72

		Tag GC: READY ROOM		

Group	Quantity	Description	Unit Price	Extended Amount
E	1.0	RECEPTION	1,413.61	1,413.61

Line	Quantity	Description	Unit Price	Extended Amount
19	1.00 Each	HIWMM--.Y2-.A-.S-.IM-$(1)-.UR-94-.BL-.SB-.T Ignition 2 Task Mid-back .Y2:Advanced Synchro-Tilt SeatSldr .A:Height and Width Adj. Arm .S:Black All-Surface Caster .IM:4-Way Black $(1):Grade 1 Uph .UR:Contourett 94:Baltic .BL:Black Adjustable Lumbar .SB:Standard Base .T:Black Tag: Tag TG: Reception Tag GC: RECEPTION	392.06	392.06
20	1.00 Each	HTLSCURECCNSL1253--$(L1STD)-.LSA1-$(P2)-.T1 Sculpt 12"x53" Rect Console Tbl $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash $(P2):P2 Paint Opts .T1:Platinum Metallic Tag: Tag TG: Reception	1,021.55	1,021.55

Group	Quantity	Description	Unit Price	Extended Amount
F	1.0	SHOP OFFICE	2,152.05	2,152.05

Line	Quantity	Description	Unit Price	Extended Amount
21	1.00 Each	H105R2448--$(L1STD)-.LSA1-SA 48Wx24D Rectangle Worksurface $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash SA:Sterling Ash Tag: Tag TG: Shop Office Tag GC: SHOP OFFICE	140.58	140.58
22	1.00 Each	H10524LEP--$(L1STD)-.LSA1 15-3/4Wx23-7/8Dx28-1/2H L-Shaped End Panel $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash Tag: Tag TG: Shop Office Tag GC: SHOP OFFICE	143.70	143.70
23	1.00 Each	H10592--$(L1STD)-.LSA1-LSA1 10500 Series Desk Shell 72W x 30D x 29-1/2H $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash LSA1:Sterling Ash Tag: Tag TG: Shop office Tag GC: SHOP OFFICE	403.00	403.00
24	2.00 Each	HIGS6--.F-.E-.U-$(1)-.UR-94-.T Ignition Guest/Multi-Purpose Chair Four-Leg Stacking .F:Fixed .E:Nylon Glide .U:Upholstered $(1):Grade 1 Uph .UR:Contourett 94:Baltic .T:Black Tag: Tag TG: Shop office Tag GC: SHOP OFFICE	247.97	495.94

25	1.00 Each	HIWMBT--.Y4-.V-.A-.IM-$(1)-.UR-94-.BL-.SB-.T-.N Ign 2.0 Big & Tall .Y4:Synchro-Tilt .V:All-Adjustable Arm .A:All Surface Caster .IM:4-Way Black $(1):Grade 1 Uph .UR:Contourett 94:Baltic .BL:Black Adjustable Lumbar .SB:Standard Base .T:Black .N:No Headrest Tag: Tag TG: Shop Office Tag GC: SHOP OFFICE	565.44	565.44
26	1.00 Each	HLSL2028B--$(L1STD)-.LSA1-$(L1STD)-.LSA1-.PR6 20"D x 28" Box/Box/File Pedestal Support $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash .PR6:Silver Tag: Tag TG: Shop Office Tag GC: SHOP OFFICE	403.39	403.39

Group	Quantity	Description	Unit Price	Extended Amount
G	1.0	TRAINING ROOM	17,382.13	17,382.13

Line	Quantity	Description	Unit Price	Extended Amount
27	44.00 Each	HIGS6--.N-.S-.U-$(1)-.UR-18-.PR8T Ignition Guest/Multi-Purpose Chair Four-Leg Stacking .N:Armless .S:All Surface Caster .U:Upholstered $(1):Grade 1 Uph .UR:Contourett 18:Cloud .PR8T:Textured Silver Tag: Tag TG: Training Room Tag GC: TRAINING ROOM	263.98	11,615.12
28	12.00 Each	HMPTT2460--.N-$(L1STD)-.LAHS-.S Between 24x60 Table Top .N:No Grommets $(L1STD):Grd L1 Standard Laminates .LAHS:Handspun Slate .S:Charcoal Tag: Tag TG: Training Room	215.17	2,582.04
29	12.00 Each	HMPTBNTL--$(P2)-.PR6 Long Nesting Base for 60W & 72W Tops $(P2):P2 Paint Opts .PR6:Silver Tag: Tag TG: Training Room Tag GC: TRAINING ROOM	199.55	2,394.60
30	1.00 Each	HTLLECTA--$(L1STD)-.LOFT-.J Preside Laminate Lectern $(L1STD):Grd L1 Standard Laminates .LOFT:Loft .J:Loop Satin Nickel Tag: Tag TG: Training Room Tag GC: TRAINING ROOM	790.37	790.37

Group	Quantity	Description	Unit Price	Extended Amount
H	1.0	VESTIBULE	515.46	515.46

syracuse office environments

Proposal

Syracuse Office Environments
375 Erie Blvd W
Syracuse, NY 13202
Phone: 315.476.9091
www.soesyr.com

Order Number	16381
Date	03/06/2026
Customer PO No	
Customer Name	TOWN OF MANLIUS
Salesperson	Joe De Santis
Project Number	
Terms	NET 15
Page	6 of 7

Line	Quantity	Description	Unit Price	Extended Amount
31	1.00 Each	HTLSCUSQRT18MML--.N-$(L1STD)-.LSA1-$(P2)-.T1-.G Sculpt 18" Sq. Tray Tbl -Med Mtl Legs .N:No Cutout $(L1STD):Grd L1 Standard Laminates .LSA1:Sterling Ash $(P2):P2 Paint Opts .T1:Platinum Metallic .G:Glide Tag: Tag TG: Vestibule Tag GC: VESTIBULE	515.46	515.46

Individual Items			9,847.95

Line	Quantity	Description	Unit Price	Extended Amount
32	1.00 Each	LOT INSTALLATION CHARGE	9,847.95	9,847.95

Order Sub-Total :	$47,010.03
TOTAL ORDER :	**$47,010.03**

PLEASE REVIEW THIS QUOTATION AND NOTIFY US PROMPTLY OF ANY CORRECTIONS REQUIRED

THANK YOU FOR THE OPPORTUNITY TO BE OF SERVICE

For Leasing Options Scan QR Code

syracuse office environments

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Salesperson	Joe De Santis
Project Number	
Terms	NET 15
Page	7 of 7

1. ACCEPTANCE. Acceptance of this proposal includes, but is not limited to, Buyer's signature on this proposal, total or partial acceptance of goods or services provided by Seller, or Buyer's use of Seller's bid in another bid proposal. Such acceptance shall be deemed an unconditional acceptance and shall create a binding contract. Seller reserves the right to revoke this offer any time prior to Buyer's acceptance. If this document is deemed to be an acceptance, the acceptance is expressly conditioned on the Buyer's assent to the exact terms and conditions contained herein, and any differing terms are rejected. If any changes in quantity, quality, or style are desired, another agreement must be signed by both Buyer and Seller. Seller and Buyer bind themselves, their successors, and assigns to this Agreement.

2. TITLE OF GOODS. Buyer shall take title to merchandise and assume obligation for payment and maintain insurance on the merchandise, commencing with the date at which Seller receives the merchandise at its premises or at a drop shipment location and notifies Buyer of such receipt.

3. BUYER OBLIGATIONS AND LIMITATIONS. Buyer shall furnish all details and explanations necessary to clarify plans and specifications. If merchandise is special ordered and the Buyer cancels through no fault of Seller, Seller will have to right to assess the Buyer a restocking charge. Buyer shall inspect goods within a reasonable time and notify Seller in writing within 72 hours of when Buyer becomes aware of any defects or nonconformity. Buyer shall give Seller reasonable time to cure any defects or nonconformity. The goods furnished by Seller are subject to variations in dye lots, color and finish, even within the same lot. Such variations shall not be considered defects. No claim or back charge of any nature shall be charged to or made against Seller unless the Buyer has made the required written notice and has the consent of Seller. Any changes against either party are to be accounted for and settled monthly. Buyer must notify Seller in writing of any breach of warranty. The Buyer's sole remedy for any breach of warranty shall be at Seller's discretion.

4. SELLER OBLIGATIONS AND LIMITATIONS. Seller agrees to supply Buyer with adequate documentation if needed for approval. Seller shall not be liable for any loss, damage, detention, delay or breach of this agreement caused by Owner, Architect, Designer, Buyer or any of Buyer's subcontractors or materialmen, or by delays in transportation or by causes beyond Seller's control. Seller is not liable for indirect or consequential damages to Buyer or third parties. Seller make no warranties not contained in writing. Material warranties will not exceed manufacturer's recommendations. Seller makes no warranty of merchantability or fitness for a particular purpose.

5. TAXES. Prices quoted in this Agreement are subject to sales or other excise taxes where applicable.

6. TERMINATION. If the Buyer stops, delays or interferes with performance of Seller, or fails to make payment when payment is due, or is any way in violation of the terms of this Agreement, Seller may, upon three (3) days written notice to Buyer, terminate this Agreement and recover from Buyer payment and or material for all work and material related to this Agreement completed or in process and any related costs, including Attorney's fees. Seller shall not be liable for any charges or expenses incurred by the Buyer in advance of the normal or reasonable lead time required to meet scheduled delivery dates.

7. NON-WAIVER. Waiver by either Seller or Buyer of a breach by the other of any provision so this Agreement shall not be deemed a waiver of future compliance with said provision. Such provision shall remain in full force and effect.

8. PAYMENT AND LIENS. Payment terms are determined by Seller at its sole discretion. Some purchases may require cash payments in advance. When credit terms are available, payment by Buyer shall be made within 10 days of date of invoice. Past due invoices may be subject to a late payments charge of 1.5% per month or the maximum rate permitted by law. Seller shall recover all costs and expenses, including attorney's fees related to collecting payment for the enforcement of this Agreement. Seller agrees to furnish a full and absolute release of liens upon request at the receipt of final payment.

9. ARBITRATION. All claims, disputes and other matters in question between Seller and Buyer arising out of, or in any way relating to this Agreement or the breach thereof, except those that have been waived or which are barred by the passage of time, waiver, or lack of required notice, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect. This Agreement to arbitrate shall be specifically enforceable under arbitration law and the ward rendered by the arbitrators shall be final and conclusive and judgement may be entered upon it, in accordance with the Federal Arbitration Act and other applicable law, in any court having jurisdiction thereof.

10. SEVERABILITY. If any provision of this Agreement is determined to unenforceable or invalid, the unenforceable or invalid part thereof shall be deemed severed from this Agreement, and the remaining portions of this Agreement shall be carried out with the same force and effect as if the severed portions had not been part of this Agreement.

11. APPLICABLE LAW. The rights and obligations under this Agreement shall be governed by the laws of the State of New York. Buyer and Seller agree that all arbitration proceedings shall be administered and held exclusively in Syracuse, New York, and that exclusive jurisdiction and venue for any litigation shall be New York State District Court for Onondaga County.

Signature: _____Name:_____ Title:_____ Date: _____

syracuse office environments

Proposal

Syracuse Office Environments
375 Erie Blvd W
Syracuse, NY 13202
Phone: 315.476.9091
www.soesyr.com

Order Number	16382
Date	03/06/2026
Customer PO No	
Customer Name	TOWN OF MANLIUS
Salesperson	Joe De Santis
Project Number	
Terms	NET 15
Page	1 of 2

TO
TOWN OF MANLIUS
301 BROOKLEA DRIVE
FAYETTEVILLE, NY 13066

ATTN: ACCOUNTS PAYABLE
Phone: 315-637-3414

SHIP TO
TOWN OF MANLIUS
HIGHWAY GARAGE
5970 CLEMONS ROAD
EAST SYRACUSE, NY 13057

ATTN: KAY BLYTHE
Phone: 315-632-7306
Email: kblythe@townofmanlius.org

Prepared for : Joe De Santis

PRICING PER OFGO NYS CONTRACT - PC70190

PLEASE MAKE PO OUT TO:

DSI Industries Inc. D/B/A OFGO Studio
C/O SOE
452 Millway Ave
Concord, ON L4K 3V7

Line	Quantity	Description	Unit Price	Extended Amount
1	3.00 Each	5100-SF-1S-IV--IV3-GR03-Carson CV-Graphite Vintage - 31"w x 32"d x 33.5"h - 1 Seater Sofa IV3:Silver GR03:Grade 3 Carson CV:Carson CV Graphite:Graphite Tag: Tag TG: Exec office Tag T5: 5100-SF-1S-IV	785.05	2,355.15
2	2.00 Each	5100-SF-1S-IV--IV3-GR03-Carson CV-Graphite Vintage - 31"w x 32"d x 33.5"h - 1 Seater Sofa IV3:Silver GR03:Grade 3 Carson CV:Carson CV Graphite:Graphite Tag: Tag TG: VESTIBULE Tag T5: 5100-SF-1S-IV	785.05	1,570.10
3	1.00 Each	LOT INSIDE DELIVERY CHARGE	785.05	785.05
			Order Sub-Total :	$4,710.30
			TOTAL ORDER :	**$4,710.30**

PLEASE REVIEW THIS QUOTATION AND NOTIFY US PROMPTLY OF ANY CORRECTIONS REQUIRED

THANK YOU FOR THE OPPORTUNITY TO BE OF SERVICE

For Leasing Options Scan QR Code

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Proposal

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Order Number	16382
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Customer Name	TOWN OF MANLIUS
Salesperson	Joe De Santis
Project Number	
Terms	NET 15
Page	2 of 2

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2. TITLE OF GOODS. Buyer shall take title to merchandise and assume obligation for payment and maintain insurance on the merchandise, commencing with the date at which Seller receives the merchandise at its premises or at a drop shipment location and notifies Buyer of such receipt.

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4. SELLER OBLIGATIONS AND LIMITATIONS. Seller agrees to supply Buyer with adequate documentation if needed for approval. Seller shall not be liable for any loss, damage, detention, delay or breach of this agreement caused by Owner, Architect, Designer, Buyer or any of Buyer's subcontractors or materialmen, or by delays in transportation or by causes beyond Seller's control. Seller is not liable for indirect or consequential damages to Buyer or third parties. Seller make no warranties not contained in writing. Material warranties will not exceed manufacturer's recommendations. Seller makes no warranty of merchantability or fitness for a particular purpose.

5. TAXES. Prices quoted in this Agreement are subject to sales or other excise taxes where applicable.

6. TERMINATION. If the Buyer stops, delays or interferes with performance of Seller, or fails to make payment when payment is due, or is any way in violation of the terms of this Agreement, Seller may, upon three (3) days written notice to Buyer, terminate this Agreement and recover from Buyer payment and or material for all work and material related to this Agreement completed or in process and any related costs, including Attorney's fees. Seller shall not be liable for any charges or expenses incurred by the Buyer in advance of the normal or reasonable lead time required to meet scheduled delivery dates.

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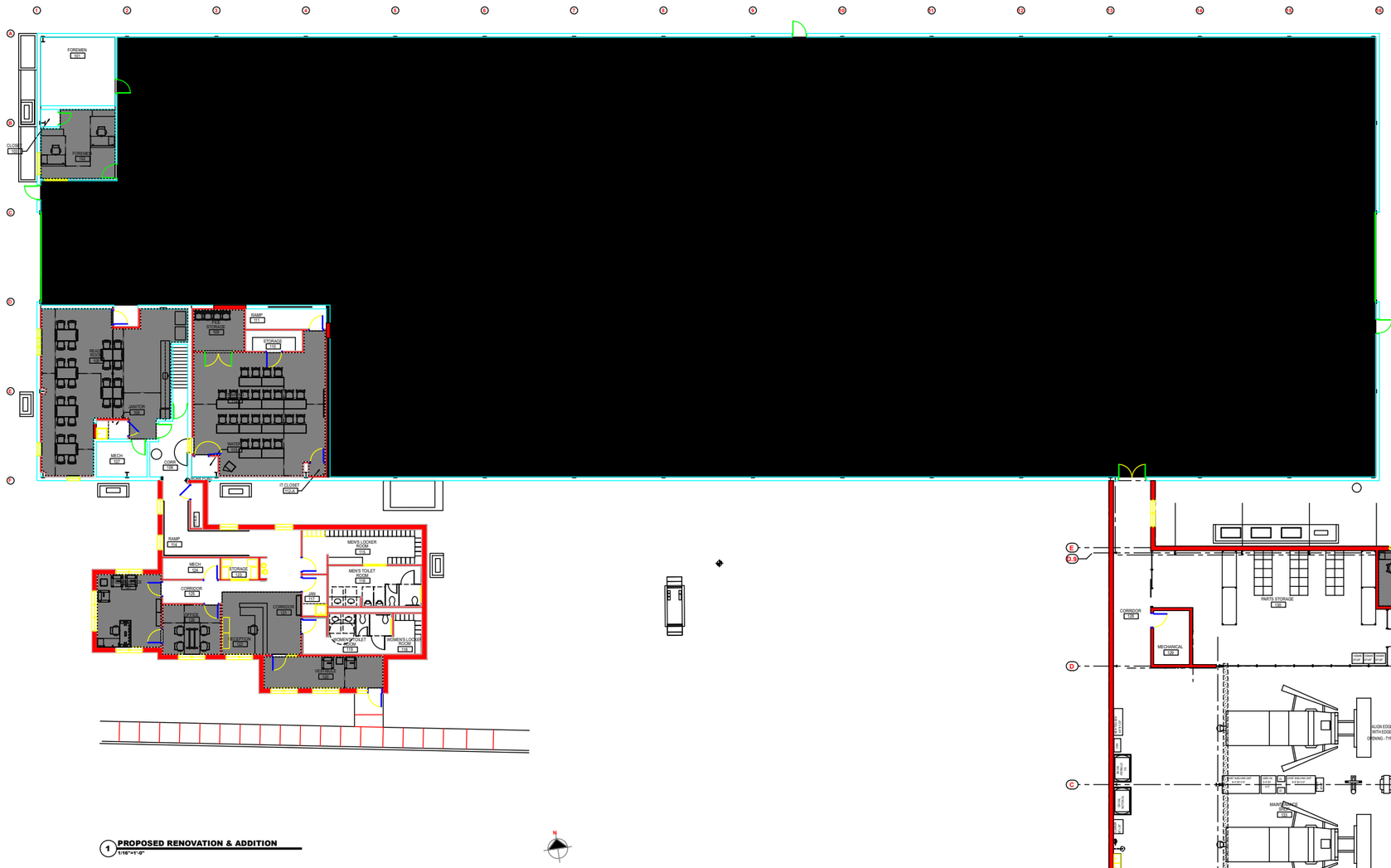
Signature: _____Name:_____ Title:_____ Date: _____

TOWN OF MANLIUS

OVERALL FURNITURE PLAN



1 **PROPOSED RENOVATION & ADDITION**
1/16"=1'-0"

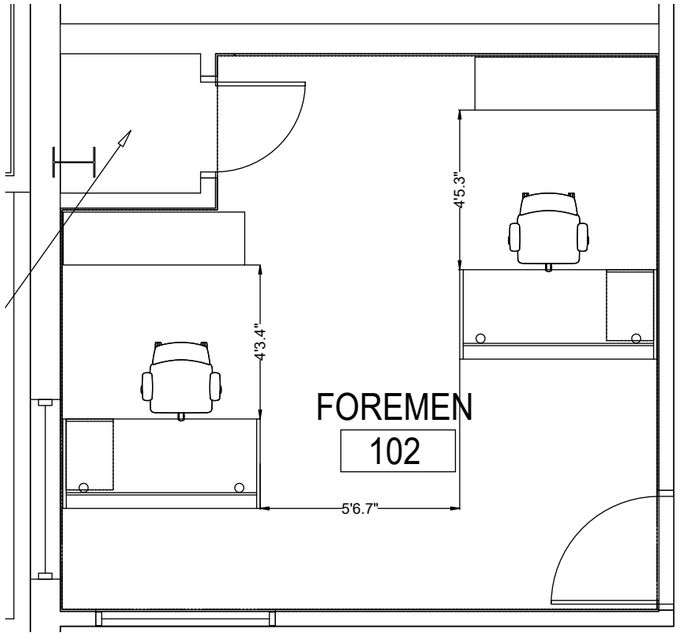
syracuse office environments
375 Erie Blvd. West
Syracuse, NY 13202
office 315.476.9091

PROJECT NUMBER:
SOE26-169
QUOTE NUMBER:
0
ORDER NUMBER:
0
CUSTOMER CONTACT:
TOWN OF MANLIUS
CUSTOMER LOCATION:
DESIGNER CONTACT:
CAITLIN ST. GERMAIN CSTGERMAIN@SOESYR.COM
SALES CONTACT:
JOE DE SANTIS DESANTIS@SOESYR.COM
REVISION DATE:
03/06/26
PLOT SIZE:
11X17
SITE VERIFIED:
YES ☐ NO ☐
COPYRIGHT:

NOTE: THIS DRAWING IS THE PROPERTY OF SOE-SYRACUSE. UNDER THE US COPYRIGHT LAWS THESE DRAWINGS MAY NOT BE REPRODUCED OR USED WITHOUT WRITTEN CONSENT FROM THE COMPANY.

TOWN OF MANLIUS

FOREMAN OFFICE







soe
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375 Erie Blvd. West
Syracuse, NY 13202
office 315.476.9091

PROJECT NUMBER:
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DESIGNER CONTACT:
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CSTGERMAIN@SOESYR.COM

SALES CONTACT:
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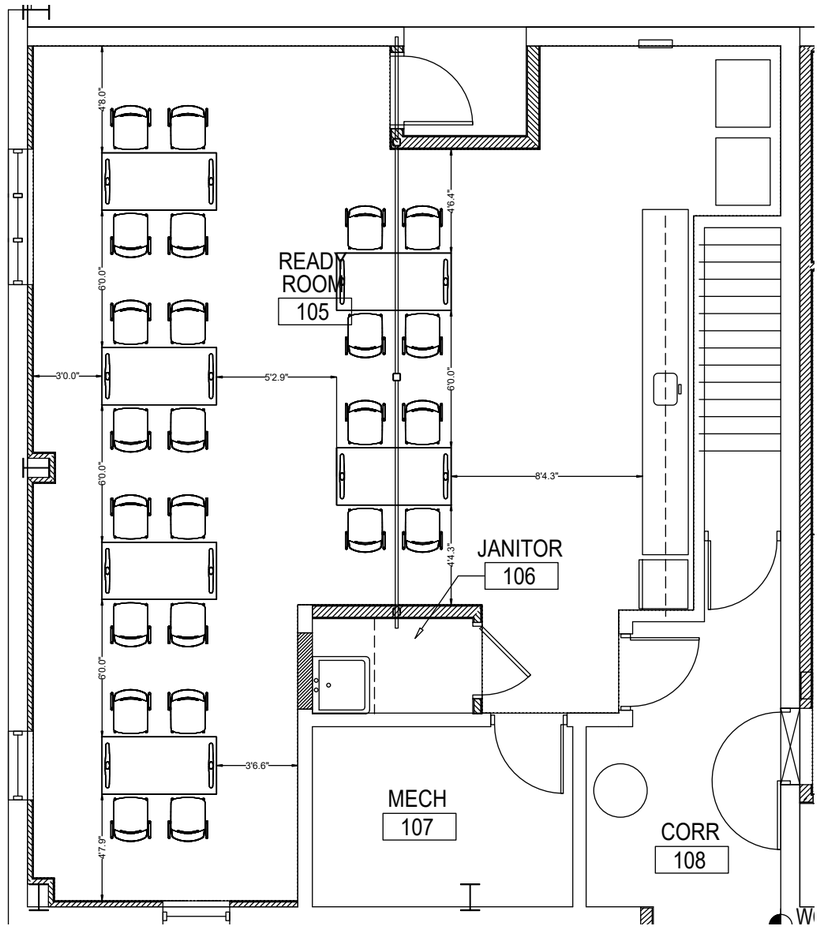
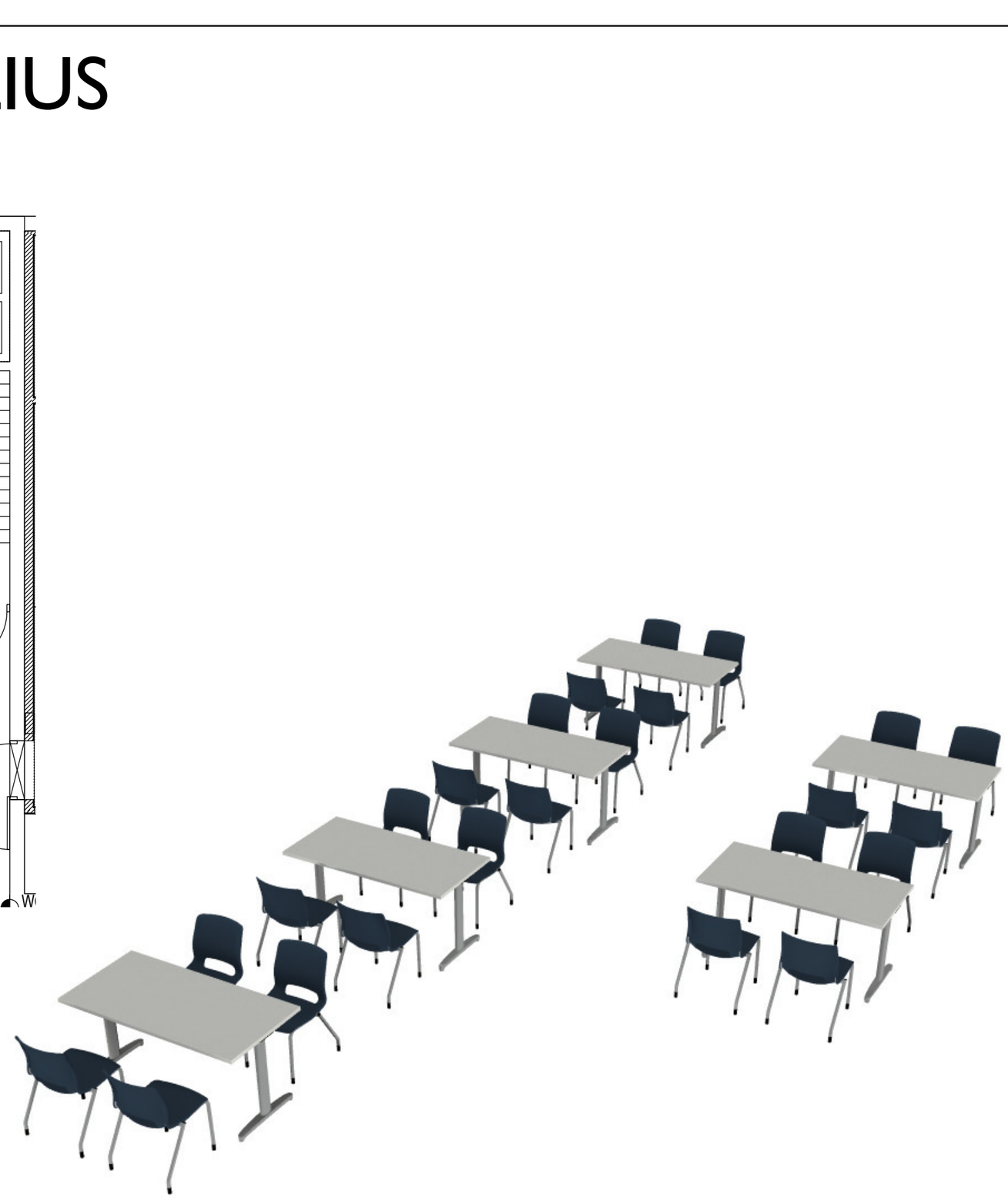
TOWN OF MANLIUS

READY ROOM





soe

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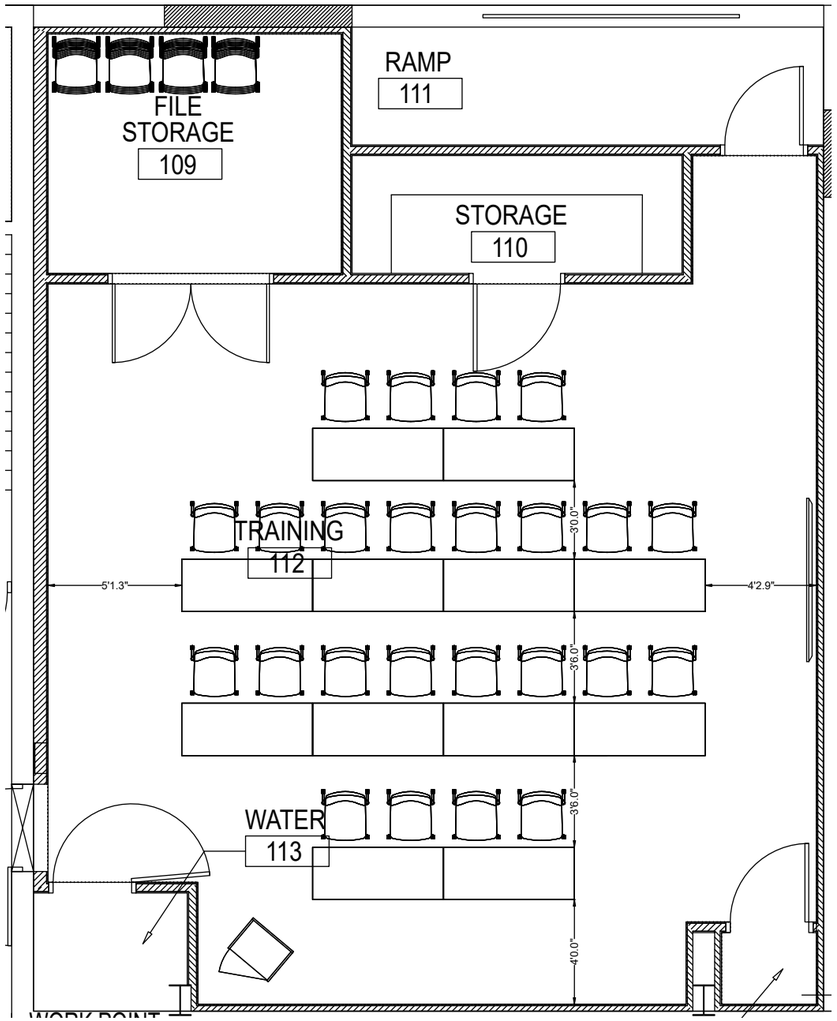
TOWN OF MANLIUS

TRAINING ROOM AND FILE STORAGE

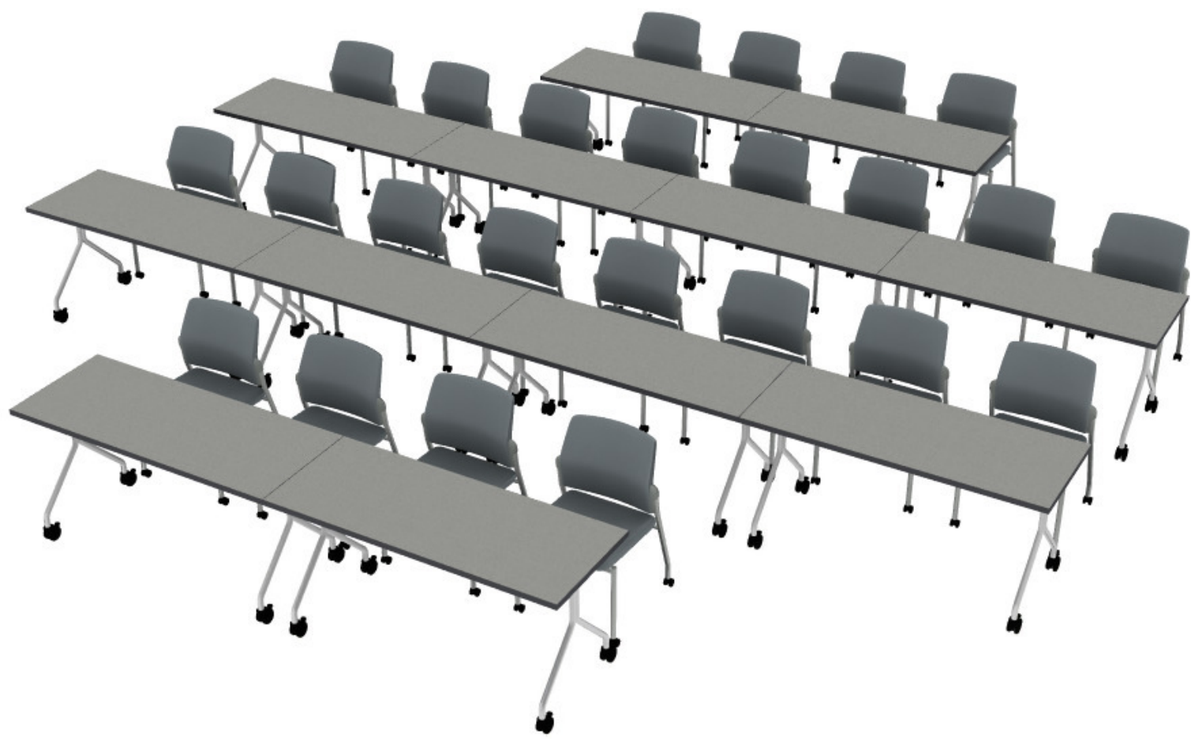




LECTURN



NESTED CHAIRS



soe

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375 Erie Blvd. West
Syracuse, NY 13202
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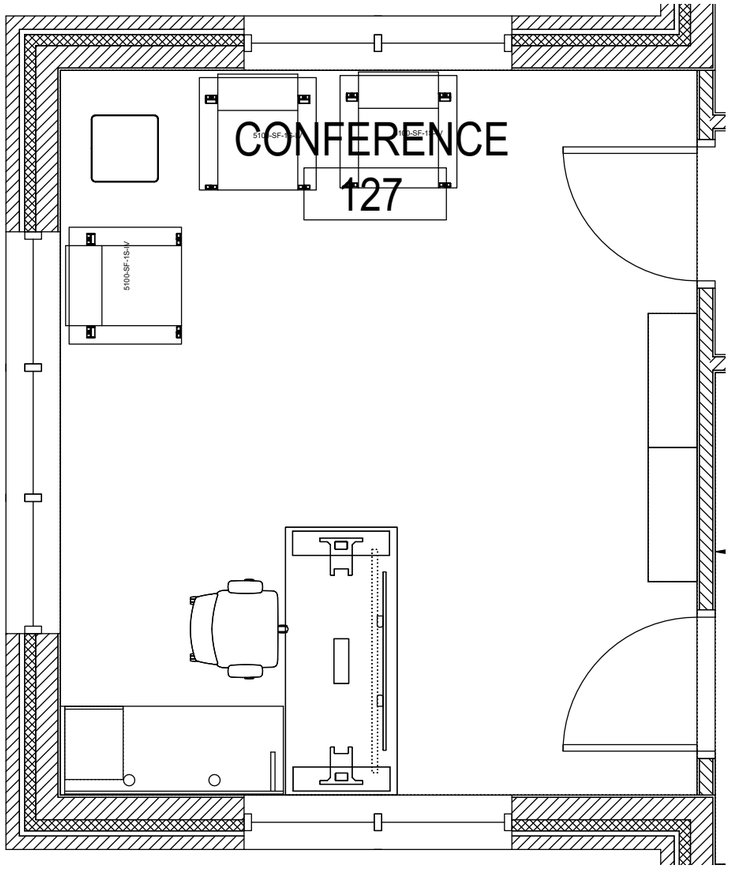
TOWN OF MANLIUS

PRIVATE OFFICE









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375 Erie Blvd. West
Syracuse, NY 13202
office 315.476.9091

PROJECT NUMBER:
SOE26-169

QUOTE NUMBER:
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ORDER NUMBER:
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CUSTOMER CONTACT:
TOWN OF MANLIUS

CUSTOMER LOCATION:

DESIGNER CONTACT:
CAITLIN ST. GERMAIN
CSTGERMAIN@SOESYR.COM

SALES CONTACT:
JOE DE SANTIS
DESANTIS@SOESYR.COM

REVISION DATE:
03/06/26

PLOT SIZE:
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SITE VERIFIED:
YES ☐ NO ☐

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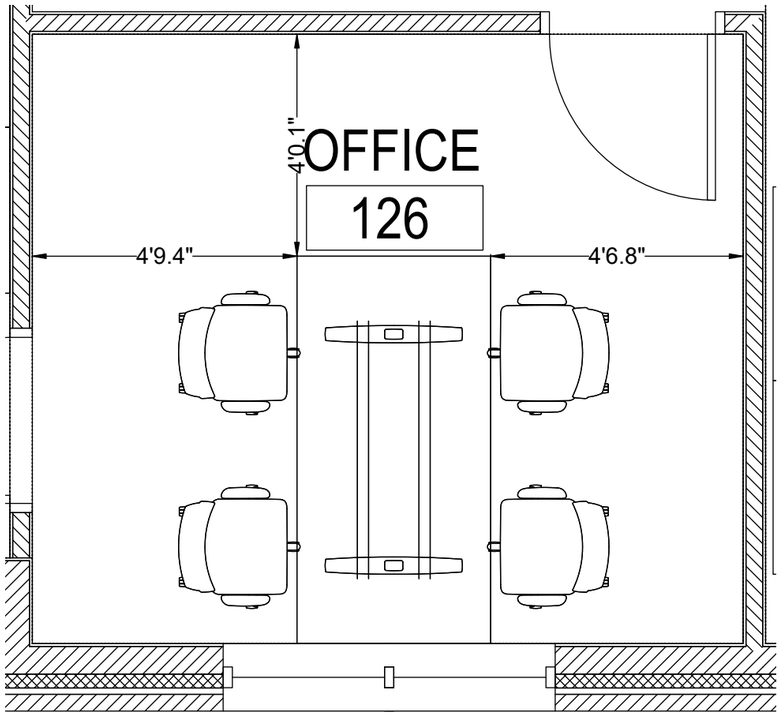
TOWN OF MANLIUS

CONFERENCE ROOM





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CSTGERMAIN@SOESYR.COM

SALES CONTACT:
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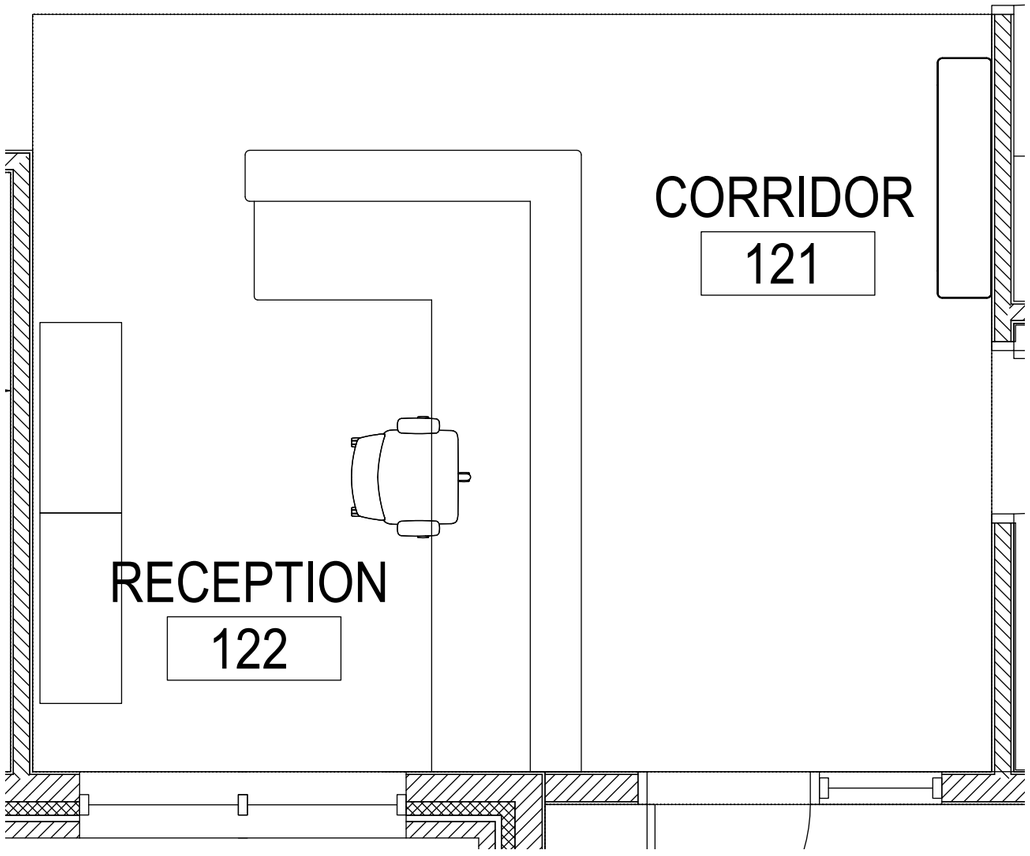
TOWN OF MANLIUS

RECEPTION DESK







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PROJECT NUMBER:
SOE26-169

QUOTE NUMBER:
0

ORDER NUMBER:
0

CUSTOMER CONTACT:
TOWN OF MANLIUS

CUSTOMER LOCATION:

DESIGNER CONTACT:
CAITLIN ST. GERMAIN
CSTGERMAIN@SOESYR.COM

SALES CONTACT:
JOE DE SANTIS
DESANTIS@SOESYR.COM

REVISION DATE:
03/06/26

PLOT SIZE:
11X17

SITE VERIFIED:
YES ☐ NO ☐

COPYRIGHT:

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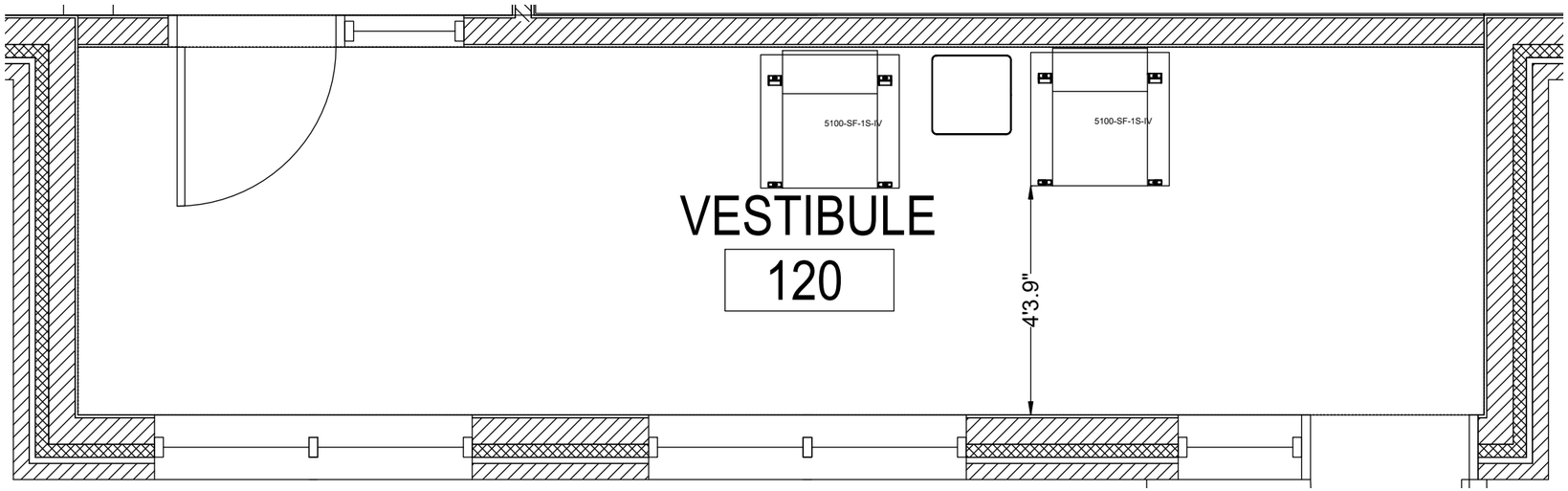
TOWN OF MANLIUS

VESTIBULE





syracuse office environments
375 Erie Blvd. West
Syracuse, NY 13202
office 315.476.9091

PROJECT NUMBER:
SOE26-169

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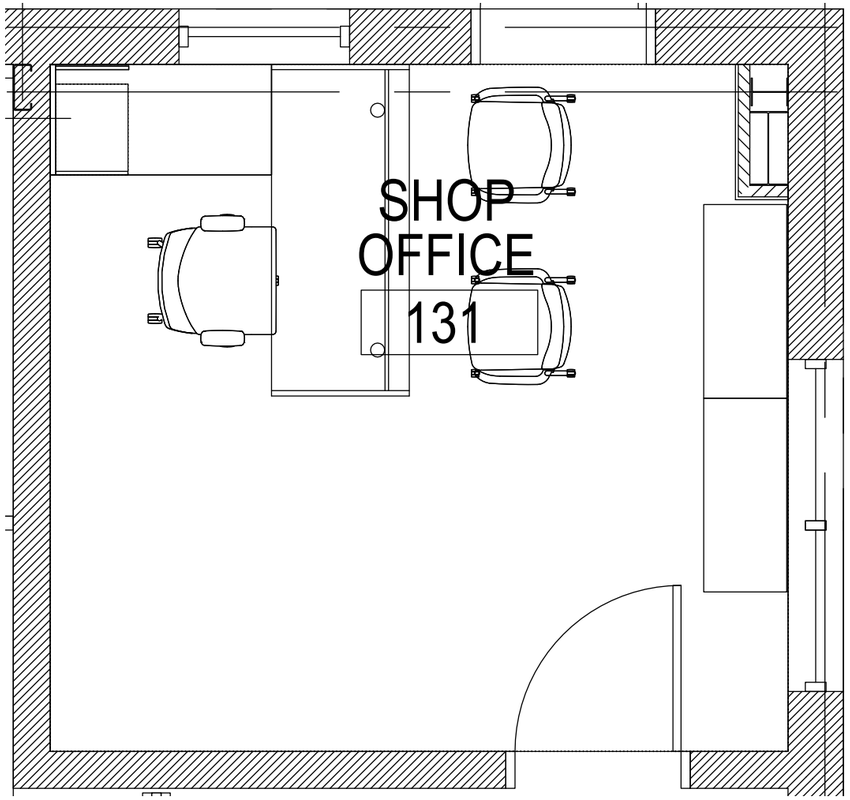
TOWN OF MANLIUS

SHOP OFFICE







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Esri Inc
380 New York St
Redlands CA 92373-8118

Subject: Renewal Quotation

Date: 01/02/2026
To: John Deer
Organization: Town of Manlius
Dept of Assessment
Fax #: 315-637-0713 **Phone #:** 315-637-9854

From: Pete Bennett
Fax #: 909-307-3083 **Phone #:** + 19093692063 Ext. 2063
Email: pbennett@esri.com

Number of pages transmitted (including this cover sheet): 4

Quotation #26328650
Document Date: 01/02/2026

Please find the attached quotation for your forthcoming term. Keeping your term current may entitle you to exclusive benefits, and if you choose to discontinue your coverage, you will become ineligible for these valuable benefits and services.

If your quote is regarding software maintenance renewal, visit the following website for details regarding the maintenance program benefits at your licensing level
https://www.esri.com/en-us/cp/maintenance

All maintenance fees from the date of discontinuation will be due and payable if you decide to reactivate your coverage at a later date.

Please note: Certain programs and license types may have varying benefits. Complimentary User Conference registrations, software support, and software and data updates are not included in all programs.

Customers who have multiple copies of certain Esri licenses may have the option of supporting some of their licenses with secondary maintenance.

For information about the terms of use for Esri products as well as purchase order terms and conditions, please visit
http://www.esri.com/legal/licensing/software-license.html

If you have any questions or need additional information, please contact Customer Service at 888-377-4575 option 5.

380 New York St
Redlands, CA 92373-8118
Phone: + 190936920632063
Fax #: 909-307-3083

Quotation

Date: 01/02/2026 **Quotation Number:** 26328650 **Contract Number:** 00044013.6

Send Purchase Orders To:
Environmental Systems Research Institute, Inc.
380 New York Street
Redlands, CA 92373-8100
Attn: Pete Bennett

Please include the following remittance address on your Purchase Order:
Environmental Systems Research Institute, Inc.
P.O. Box 741076
Los Angeles, CA 90074-1076

Town of Manlius
Dept of Assessment
PO Box 9
Fayetteville NY 13066
Attn: John Deer
Email: jdeer@townofmanlius.org
Phone: 315-637-9854
Customer Number: 105721

For questions regarding this document, please contact Customer Service at 888-377-4575.

Item	Qty	Material#	Unit Price	Extended Price
		For customers purchasing from the State of New York Centralized Contract No.PM67345/Esri Contract No. 305303, supplemental licensing terms and conditions for the Esri products also apply and can be found here http://www.esri.com/legal/software-license		
10	3	153147 ArcGIS Online Viewer User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027 Subscription ID: 2370371964	123.92	371.76
1010	2	153148 ArcGIS Online Creator User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027 Subscription ID: 2370371964	689.13	1,378.26
2010	3	165531 ArcGIS Online Contributor (formerly Editor) User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027	246.84	740.52

Please note Esri has introduced a price change and this quote reflects current pricing for your organization. It is important to us that we are able to continue to deliver value through enhancements to products, solutions, and capabilities.

Your renewal provides access to all the benefits you are familiar with, which you can review at https://go.esri.com/maintenance
For questions related to the price change, please reach out to your assigned Esri Account Manager.

Quotation is valid for 90 days from document date.

Any estimated sales and/or use tax has been calculated as of the date of this quotation and is merely provided as a convenience for your organization's budgetary purposes. Esri reserves the right to adjust and collect sales and/or use tax at the actual date of invoicing. If your organization is tax exempt or pays state taxes directly, then prior to invoicing, your organization must provide Esri with a copy of a current tax exemption certificate issued by your state's taxing authority for the given jurisdiction.

Esri may charge a fee to cover expenses related to any customer requirement to use a proprietary vendor management, procurement, or invoice program.

To expedite your order, please reference your customer number and this quotation number on your purchase order.

380 New York St
Redlands, CA 92373-8118
Phone: + 190936920632063
Fax #: 909-307-3083

Quotation

Date: 01/02/2026 **Quotation Number:** 26328650 **Contract Number:** 00044013.6

Item	Qty	Material#	Unit Price	Extended Price
		Subscription ID: 2370371964		
3010	10	165533 ArcGIS Online Mobile Worker User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027 Subscription ID: 2370371964	393.93	3,939.30
4010	1	165536 ArcGIS Online Professional (formerly Standard) User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027 Subscription ID: 2370371964	2,166.13	2,166.13
5010	1	165537 ArcGIS Online Professional Plus (formerly Advanced) User Type Annual Subscription Start Date: 04/03/2026 End Date: 04/02/2027 Subscription ID: 2370371964	4,134.78	4,134.78

Item Subtotal		12,730.75
Estimated Tax		0.00
Total	**USD**	**12,730.75**

DUNS/CEC: 06-313-4175 CAGE: 0AMS3

380 New York St
Redlands, CA 92373-8118
Phone: + 190936920632063
Fax #: 909-307-3083

Quotation

Date: 01/02/2026 **Quotation No:** 26328650 **Customer No:** 105721 **Contract No:** 00044013.6

Item	Qty	Material#	Unit Price	Extended Price

Renew online by using a credit card, purchase order, or by requesting an invoice at https://www.esri.com/en-us/quote-order/renew.

If there are any changes required to your quotation please respond to this email and indicate any changes in your invoice authorization.

If you choose to discontinue your support, you will become ineligible for support benefits and services. All maintenance fees from the date of discontinuation will be due and payable if you decide to reactivate your support coverage at a later date.

The items on this quotation are subject to and governed by the terms of this quotation, the most current product specific scope of use document found at http://assets.esri.com/content/dam/esrisites/media/legal/product-specific-terms-of-use/e300.pdf , and your applicable signed agreement with Esri. If no such agreement covers any item quoted, then Esri's standard terms and conditions found at http://assets.esri.com/content/dam/esrisites/media/legal/ma-full/ma-full.pdf apply to your purchase of that item. Federal government entities and government prime contractors authorized under FAR 51.1 may purchase under the terms of Esri's GSA Federal Supply Schedule. Supplemental terms and conditions found at http://www.esri.com/en-us/legal/terms/state-supplemental apply to some state and local government purchases. All terms of this quotation will be incorporated into and become part of any additional agreement regarding Esri's offerings. Acceptance of this quotation is limited to the terms of this quotation. Esri objects to and expressly rejects any different or additional terms contained in any purchase order, offer, or confirmation sent to or to be sent by buyer. Unless prohibited by law, the quotation information is confidential and may not be copied or released other than for the express purpose of system selection and purchase/license. The information may not be given to outside parties or used for any other purpose without consent from Esri. Delivery is FOB Origin.

In order to expedite processing, please reference the quotation number and any/all applicable Esri contract number(s) (e.g. MPA, EA, GSA, BPA) on your ordering document.

Prepared For:
Town of Manlius
Onondaga County, New York

Submitted by:
LaBella Associates
300 State Street
Suite 201
Rochester, NY 14614
(585) 454-6110

LaBella
Powered by partnership.

CONTRACT DOCUMENTS
for the

MUIRFIELD DRIVE STORMWATER IMPROVEMENTS

OCTOBER 2025

PROJECT NO. 2251531

ADDENDUM NO. 1
Muirfield Drive Stormwater Improvements
Town of Manlius

Effective from this date of issue, the following changes are part of the Contract Documents for the above-referenced project.

All provisions of the original Contract Documents shall remain in full force and effect as specifically described in this Addendum. The date of issue is **November 17, 2025.** The bid date remains unchanged.

TO THE DRAWINGS:

C703 – CONSTRUCTION DETAILS

1. ***DELETE*** the following label on detail 3/C703 "RESTORE LAWN DISTURBED BY CONSTRUCTION AND PROVIDE NEW 4" MINIMUM DEPTH MECHANICALLY SCREENED TOPSOIL (TYP)" in its entirety and ***REPLACE*** it with "RESTORE LAWN DISTURBED BY CONSTRUCTION AND PROVIDE NEW **6" MINIMUM DEPTH** MECHANICALLY SCREENED TOPSOIL (TYP)".

Jason R. Ebbs, P.E.
Project Manager
LaBella Associates, D.P.C.

This addendum is to be signed below and attached to the bid submitted to the Town of Irondequoit.
Received and accepted by:

(Bidder's Signature)

11/18/25
(Date)

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ATTACHMENTS

A. QUALIFICATIONS STATEMENT
B. GEOTECHNICAL REPORT
C. CHANGE ORDER BACKUP SHEETS

SECTION 00 11 13
ADVERTISEMENT FOR BIDS

The Town of Manlius will receive sealed bids for the **Muirfield Drive Stormwater Improvements.**

Sealed Bids will be received, and bids publicly opened and read at the following place and time:

Place: Town of Manlius
301 Brooklea Dr
Fayetteville, New York 13066

Date: Wednesday, November 19, 2025
Time: 10:00am, local time

Base Bid: Remove the existing stormwater basin structure and accumulated sediment, abandon a portion of existing storm sewer, install new storm manholes, storm sewer pipes, metal end sections, light stone and stormwater chamber system, site grading, gravel access road, fencing and provide and maintain erosion and sediment control practices.

The foregoing is a general outline of work only and shall not be construed as a complete description of the work to be performed under each contract. Plans and specifications are available for inspection at the following location(s) and may be obtained upon payment of seventy-five ($75) dollars for each set of documents requested. This check is **non-refundable.**

Representative: **Rotolite Elliott**

Place: **1 Grove Street**
Pittsford, NY 14534
(585) 385-1463
M-F 8:00 a.m. to 5:00 p.m.

Check for Plans and Specifications shall be made payable to the Town of Manlius.

If you would like Plans and Specifications mailed to you, please enclose an additional check for twenty-five ($25) per set made payable to Rotolite Elliott. This option is only available through Rotolite Elliott.

Bidding Documents also may be examined online with an online payment by visiting www.recplanroom.com (click Public Jobs under the Menu Tab on the left hand side of the plan room homepage. Once you are in the public plan room, please select the link for the **Muirfield Drive Stormwater Improvements.**

The successful bidder(s) must self-perform at a minimum 50% of the contracted work.

Bids must be made in writing on the forms furnished and shall be accompanied by a bid guarantee for an amount not less than five percent (5%) of the amount bid in accordance with the INSTRUCTIONS TO BIDDERS.

The Town of Manlius is exempt under New York State Tax law, and therefore, no sales tax on the cost of materials incorporated into the project shall be included in the bid.

The successful Bidder will be required to furnish and pay for satisfactory performance and labor and material bonds in accordance with the INSTRUCTIONS TO BIDDERS.

The Town of Manlius reserves the right to consider bids for forty-five (45) days after the receipt before awarding any contract. The Town of Manlius further reserves the right to reject any and all bids, and to accept any Proposal or individual item or items, which it may deem to be the most favorable to its best interests.

An optional Pre-Bid meeting will be held on **November 10, 2025**, with all contractors assembled **on site (near 5136 Muirfield Drive) at 10:00am.**

All bidding questions or Requests for Information must be submitted by 5:00pm on November 12, 2025. All questions may be sent to gnking@labellapc.com. Questions or requests for additional submitted after this date / time may not receive a response.

Dated: **October 2025**

Town of Manlius
Carrie Grevelding
(315) 637-3521

END OF SECTION

SECTION 00 21 16
INSTRUCTIONS TO BIDDERS

1.00 PREPARATION AND SUBMITTAL OF BIDS

1.01 Bids shall be submitted on the Bid Forms furnished with the Contract Documents.

1.02 All blank spaces for bid prices shall be properly filled in, in ink, or typed. In cases where both words and figures are requested, the written words shall be binding on the Bidder. In the event of an error in the sum total of the bid, the Contractor's bid shall be the sum total of all items in written words. In case of a discrepancy in the prices contained in the Bid form submitted in duplicate by the Bidder, the Bid form which contains the lowest bid shall be deemed the bid of the Bidder; provided, however, the Owner may consider the Bid of such Bidder informal. Bids shall not be modified, limited or restricted in any way.

1.03 Bids shall be enclosed in a sealed envelope, plainly marked with the title of the project **"Muirfield Drive Stormwater Improvements"** and name and address of the Bidder on the outside. No Bid will be considered unless filed on or before the time and at the place designated in the "Advertisement for Bids." Bids received after the time set for the opening will be returned to Bidders unopened. When sent by mail, preferably registered, the sealed Bid, marked as above, should be enclosed in an additional envelope similarly marked and addressed to:

Town of Manlius
301 Brooklea Drive
Fayetteville, NY 13066

1.04 Bids received prior to the time of opening will be securely kept unopened. No Bid received after the time of opening will be considered.

1.05 The Town of Manlius is exempt under New York State Tax Law and, therefore, no sales tax shall be included in the bids for materials which shall become an integral component part of the permanent installation.

1.06 Contract Time & Long Lead Time Items

A. With the Bid, submit a complete list of all items with lead times over 8 weeks or any lead times the Contractor believes may impact the contract duration. Clearly list each item, along with the specific lead time from approved submittal to delivery onsite. In addition, provide a baseline construction schedule that accounts for the lead item.

B. Contract extensions due to lead times will not be granted for any item or material excluded from the list provided with the contractor's bid.

C. No contract extensions will be granted because of long lead time items without the written approval of the engineer. If the contractor requests a contract extension because of a long lead time item, the contractor will be required to submit supporting documents that indicate the difference in lead time from the BID and evidence that equal items / suppliers are not available. By submitting its bid, Contractor is indicating to Owner and Engineer that it has fully considered its ability to complete the Work (including the lead time necessary to procure

materials and equipment and any other items required) within the Contract Time and milestones, if any, presented in the Bid Documents and explicitly affirms to the Owner its ability to do so.

1.07 Schematic Excavation Support, Shoring and Dewatering Plan:

A. Submit a well-defined plan which includes:

1. A drawing or legible hand sketch showing layout of shoring system.

2. A narrative stating the approach and sequencing for excavating, shoring, dewatering, and construction of all below grade structures.

3. Name, contact information, and the NYS license number of the engineer that will be responsible for the delegated design of the excavation protection system.

4. A signed letter from a licensed engineer stating that they have reviewed the geotechnical report and contract documents.

1.08 Contractors are **required** to complete and submit the following forms with their bids:

- Section 00 43 13 – Bid Security Form
- Section 00 43 14 - Site Investigation Certificate
- Section 00 45 19 - Non-Collusive Bidding Certificate
- Section 00 45 50 – Sexual Harassment Prevention Certificate
- Section 00 46 00 – E0177 Certificate
- Subcontractor List
- Long Lead Time Items List
- Schematic Excavation Support, Shoring and Dewatering Plan

2.00 BID GUARANTEE

2.01 Each Bid must be accompanied by a Bid Guarantee, which shall not be less than five percent (5%), of the total bid amount. The Bid Guarantee may be a certified check, bank draft, or a Bond in the form set forth in section 00 45 13 herein. The Bond shall be issued by a Surety Company authorized to do business in the State of New York. No Bid will be considered unless it is accompanied by the required Bid Guarantee. Certified check or bank draft must be payable to the order of the Town of Manlius. Cash deposits will not be accepted. The Bid Guarantee shall be conditioned the execution of the Agreement, and the furnishing of the required surety bonds by the successful Bidder.

2.02 Bid Guarantees will be returned within ten (10) days after the bids are opened to Bidders whose Bids, in the judgment of the Owner and Architect/Engineer, will not be considered in making the Award.

2.03 Failure of the successful Bidder, whose bid the Owner intends to award, to both execute the Agreement tendered by the Owner with the Notice of Intent to Award Contract, and to provide the required performance and payment bonds, shall entitle the Owner to recover from the Bid Guarantee the amount of the Contract finally entered into for the work which is the subject of this Bid in excess of the amount of the Bid of the Bidder, not to exceed the amount of the Bid Guarantee.

3.00 INTERPRETATIONS OR ADDENDA

3.01 No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Architect/Engineer. To be given consideration, all inquiries must be received by the Architect/Engineer five (5) or more days prior to the date set for the receipt of Bids. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents and when issued, will be on file at the offices of the Owner and the Architect/Engineer at least twenty-four (24) hours before proposals are opened. In addition, all Addenda will be electronically mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Contract Documents and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

4.00 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

4.01 Each Bidder shall visit the site of the proposed work and fully acquaint himself with the existing conditions there relating to the work to be performed, and shall inform himself as to the facilities involved, and the difficulties and restrictions attending the performance of the Contract. The Bidder shall thoroughly examine and familiarize himself with the Plans, Specifications, and all other Contract Documents. Each Bidder is required to complete the SECTION 00 43 14 - SITE INVESTIGATION CERTIFICATION.

4.02 The Contractor by the execution of the Contract shall in no way be relieved of any obligation under the Contract, due to his/her failure to examine the Contract Documents or to visit the site and acquaint himself with the conditions there existing. The Owner will be justified in rejecting any claim based on facts regarding which the Contractor should have been on notice as a result thereof.

5.00 MODIFICATIONS OF BIDS

5.01 Written or electronic modifications of Bids prior to the opening of the Bids, may be accepted if received in accordance with the requirements for the submission of Bids as provided above. Bidders are cautioned that if in the opinion of the Owner or the Architect/Engineer such modifications are not explicit, or are in any sense subject to misinterpretation, then the Bid so amended or modified will be subject to rejection.

6.00 WITHDRAWAL OF BIDS

6.01 Any Bidder, upon his/her written request, will be given permission to withdraw his/her Bid not later than the time set for opening. At the time of opening of the Bids, when such Bid is included, it will be returned to the Bidder unopened. The Bidder's rights to withdraw its Bid after it has been opened is governed by Municipal Law Section 103(11).

6.02 If within 48 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

7.00 STATEMENT OF BIDDER'S QUALIFICATIONS

7.01 Each bidder must meet the following requirements for their bid to be considered by the Owner:

1. Each bidder must have a minimum of ten years in experience in the construction of:

    a. Underground utilities.

    b. Stormwater chamber systems.

2. Within 72 hours after the opening date specified in the Advertisement for bids, the qualifications statement, a detailed financial and ownership statement must be submitted to the Engineer by the apparent low Bidder.

3. Each bidder shall upon the request of the owner submit copies of their certified financial statements for the last two years or equivalent proof of financial responsibility. The apparent low bidder shall submit said statements to the Engineer within two days after receipt of the Notice of Intent to Award Contract.

4. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his/her obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as it may request. The Owner may reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified to carry out properly the terms of the Contract. The issuing of bid documents and receipt of a Bidder's bid by the Owner shall not be construed as pre-qualification of that Bidder.

8.00 SUBCONTRACTORS

8.01 In accordance with General Municipal Law §101(5), **each Bidder shall submit with its bid a separate sealed list that names each subcontractor that the Bidder will use to perform work** on the Contract and the amount to be paid to each, for (a) plumbing and gas fitting, (b) steam, hot water heating, ventilating and air-conditioning apparatus and (c) electric wiring and standard illuminating fixtures. The sealed list of subcontractors submitted by the unsuccessful Bidders shall be returned to them unopened after the contract award.

9.00 CONSIDERATION OF BIDS

9.01 The Owner shall have the right, to reject any or all bids, to waive any informality in bids received, to reject any items of any bid, to obtain new Bids, or to proceed to do the work otherwise, when the best interest of the Owner may be promoted thereby.

9.02 Pursuant to General Municipal Law §105, any bidder may withdraw its bid if no award is made within the date listed in section 00 11 13 advertisement for bids after the Town's receipt thereof, and upon such withdrawal the Bid Guarantee shall be returned to the Bidder.

10.00 ACCEPTANCE OF BID AND AWARD OF CONTRACT

10.01 Within ten (10) days of the receipt of a Notice of Intent to Award Contract accompanied by an Agreement prepared by the Owner, the successful Bidder shall execute the agreement as provided hereinafter. The rights and obligations provided for in the Agreement shall become effective and binding upon the parties only with its formal execution by both the successful Bidder and the Owner. Delivery to the Bidder of an Agreement executed by both the Owner and Bidder shall constitute an award of the Contract.

11.00 DETERMINATION OF LOW BIDDER

11.01 Except where the Owner exercises the right to reject any or all Bids, the Owner will award the Agreement to the lowest responsible Bidder on the basis therefore and complying with all requirements of the "ADVERTISEMENT FOR BIDS" and these "INSTRUCTIONS TO BIDDERS," after investigations are made to determine the Bidder's responsibility and capability, and responsibility and capability of subcontractors proposed for the work by the Bidder.

12.00 EXECUTION OF CONTRACT

12.01 The Bidder whose Bid has been accepted will be required to appear at the place and the time designated by the Owner, in person; or if a Firm or Corporation, a legally authorized representative shall so appear, and shall execute the Contract within ten (10) calendar days of the date of Notice of Award of Contract. In the case of a Firm or Corporation, the person so appearing to represent such Firm or Corporation and sign the Agreement on its behalf shall present satisfactory proof in writing to the Owner that such person is a properly authorized representative of such Firm or Corporation and has the authority to sign such Agreement on its behalf and be bound by such signature so affixed to the Agreement on behalf of the Firm or Corporation.

12.02 In addition, the successful Bidder, within ten (10) calendar days of the date of the notice of intent to award, shall procure, execute, and deliver to the Owner and maintain, at his/her own cost and expense, the following bonds, in the form attached herein, of a Surety Company approved by the Owner and authorized to do business in the **State of New York** as a surety and insurance certificates as required by the terms of the Agreement:

A. Performance Bond - in an amount of one hundred percent (100%) of the total amount payable to the Contractor by the terms of the Contract (see Section 00 61 10).

B. Labor and Materials Payment Bond - in an amount of one hundred percent (100%) of the total amount payable to the Contractor by the terms of the Contract (see Section 00 61 13).

END OF SECTION

SECTION 00 26 00
SUBSTITUTIONS

PART 1 - GENERAL

1.1 DESCRIPTION

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

B. Related Sections: The following sections contain requirements that relate to this section:

1. Section 01 42 19 "Applicable Standards" specifies the applicability of industry standards to products specified.

2. Section 01 33 23 "Submittals, Shop Drawings, Product Data and Samples" specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.

1.3 DEFINITIONS

A. Definitions in this article do not change or modify the meaning of other terms used in the Contract Documents.

B. Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract or re-review of previously approved shop drawings are considered to be requests for substitutions. The following are <u>not</u> considered to be requests for substitutions:

1. Substitutions requested during the bidding period, and accepted by addendum prior to award of the Contract, are included in the Contract Documents and are not subject to requirements specified in this section for substitutions.

2. Revisions to the Contract Documents requested by the Owner.

3. Specified options of products and construction methods included in the Contract Documents.

1.4 SUBMITTALS

A. Substitution Request Submittal: The Architect/Engineer will consider requests for substitution if received within 30 days after commencement of the work (as defined in the notice to proceed). Requests received more than 30 days after commencement of the work may be considered or rejected at the discretion of the Architect/Engineer.

1. Identify the product or the fabrication or installation method to be replaced in each request. Include related specification section and drawing numbers.

2. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

a. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction that will be necessary to accommodate the proposed substitution.

b. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements, such as performance, weight, size, durability and visual effect.

c. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.

d. Cost information and associated cost justifications, including a proposal of the net change, if any in the contract sum.

e. A statement indicating the substitution's effect on the Contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.

f. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

B. A substitution request constitutes a representation that the Contractor:

1. Has investigated the proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Will provide the same or improved warranty for the substitution as for the specified product.

3. Certifies that the substitution does not affect dimensions shown on the Contract Drawings. Certifies that the substitution will have no adverse effect on other trades.

4. Will coordinate installation and make changes to other Work, which may be required for the Work to be complete with no additional costs to the Owner.

5. Will reimburse the Owner for all related expenses incurred by the Architect/Engineer and/or Owner to complete the evaluation of the substitution and determine its acceptability (whether the substitution is ultimately approved or rejected).

6. Waives claims for additional costs or time extensions, which may subsequently become apparent.

7. Will reimburse the Owner for review or redesign services associated with re-approval by authorities.

8. Will reimburse the Owner for all related expenses incurred by the Owner and/or Architect/Engineer for changes and coordination necessitated by the approved substitution.

9. Maintenance and service parts will be locally available to the Owner for the substitution.

PART 2 - PRODUCTS

2.1 MATERIALS

A. SUBSTITUTIONS

1. Conditions: The Owner will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied:

   a. Extensive revisions to the Contract Documents are not required.

   b. Proposed changes are in keeping with the general intent of the Contract Documents.

   c. The request is timely, fully documented, and properly submitted.

   d. The request is directly related to an "or-equal" clause or similar language in the Contract Documents.

   e. A specified product becomes unavailable through no fault of the Contractor.

2. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request or when acceptance will require extensive revisions to the Contract Documents.

3. Substitutions incorporated into the Work, not properly approved and authorized will be considered defective.

4. Approval of substitutions affecting cost and/or time will require the execution of a change order. Final acceptance of such a change order by the Owner may be contingent upon approval from the appropriate funding agency, if any.

PART 3 - EXECUTION

3.1 SUBSTITUTIONS

A. SUBMITTAL PROCEDURE

1. Submit three copies of the request for substitution (as outlined in Section 1.4 above) for consideration.

2. Submit shop drawings, product data and certified test results attesting to the proposed product equivalence (number of copies as required for shop drawings).

3. The Architect/Engineer will notify the Contractor, in writing, of the decision to accept or reject request, as well as any costs incurred.

4. The Engineer will be granted at least ten (10) business days to review substitutions.

B. REIMBURSEMENT

1. Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute.

2. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner resulting from the acceptance of each proposed substitute.

END OF SECTION

SECTION 00 42 00
BID PROPOSAL

1.00 BID PROPOSAL LETTER

Muirfield Drive Stormwater Improvements
Town of Manlius
301 Brooklea Dr
Fayetteville, New York 13066

Submitted by:

IDH LLC
(Contractor)

I the undersigned Bidder has carefully examined the Instructions to Bidders and Contract Documents For:

Town of Manlius
Muirfield Drive Stormwater Improvements

and hereby offers to do all the work and furnish all the materials required in strict accordance with the Contract Documents.

1.00 PRICING AND PROPOSAL DATA

1.01 SCOPE

The Bidder agrees to furnish the materials, equipment, superintendence, labor, skill, and all other items necessary for the complete construction of the project as described in the Contract Documents.

1.02 BID SCHEDULE OF VALUES

The Bid Schedule of Values lists one Lump Sum item. Lump Sum bid to include all labor, material, equipment, to complete the project in full (including, but not limited to, bonds, insurances, securities, mobilization, etc.).

1.03 BID CALCULATION

(1) All work excluding Allowances:

Three hundred forty seven Thousand (In words) $ 347,000 (In figures)

(2) Allowances (in accordance with Section 01 21 00):

Twenty Five Thousand Dollars (In words) $ 25,000 (In figures)

(3) **TOTAL BASE BID:** Add lines (1) and (2)

Three hundred Seventy Two thousand (In words) $ 372,000 (In figures)

II. The undersigned acknowledges the receipt of the following Addenda, but agrees to be bound by all Addenda, whether or not listed herein:

ADDENDUM NUMBERS AND DATES

Addendum No.	#1	dated:	11/17/25
Addendum No.	_____	dated:	_____
Addendum No.	_____	dated:	_____

III. The Bidders submits here with a Bid Guarantee in the amount of $ 18,600 . In event the bidders fails, within ten (10) calendar days after date of receipt of Notice of Intent to Award, to execute and deliver to the Owner an Agreement in the form provided with said notice and deliver a performance bond, a labor and material bond in the amounts and form prescribed, the Owner may seek recovery from the Bid Guaranty, otherwise the total amount of the bid security will be returned to the Bidder in accordance with provisions set forth in "INSTRUCTIONS TO BIDDERS."

IV. The undersigned Bidder also agrees as follows:

FIRST: EXECUTION OF AGREEMENT AND SURETY BONDS

Within ten (10) calendar days after receipt of the Agreement provided by the Owner with the Notice of Intent to Award Contract, the bidder shall execute and return the signed Agreement to the Owner, and shall furnish to the Owner required surety bonds, each in the sum of one hundred percent (100%) of the amount of the Contract, to be awarded, to bidder, as security for the faithful performance of the work, and for the payment of all persons performing labor and furnishing materials in connection with the work.

SECOND: NOTICE TO PROCEED

The Notice to Proceed is anticipated to be issued on or about March 02, 2026. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the Owner and the Contractor. If the Notice to Proceed has not been issued within the above indicated time or within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

THIRD: CONTRACT TIMES

The Work must be substantially completed within 100 days after the date when the Contract Times commence to run as provided in section 8 of the General Conditions and completed and ready for final payment in accordance with section 8 of the General Conditions within 120 days after the date when the Contract Times commence to run.

FOURTH: LIQUIDATED DAMAGES

Contractor and Owner recognize that time is of the essence as stated above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner $ 500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified for Substantial Completion until the Work is substantially complete.

2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $ 250 for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

FIFTH: NON-COLLUSION

Has completed the SECTION 00 45 19, NON-COLLUSIVE BIDDING CERTIFICATION.

Certifies as follows: Pursuant to Section 103-d of General Municipal Law.

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

   1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purposes of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor.

   2. Unless otherwise required by law, the prices, which have been quoted in this bid, have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor.

   3. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

SIXTH: REFUSAL TO TESTIFY

The Contractor hereby agrees to the provisions of Section 139-b of New York State Finance Law which require that upon the refusal of a person, when called before a grand jury, head of a state department, legislative body, state commission or other state agency, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation, concerning any transaction or Contract had with the State of New York, any political subdivision thereof, a public authority or with any public department, agency or official of the State of New York or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or Contract.

A. Such person, and any firm, partnership or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any Contract with the State of New York or any public department, agency or official thereof, for goods, work or services, for a period of five (5) years after such refusal.

B. Any and all Contracts made with the State of New York or any public department, agency or official thereof, since the effective date of this law by such a person, and by any firm, partnership, or corporation of which he is a member, partner, director or officer may be canceled or terminated by the State of New York without any penalty or damages on account of such cancellation or termination, but any monies owing by the State of New York for goods delivered or work done prior to the cancellation or termination shall be paid.

SEVENTH: NONDISCRIMINATION CLAUSES

During the performance of this Contract, the Contractor hereby agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color or national origin, and will take affirmative action to ensure that they are afforded equal employment opportunities without discrimination because of race, creed, color or national origin. Such action shall be taken with reference, but not be limited to: recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.

B. The Contractor will send to each labor union or representative of workers with which he has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by State Commission for Human Rights, advising such labor union or representative of the Contractor's agreement under clauses (A) through (G) hereinafter called "nondiscrimination clauses."

If the Contractor was directed to do so by the Owner as part of the bid or negotiation of this Contract, the Contractor shall request such labor union or representative to furnish him with a written statement that such labor union or representative will not discriminate because of race creed, color or national origin and that such labor union or representative either will affirmatively cooperate, within the limits of its legal and contractual authority, in the implementation of the policy and provisions of these

nondiscrimination clauses or that is consents and agrees that recruitment, employment under this Contract shall be in accordance with the purposes and provisions of these nondiscrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the Contractor shall promptly notify the New York State Commission for Human Rights of such failure or refusal.

C. The Contractor will post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commission for Human Rights setting forth the substance of the provisions of clauses (A) and (B) and such provisions of the State's laws against discrimination as the State Commission for Human Rights shall determine.

D. The Contractor will state, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will be afforded equal opportunities without discrimination because of race, creed, color, or national origin.

E. The Contractor will comply with the provisions of Section 291-299 of the Executive Law, and will permit access to his books, records and accounts by the State Commission for Human Rights, the Attorney General and the Industrial Commissioner for purposes of investigation to ascertain compliance with these nondiscrimination clauses and such sections of the Executive Law and Civil Rights Law.

F. This Contract may be forthwith canceled, terminated, or suspended, in whole or in part, by the contracting agency upon the basis of a finding made by the State Commission for Human Rights that the Contractor has not complied with these nondiscrimination clauses, and the Contractor may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the State, until he has established and is carrying out a program in conformity with the provisions of these nondiscrimination clauses. Such findings shall be made by the State Commission for Human Rights after conciliation efforts by the Commission have failed to achieve compliance with these nondiscrimination clauses and after a verified complaint has been filed with the Commission, notice thereof has been given to the Contractor and an opportunity has been afforded him to be heard publicly before three members of the Commission. Such sanctions may be imposed and remedies invoked independently of or in addition to sanctions and remedies otherwise provided by law.

G. The Contractor will include the provisions of clauses (A) through (F) in every subcontract or purchase order in such a manner that such provisions will be binding upon each subcontractor or vendor as to operations to be performed within the State of New York. The Contractor will take such action in enforcing such provisions of such subcontract or purchase order as the contracting agency may direct, including sanctions or remedies for noncompliance. If the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor shall promptly so notify the Attorney General, requesting him to intervene and protect the interests of the State of New York.

EIGHTH: SALES TAX, TRANSFER OF OWNERSHIP

I. Bid price(s) shall not include any Sales Tax levied by the following governmental agencies:

1. New York State
2. Onondaga County, New York
3. Any other Town or Governmental Agency

2.00 SIGNATURES

DATED: 11/19/25

A. If Individual, Partnership, or Non-Incorporated Organization

Name of Bidder: IDH LLC

By: _____
(Signature - Blue or other non-black ink required)

Address of Bidder: 10280 old state Rd Carthage NY 13619

Bidder Email Address (**Required**): Marcus@idhpro.com

Bidder Phone No. (**Required**): (315) 778-9876

Names and Addresses of Owners or Partners of the Bidder

Marcus Moser 10280 old state Rd
Carthage NY 13619

B. If a Corporation:

Name of Bidder: _____

By: _____
(Signature) (Title) (Blue or other non-black ink required)

Address of Bidder: _____

Bidder's Email Address
(Required): _____

Bidder's Cell Phone No.
(Required): _____

Name of President _____
(Name) (Address)

_____

Officer (Secretary) _____
(Name) (Address)

_____

Treasurer _____
(Name) (Address)

_____

CORPORATE SEAL



END OF SECTION

SECTION 00 43 13
BID SECURITY FORM

1.00 FORM OF BID GUARANTEE

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned IDH, LLC 10280 Old State Road, Carthage, NY 13619 as Principal, and RLI Insurance Company 9025 N. Lindbergh Drive, Peoria, IL 61615 as Surety, are hereby held and firmly bound unto Town of Manlius 301 Brooklea Dr Fayetteville NY, 13066 as Owner in the penal sum of $ Five percent of contract amount (5%) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Whereas the Principal has submitted to the Owner a certain Bid, which is incorporated by reference, and made a part hereof, to enter into a contract generally for the removal the existing stormwater basin structure and accumulated sediment, abandonment of a portion of existing storm sewer, installation of new storm manholes, storm sewer pipes, metal end sections, light stone and stormwater chamber system, site grading, gravel access road, fencing and providing and maintainaing erosion and sediment control practices, as more fully described in the Bidding Documents provided by the Owner, and specifically identified as Muirfield Drive Stormwater Improvements, Town of Manlius, LBA Project No. 2251531,

NOW, THEREFORE, the condition of this obligation is that:

(a) If said Bid shall be rejected, or in the alternate,

(b) If said Bid shall be accepted, and the Principal shall execute and deliver a contract in the form of an agreement (properly completed in accordance with said Bid) and shall furnish a bond for the faithful performance of said Contract, and a bond for the payment of all persons performing labor or furnishing materials in connection therewith.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates, and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Owner may award such Bid; and said Surety does hereby waive notice of any such extension.

Failure of the principal, whose Bid the Owner intends to award, to both execute the Agreement tendered by the Owner, and to provide the required performance and payment bonds, shall entitle the Owner to recover from the Bid Guarantee the amount of the Contract finally entered into for the work which is the subject of this Bid in excess of the amount of the Bid of the principal.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

JDH, LLC

Marcus Moser, Member Principal (L.S.)

RLI Insurance Company

Surety

BY: _____

Gary A Cardinale, Attorney-In-Fact

SEAL

END OF SECTION

SECTION 00 43 14
SITE INVESTIGATION CERTIFICATION

PART 1 - GENERAL

The Contractor acknowledges that he/she has visited the site of the proposed work on Nov. 10th, 2025 and has satisfied himself as to the nature and location of the work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, ground water table or similar physical conditions at the site, the confirmation and condition of the ground, the character, quality and quantity of surface and subsurface materials to be encountered, the character of equipment and facilities needed prior to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract.

STATE OF NY

COUNTY OF Lewis

CITY OF Denmark (Carthage Mailing address)

SS

Signature of Bidder

10280 old state Rd Carthage, NY 13619
Business Address of Bidder

Sworn to and subscribed before me this 19th day of November, 2025.

(Notary Public)

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2028

END OF SECTION

SECTION 00 43 73
PROPOSED SCHEDULE OF VALUES

1.1 BID FORM SUPPLEMENT

A. Within 7 days of the receipt of the Notice of Award, submit a completed Proposed Schedule of Values form.

1.2 PROPOSED SCHEDULE OF VALUES FORM

A. Proposed Schedule of Values Form: Provide a breakdown of the bid amount, including alternates, in enough detail to facilitate continued evaluation of bid. Coordinate with the Project Manual table of contents. Provide multiple line items for principal material and subcontract amounts in excess of **five** percent of the Contract Sum, and the General Conditions.

B. Arrange schedule of values using **AIA Document G703-1992**

1. Copies of AIA standard forms may be obtained from the American Institute of Architects; https://www.aiacontracts.org

END OF SECTION

SECTION 00 45 19
NON-COLLUSIVE BIDDING CERTIFICATE

By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in case of a joint bid, each party hereto certifies as to its organization, under penalty of perjury, that to the best of knowledge and belief:

1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the opening, directly or indirectly, to any other bidder or to any competitor.

3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

4. The bidder herein has carefully examined the annexed form of the contract and contract documents.

5. The bidder has not violated the provisions of Section 103-d of General Municipal Law.

STATE OF NY

COUNTY OF lewis

CITY OF Carthage - Town of Denmark

SS

Signature of Bidder

10280 old state Rd Carthage NY 13619
Business Address of Bidder

Sworn to and subscribed before me this 19th day of November, 2025.

(Notary Public)

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2029

END OF SECTION

Certification Regarding Sexual Harassment Prevention Policies Pursuant to State Finance Law §139-l

By submission of this proposal, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of section two hundred one-g of the labor law.

I, Marcus Moser, hereby affirm, under penalty of perjury, that
Printed Name of Person Executing Certification

I am Managing Member of the above-named bidder that I am
Printed Title of Person Executing Certification

authorized to make this certification on behalf of such bidder, and I further certify that this certification is true, accurate and complete to the best of my knowledge and belief.

The undersigned, being duly sworn, says (a) I am duly authorized to execute this Certification and (b) I hereby certify, under penalty of perjury, that the forgoing Certification is in all respects true and accurate.

Signature

STATE OF NY)
) ss.:
COUNTY OF Lewis)

On this 19th day of November, 2025, before me personally came

Marcus Moser, to me known and known to me to be the person(s) described in and who executed the foregoing instrument and acknowledged that he/she executed the same.

Notary Public

Submit form with original signatures

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2028

END OF SECTION

EO 177 Certification

The New York State Human Rights Law, Article 15 of the Executive Law, prohibits discrimination and harassment based on age, race, creed, color, national origin, sex, pregnancy or pregnancy-related conditions, sexual orientation, gender identity, disability, marital status, familial status, domestic violence victim status, prior arrest or conviction record, military status or predisposing genetic characteristics.

The Human Rights Law may also require reasonable accommodation for persons with disabilities and pregnancy-related conditions. A reasonable accommodation is an adjustment to a job or work environment that enables a person with a disability to perform the essential functions of a job in a reasonable manner. The Human Rights Law may also require reasonable accommodation in employment on the basis of Sabbath observance or religious practices.

Generally, the Human Rights Law applies to:

- all employers of four or more people, employment agencies, labor organizations and apprenticeship training programs in all instances of discrimination or harassment;
- employers with fewer than four employees in all cases involving sexual harassment; and,
- any employer of domestic workers in cases involving sexual harassment or harassment based on gender, race, religion or national origin.

In accordance with Executive Order No. 177, the Bidder hereby certifies that it does not have institutional policies or practices that fail to address the harassment and discrimination of individuals on the basis of their age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status under the Human Rights Law.

Executive Order No. 177 and this certification do not affect institutional policies or practices that are protected by existing law, including but not limited to the First Amendment of the United States Constitution, Article 1, Section 3 of the New York State Constitution, and Section 296(11) of the New York State Human Rights Law.

Contractor Name: IDH LLC

By: _____ Date: 11/19/25
Signature

Print Name and Title: Marcus Moser Managing Member

END OF SECTION

SECTION 00 52 00
AGREEMENT FORMS

1.00 AGREEMENT

THIS AGREEMENT, made on the _____ day of _____, 20____, by and between the ***Town of Manlius***, (maintaining office at ***301 Brooklea Dr.***), parties of the first part, hereinafter called the OWNER, and

IDH LLC
10280 old State Rd
Carthage, NY 13619

party of the second part, hereinafter called the CONTRACTOR.

WITNESSETH, that the CONTRACTOR and the OWNER for the considerations, hereinafter named agree as follows:

1.01 SCOPE OF THE WORK

The Contractor hereby agrees to furnish all of the materials and all of the equipment and labor necessary, and to perform all of the work in accordance with the requirements of the plans and specifications and as may be reasonably implied and required to make the work complete in every respect.

For the Project entitled:

Muirfield Drive Stormwater Improvements

1.02 CONTRACT DOCUMENTS

The work shall be performed in accordance with the requirements and provisions of the following Documents prepared by the Firm of LaBella Associates, D.P.C., hereinafter called the ARCHITECT/ENGINEER, and which Documents in addition to the Contract Documents in General Conditions Paragraph 1.1.1, are hereby made a part of this Agreement.

A. Drawings (not attached but incorporated by reference) for all contract and alternates work consisting of 9 sheets with each sheet bearing the following general title: "Muirfield Drive Stormwater Improvements

B. Bidding Documents as listed in the Table of Contents of the Project Manual

C. Contract Documents as listed in the Table of Contents of the Project Manual

D. Technical Specifications as listed in the Table of Contents of the Project Manual

E. Attachments as listed in the Table of Contents of the Project Manual

i. The following Addenda:

Addendum No. #1 dated: 11/17/25

Addendum No. _____ dated: _____

1.03 TIME OF COMPLETION

A. The work to be completed under these Contracts shall be commenced within five (5) days after the date of Notice to Proceed.

B. The entire work shall be completed within the completion time noted within the TIME OF COMPLETION provided in section 00 42 00 Bid Proposal beginning from receipt of the Notice to Proceed.

C. Failure to complete the specified sections of the work within the time stipulated in this Article, including extensions granted thereto as determined by the Architect/Engineer, shall entitle the Owner to deduct from the monies due, or about to become due to the Contractor, an amount equal to the amounts provided in section 00 42 00 Bid Proposal for each calendar day of delay in the completion of the work, said sum being fixed and agreed as Liquidated Damages which the Owner will suffer by reason of such delay and not as a penalty.

1.04 THE CONTRACT SUM

A. The Owner shall pay to the Contractor for the performance of the Contract, subject to additions and deductions and the adjustment of final quantities as provided herein, the total base bid (Contract sum) as follows:

Base Bid: Three hundred Seventy two thousand Dollars and zero Cents
(Written in words)

$ 372,000 00
(Written in numerals)

B. IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the day and year first above written.

Owner
Town of Manlius
301 Brooklea Dr
Fayetteville, New York 13066

Witness

Title Owner

Contractor

IDH LLC
10280 old State Rd
Carthage, NY 13619

Witness

Title Owner

END OF SECTION

SECTION 00 52 01
AGREEMENT ACKNOWLEDGEMENTS

1.00 ACKNOWLEDGEMENTS

1.01 (ACKNOWLEDGEMENT BY CONTRACTOR, IF A CORPORATION)

STATE OF NY)

SS:

COUNTY OF Lewis)

On this 20th day of January, 2026, before me personally came Marcus Moser, to me known, who being duly sworn, did depose and say that he resides in Carthage, NY; that he is the Managing Member of the KBH LLC corporation described in and which executed the foregoing instrument; that he knows the seal of the ~~corporation~~ LLC; that the seal affixed to the instrument is such ~~corporate~~ LLC seal; that it was so affixed by the order of the ~~Board of Directors~~ Members of the ~~corporation~~ LLC; and that he signed his name hereto by like order.

(Notary Public)

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2028

1.02 (ACKNOWLEDGEMENT OF CONTRACTOR, IF A PARTNERSHIP)

STATE OF _____)

SS:

COUNTY OF _____)

On this _____ day of _____, 20_____, before me personally came _____, to me known, and known to me to be a member of the firm of _____, and known to me to be an individual described in, and who executed, the foregoing instrument in the firm name of _____, and he duly acknowledged to me that he executed the same for and in the behalf of said firm for the uses and purposes mentioned therein.

_____
(Notary Public)

1.03 (ACKNOWLEDGEMENT BY INDIVIDUAL CONTRACTOR)

STATE OF _____)

SS:

COUNTY OF _____)

On this _____ day of _____, 20_____, before me personally came _____, to me known, and known to me to be the person described in and who executed the foregoing instrument and duly acknowledged that he executed the same.

_____
(Notary Public)

1.04 (ACKNOWLEDGEMENT BY MUNICIPALITY)

STATE OF _____)

SS:

COUNTY OF _____)

On this _____ day of _____, 20_____, before me personally came _____, to me known, who being by me duly sworn did depose and say that they are the Supervisor of the Town of Irondequoit , and that he executed the above instrument; and that they are authorized to sign her name thereto on behalf of the Owner.

_____
(Notary Public)

END OF SECTION

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

NOTICE TO PROCEED

Owner:	Town of Manlius	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Labella Associates, D.P.C	Engineer's Project No.:	2251531
Project:	Muirfield Dr. Stormwater Improvements	Contract Name:	
		Effective Date of Contract:	

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [_____, 20__].

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is _____, and the date of readiness for final payment is_____] ***or*** [the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before starting any Work at the Site, Contractor must comply with the following:
[Note any access limitations, security procedures, or other restrictions]

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

SECTION 00 61 00
PERFORMANCE BOND

1.00 PERFORMANCE BOND

1.01 GENERAL

KNOW ALL MEN BY THESE PRESENTS, that IDH, LLC 10280 Old State Road, Carthage, NY 13619 (hereinafter called the "Principal") and RLI Insurance Company 9025 N. Lindbergh Drive, Peoria, IL 61615 (hereinafter called the "Surety") are held and firmly bound to the Town of Manlius 301 Brooklea Drive Fayetteville, NY 13066 (hereinafter called the "Owner") in the full and just sum of Three hundred seventy two thousand and 00/100 Dollars ($372,000.00) good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds himself, his/her heirs, executors, administrators and assigns and the Surety binds itself, its successors and assigns, jointly and severally, firmly by these present.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the 12th day of January 20 26, with the Owner for the Muirfield Drive Stormwater Improvements a copy of which Contract is annexed to and hereby made part of this bond as though herein set forth in full.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his/her or its representatives or assigns, shall well and faithfully comply with and perform all the terms, covenants and conditions of said Contract or his/her (their, its) part to be kept and performed and all modifications, amendments, additions, and alterations thereto that may hereafter be made, according to the true intent and meaning of said Contract, including repair and/or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the Owner and Government from all cost and damage which it may suffer by reason of failure so to do, and shall fully reimburse and repay the Owner and Government for all outlay and expense which the Owner and Government may incur in making good any such default, and shall protect the said Owner and Government against, and pay any and all amounts, damages, costs and judgments which may or shall be recovered against said Owner and Government or its officers or agents or which the said Owner and Government may be called upon to pay to any person or corporation by reason of any damages arising or growing out of the doing of said work, or the repair or maintenance thereof, or the manner of doing the same, or the neglect of the said Principal, or his/her (their, its) agents or servants, or the improper performance of the said work by the said Principal, or his/her (their, its) agents or servants, or the infringement of any patent or patent rights by reason of the use of any materials furnished or work done as aforesaid or otherwise, then this obligation shall be null and void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, the Surety for value received, hereby stipulates and agrees, if requested to do so by the Owner and Government, to fully perform and complete the work mentioned and described in said Contract, pursuant to the terms, conditions, and covenants thereof, if for any cause the Principal fails or neglects to so fully perform and complete such work and the Surety further agrees to commence such work of completion within ten (10) calendar days after written notice thereof from the Owner and Government and to complete such work within ten (10) calendar days from the expiration of the time allowed the Principal in the Contract for the completion thereof; and further;

PROVIDED, HOWEVER, the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by an extension of time, modification, omission, addition, or change in or to the said Contract or the work to be performed thereunder or by any payment thereunder before the time required herein, or by any waiver of any provisions thereof; or by any assignment, subletting or other transfer of any work to be performed or any monies due or to become due thereunder; and said Surety does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts, and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety as though done or omitted to be done by or in relation to said Principal.

Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

IN WITNESS WHEREOF, the Principal has hereunto set his/her (their, its) hand and seal and the surety has caused this instrument to be signed by its Member, and its corporate seal to be hereunto affixed this 12th day of January 2026.

(If Corporation add Seal and Attestation.)

IDH, LLC
Principal

By:
Marcus Moser, Member

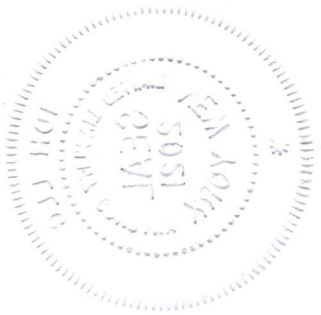
Attest
Secretary

RLI Insurance Company

By:
Gary A Cardinale, Attorney-In-Fact

Add Corporation Seal.

Attest:
Joseph Cardinale, Witness





2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON IN NEW YORK STATE (RPL 309-a)

STATE OF NY)

SS:

COUNTY OF Lewis)

On the 12th day of January 2026, before me, the undersigned, Marcus Moser

personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public
(signature and office of individual taking acknowledgment)

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2026

2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON OUTSIDE NEW YORK STATE (RPL 309-b)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned,_____

personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual(s) made such appearance before the undersigned in

_____

(insert the city or other political subdivision and the state or country or other place the acknowledgment was taken)

_____

(signature and office of individual taking acknowledgment)

2.03 BY SURETY COMPANY

STATE OF New York)

SS:

COUNTY OF Erie)

On this 12th day of January, 20 26, before me personally came Gary A Cardinale, to me known, who being by me duly sworn, did depose and say that he/she resides in Erie County, New York; that he/she is the Attorney-in-Fact of the RLI Insurance Company the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Notary Public or Commissioner of Deeds)

END OF SECTION

LISA M REESE
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01RE0014975
Qualified in Erie County
Commission Expires October 26, 2027

RLI® SURETY

P.O. BOX 3967 PEORIA, IL 61612-3967
P: (800)645-2402 E: asksurety@rlicorp.com
RLISURETY.COM

RLI Insurance Company

December 31, 2024

Admitted Assets

Investments:	
Fixed maturities	$ 1,623,131,091
Equity securities	1,673,246,978
Short-term investments	0
Real estate	23,610,523
Properties held to produce income	0
Cash and cash equivalents	100,053,303
Other invested assets	47,767,817
Receivables for securities	275,318
Agents' balances	102,566,673
Investment income due and accrued	13,698,890
Funds held	0
Reinsurance recoverable on paid losses	16,390,360
Federal income taxes receivable	2,852,054
Net deferred tax asset	4,498,328
Guarantee funds receivable or on deposit	162,638
Electronic data processing equipment, net of depreciation	1,319,432
Receivable from affiliates	2,988
Other admitted assets	10,471,819
Total Admitted Assets	$ 3,620,048,212

Liabilities and Surplus

Liabilities:	
Reserve for unpaid losses and loss adjustment expenses	$ 1,043,034,784
Unearned premiums	452,867,199
Accrued expenses	135,095,230
Funds held	590,443
Advance premiums	27,473,420
Amounts withheld	64,224,218
Remittances and items not allocated	3,310,530
Dividends declared and unpaid	20,141
Ceded reinsurance premium payable	28,179,079
Payable for securities	7,894,282
Statutory penalties	367,343
Current federal and foreign income taxes	0
Net deferred tax liability	0
Borrowed money and accrued interest	50,191,167
Drafts outstanding	0
Payable to affiliate	17,707,813
Other liabilities	1,780,541
Total Liabilities	$ 1,832,736,190
Surplus:	
Common stock	$ 10,000,375
Additional paid-in capital	242,451,084
Unassigned surplus	1,534,860,563
Total Surplus	$ 1,787,312,022
Total Liabilities and Surplus	$ 3,620,048,212

State of Ohio

County of Cuyahoga

The undersigned, being duly sworn, says: That he is the President of ***RLI Insurance Company****; that said Company is a corporation duly organized, in the State of Illinois, and licensed and engaged in business in the State of* NEW YORK *and has duly complied with all the requirements of the laws of said State applicable of said Company and is duly qualified to act as Surety under such laws; that said Company has also complied with and is duly qualified to act as Surety under the Act of Congress approved July 1947, 6U.S.C sec. 6-13; and that to the best of his knowledge and belief the above statement is a full, true, and correct statement of the financial condition of the said Company on the 31st day of December 2024.*

Attest:

RLI INSURANCE COMPANY CORPORATE SEAL ILLINOIS

{ Corporate Seal Affixed }

Craig Kliethermes — President

Olga S. Happel — Assistant Secretary

Sworn to before me this 3rd day of March, 2025.

NOTARY PUBLIC STATE OF OHIO

JILL A SCOTT
Notary Public
State of Ohio
My Comm. Expires
September 22, 2025

{ Notarial Seal Affixed }

Jill A. Scott — *Notary Public, State of Ohio*

M0058325_Portal

RCB0061655

POWER OF ATTORNEY

RLI Insurance Company
Contractors Bonding and Insurance Company

9025 N. Lindbergh Dr. Peoria, IL 61615
Phone: 800-645-2402

Know All Men by These Presents:

That this Power of Attorney is not valid or in effect unless attached to the bond which it authorizes executed, but may be detached by the approving officer if desired.

That **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, each an Illinois corporation, (separately and together, the "Company") do hereby make, constitute and appoint:

Gary A. Cardinale, Joseph V. Cardinale, Salvatore Cardinale, jointly or severally

in the City of Buffalo, State of New York its true and lawful Agent(s) and Attorney(s) in Fact, with full power and authority hereby conferred, to sign, execute, acknowledge and deliver for and on its behalf as Surety, in general, any and all bonds and undertakings in an amount not to exceed **Twenty Five Million** Dollars (**$25,000,000.00**) for any single obligation.

The acknowledgment and execution of such bond by the said Attorney in Fact shall be as binding upon the Company as if such bond had been executed and acknowledged by the regularly elected officers of the Company.

RLI Insurance Company and/or **Contractors Bonding and Insurance Company**, as applicable, have each further certified that the following is a true and exact copy of a Resolution adopted by the Board of Directors of each such corporation, and is now in force, to-wit:

"All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or Agents who shall have authority to issue bonds, policies or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

IN WITNESS WHEREOF, the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, as applicable, have caused these presents to be executed by its respective Vice President with its corporate seal affixed this 13th day of September, 2023.

CONTRACTORS BONDING AND INSURANCE COMPANY CORPORATE SEAL ILLINOIS

RLI INSURANCE COMPANY CORPORATE SEAL ILLINOIS

RLI Insurance Company
Contractors Bonding and Insurance Company

By: _____
Barton W. Davis — Vice President

State of Illinois }
County of Peoria } SS

On this 13th day of September, 2023, before me, a Notary Public, personally appeared Barton W. Davis, who being by me duly sworn, acknowledged that he signed the above Power of Attorney as the aforesaid officer of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** and acknowledged said instrument to be the voluntary act and deed of said corporation.

By: _____
Catherine D. Geiger — Notary Public

CATHERINE D. GEIGER
OFFICIAL SEAL
Notary Public - State of Illinois
My Commission Expires
December 05, 2026

CERTIFICATE

I, the undersigned officer of **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, do hereby certify that the attached Power of Attorney is in full force and effect and is irrevocable; and furthermore, that the Resolution of the Company as set forth in the Power of Attorney, is now in force. In testimony whereof, I have hereunto set my hand and the seal of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** this 12th day of January, 2026.

RLI Insurance Company
Contractors Bonding and Insurance Company

By: _____
Jeffrey D. Fick — Corporate Secretary

3153548020212

A0058D19

SECTION 00 61 13
LABOR AND MATERIALS PAYMENT BOND

1.0 LABOR AND MATERIALS PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that IDH, LLC

10280 Old State Road, Carthage, NY 13619

(hereinafter called the "Principal") and RLI Insurance Company 9025 N. Lindbergh Drive, Peoria, IL 61615

(hereinafter called the "Surety") are held and firmly bound to the

Town of Manlius 301 Brooklea Drive Fayetteville, NY 13066 (hereinafter called the "Owner") and the United States of America and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns, in the full and just sum of Three hundred seventy two thousand and 00/100 Dollars ($372,000.00) good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds itself, its heirs, executors, administrators, successors and assigns, and the Surety binds itself, its successors and assigns jointly and severally, firmly by these present.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the 12th day of January 20 26, with the Owner for the Muirfield Drive Stormwater Improvements a copy of which Contract is annexed to and hereby made part of this bond as though herein set forth in full; and

WHEREAS, the Owner has required this Bond guaranteeing prompt payment of monies due to all persons furnishing the Principal or any subcontractor of the Principal with labor or materials in the prosecution of the work provided in such Contract;

NOW, THEREFORE, the conditions of the foregoing obligation is such that if the Principal shall promptly pay all monies due to all persons furnishing the Principal or any subcontractor or the Principal with labor or materials in the prosecution of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, the Surety for value received, hereby stipulates and agrees, that no change, extension, alteration, or addition to the terms of the said Contract or specifications accompanying the same, shall in anywise affect its obligation under this Bond, and it does hereby waive notice of any such change, extension, alteration or addition, and further;

PROVIDED, HOWEVER, that the place of trial of any action on this Bond shall be in the county in which the said Contract was to be performed, or if said Contract was to be performed in more than one county, then in any such county, and not elsewhere; and further

PROVIDED, HOWEVER, that this Bond shall be enforceable in accordance with the terms and provisions of local Finance Law.

IN WITNESS WHEREOF, the Principal has hereunto set its hand and seal and the surety has caused this instrument to be signed by its Member, and its corporate seal to be hereunto affixed this 12th day of January 2026.

(If Corporation add Seal and Attestation.)

IDH, LLC
Principal

By: _____
Marcus Moser, Member

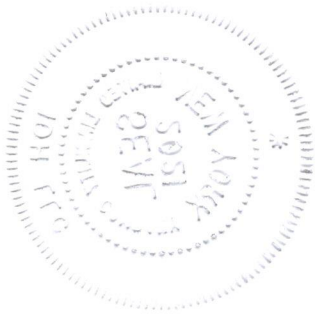
Attest: _____
Secretary

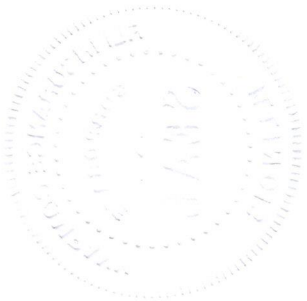
RLI Insurance Company

By: _____
Gary A Cardinale, Attorney-In-Fact

Add Corporation Seal.

Attest: _____
Joseph Cardinale, Witness





2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON IN NEW YORK STATE (RPL 309-a)

STATE OF NY)

SS:

COUNTY OF Lewis)

On the 12th day of January 2026, before me, the undersigned,

Marcus Moser

personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

(signature and office of individual taking acknowledgment)

JESSICA YOUNG, ESQ.
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02YO6261819
Qualified in Lewis County
Commission Expires May 14, 2028

2.02 ACKNOWLEDGMENT BY A PERSON OUTSIDE NEW YORK STATE (RPL 309-b)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned, _____personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual(s) made such appearance before the undersigned in

_____
(insert the city or other political subdivision and the state or country or other place the acknowledgment was taken)

_____
(signature and office of individual taking acknowledgment)

2.03 BY SURETY COMPANY

STATE OF New York)

SS:

COUNTY OF Erie)

On this 12th day of January, 20 26, before me personally came Gary A Cardinale, to me known, who being by me duly sworn, did depose and say that he/she resides in Erie County, New York; that he/she is the Attorney-in-Fact of the RLI Insurance Company the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Notary Public or Commissioner of Deeds)

END OF SECTION

LISA M REESE
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01RE0014975
Qualified in Erie County
Commission Expires October 26, 2027

RLI® SURETY

P.O. BOX 3967 PEORIA, IL 61612-3967
P: (800)645-2402 E: asksurety@rlicorp.com
RLISURETY.COM

RLI Insurance Company

December 31, 2024

Admitted Assets

Investments:	
Fixed maturities	$ 1,623,131,091
Equity securities	1,673,246,978
Short-term investments	0
Real estate	23,610,523
Properties held to produce income	0
Cash and cash equivalents	100,053,303
Other invested assets	47,767,817
Receivables for securities	275,318
Agents' balances	102,566,673
Investment income due and accrued	13,698,890
Funds held	0
Reinsurance recoverable on paid losses	16,390,360
Federal income taxes receivable	2,852,054
Net deferred tax asset	4,498,328
Guarantee funds receivable or on deposit	162,638
Electronic data processing equipment, net of depreciation	1,319,432
Receivable from affiliates	2,988
Other admitted assets	10,471,819
Total Admitted Assets	$ 3,620,048,212

Liabilities and Surplus

Liabilities:	
Reserve for unpaid losses and loss adjustment expenses	$ 1,043,034,784
Unearned premiums	452,867,199
Accrued expenses	135,095,230
Funds held	590,443
Advance premiums	27,473,420
Amounts withheld	64,224,218
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Dividends declared and unpaid	20,141
Ceded reinsurance premium payable	28,179,079
Payable for securities	7,894,282
Statutory penalties	367,343
Current federal and foreign income taxes	0
Net deferred tax liability	0
Borrowed money and accrued interest	50,191,167
Drafts outstanding	0
Payable to affiliate	17,707,813
Other liabilities	1,780,541
Total Liabilities	$ 1,832,736,190
Surplus:	
Common stock	$ 10,000,375
Additional paid-in capital	242,451,084
Unassigned surplus	1,534,860,563
Total Surplus	$ 1,787,312,022
Total Liabilities and Surplus	$ 3,620,048,212

State of Ohio

County of Cuyahoga

The undersigned, being duly sworn, says: That he is the President of ***RLI Insurance Company****; that said Company is a corporation duly organized, in the State of Illinois, and licensed and engaged in business in the State of* NEW YORK *and has duly complied with all the requirements of the laws of said State applicable of said Company and is duly qualified to act as Surety under such laws; that said Company has also complied with and is duly qualified to act as Surety under the Act of Congress approved July 1947, 6U.S.C sec. 6-13; and that to the best of his knowledge and belief the above statement is a full, true, and correct statement of the financial condition of the said Company on the 31st day of December 2024.*

Attest:

RLI INSURANCE COMPANY CORPORATE SEAL ILLINOIS

{ Corporate Seal Affixed }

Craig Kliethermes — President

Olga S. Happel — Assistant Secretary

Sworn to before me this 3rd day of March, 2025.

NOTARY PUBLIC STATE OF OHIO

JILL A SCOTT
Notary Public
State of Ohio
My Comm. Expires
September 22, 2025

{ Notarial Seal Affixed }

Jill A. Scott — *Notary Public, State of Ohio*

M0058325_Portal

POWER OF ATTORNEY

RLI Insurance Company
Contractors Bonding and Insurance Company

9025 N. Lindbergh Dr. Peoria, IL 61615
Phone: 800-645-2402

Know All Men by These Presents:

That this Power of Attorney is not valid or in effect unless attached to the bond which it authorizes executed, but may be detached by the approving officer if desired.

That **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, each an Illinois corporation, (separately and together, the "Company") do hereby make, constitute and appoint:

Gary A. Cardinale, Joseph V. Cardinale, Salvatore Cardinale, jointly or severally

in the City of Buffalo, State of New York its true and lawful Agent(s) and Attorney(s) in Fact, with full power and authority hereby conferred, to sign, execute, acknowledge and deliver for and on its behalf as Surety, in general, any and all bonds and undertakings in an amount not to exceed **Twenty Five Million** Dollars (**$25,000,000.00**) for any single obligation.

The acknowledgment and execution of such bond by the said Attorney in Fact shall be as binding upon the Company as if such bond had been executed and acknowledged by the regularly elected officers of the Company.

RLI Insurance Company and/or **Contractors Bonding and Insurance Company**, as applicable, have each further certified that the following is a true and exact copy of a Resolution adopted by the Board of Directors of each such corporation, and is now in force, to-wit:

> "All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or Agents who shall have authority to issue bonds, policies or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

IN WITNESS WHEREOF, the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, as applicable, have caused these presents to be executed by its respective Vice President with its corporate seal affixed this 13th day of September, 2023.

CONTRACTORS BONDING AND INSURANCE COMPANY CORPORATE SEAL ILLINOIS

RLI INSURANCE COMPANY CORPORATE SEAL ILLINOIS

RLI Insurance Company
Contractors Bonding and Insurance Company

By: B. W. D.
Barton W. Davis — Vice President

State of Illinois }
County of Peoria } SS

On this 13th day of September, 2023, before me, a Notary Public, personally appeared Barton W. Davis, who being by me duly sworn, acknowledged that he signed the above Power of Attorney as the aforesaid officer of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** and acknowledged said instrument to be the voluntary act and deed of said corporation.

By: Catherine D. Geiger
Catherine D. Geiger — Notary Public

CATHERINE D. GEIGER
OFFICIAL SEAL
NOTARY PUBLIC STATE OF ILLINOIS
Notary Public - State of Illinois
My Commission Expires
December 05, 2026

CERTIFICATE

I, the undersigned officer of **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, do hereby certify that the attached Power of Attorney is in full force and effect and is irrevocable; and furthermore, that the Resolution of the Company as set forth in the Power of Attorney, is now in force. In testimony whereof, I have hereunto set my hand and the seal of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** this 12th day of January, 2026.

RLI Insurance Company
Contractors Bonding and Insurance Company

By: Jeffrey D Fick
Jeffrey D. Fick — Corporate Secretary

3153548020212

A0058D19

SECTION 00 61 00
PERFORMANCE BOND

1.00 PERFORMANCE BOND

1.01 GENERAL

KNOW ALL MEN BY THESE PRESENTS, that _____

_____ (hereinafter called the "Principal") and

_____

(hereinafter called the "Surety") are held and firmly bound to the _____

_____ (hereinafter called the "Owner") in the full and just sum of _____ Dollars ($_____) good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds himself, his/her heirs, executors, administrators and assigns and the Surety binds itself, its successors and assigns, jointly and severally, firmly by these present.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the _____ day of _____ 20_____, with the Owner for the _____ a copy of which Contract is annexed to and hereby made part of this bond as though herein set forth in full.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his/her or its representatives or assigns, shall well and faithfully comply with and perform all the terms, covenants and conditions of said Contract or his/her (their, its) part to be kept and performed and all modifications, amendments, additions, and alterations thereto that may hereafter be made, according to the true intent and meaning of said Contract, including repair and/or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the Owner and Government from all cost and damage which it may suffer by reason of failure so to do, and shall fully reimburse and repay the Owner and Government for all outlay and expense which the Owner and Government may incur in making good any such default, and shall protect the said Owner and Government against, and pay any and all amounts, damages, costs and judgments which may or shall be recovered against said Owner and Government or its officers or agents or which the said Owner and Government may be called upon to pay to any person or corporation by reason of any damages arising or growing out of the doing of said work, or the repair or maintenance thereof, or the manner of doing the same, or the neglect of the said Principal, or his/her (their, its) agents or servants, or the improper performance of the said work by the said Principal, or his/her (their, its) agents or servants, or the infringement of any patent or patent rights by reason of the use of any materials furnished or work done as aforesaid or otherwise, then this obligation shall be null and void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, the Surety for value received, hereby stipulates and agrees, if requested to do so by the Owner and Government, to fully perform and complete the work mentioned and described in said Contract, pursuant to the terms, conditions, and covenants thereof, if for any cause the Principal fails or neglects to so fully perform and complete such work and the Surety further agrees to commence such work of completion within ten (10) calendar days after written notice thereof from the Owner and Government and to complete such work within ten (10) calendar days from the expiration of the time allowed the Principal in the Contract for the completion thereof; and further;

PROVIDED, HOWEVER, the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by an extension of time, modification, omission, addition, or change in or to the said Contract or the work to be performed thereunder or by any payment thereunder before the time required herein, or by any waiver of any provisions thereof; or by any assignment, subletting or other transfer of any work to be performed or any monies due or to become due thereunder; and said Surety does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts, and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety as though done or omitted to be done by or in relation to said Principal.

Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

IN WITNESS WHEREOF, the Principal has hereunto set his/her (their, its) hand and seal and the surety has caused this instrument to be signed by its _____, and its corporate seal to be hereunto affixed this _____ day of _____ 20_____.

(If Corporation add Seal and Attestation.) _____
Principal

By: _____

Attest _____
Secretary

By: _____

Add Corporation Seal. Attest: _____

2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON IN NEW YORK STATE (RPL 309-a)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned,_____

_____ personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
(signature and office of individual taking acknowledgment)

2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON OUTSIDE NEW YORK STATE (RPL 309-b)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned,_____

personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual(s) made such appearance before the undersigned in

_____
(insert the city or other political subdivision and the state or country or other place the acknowledgment was taken)

_____
(signature and office of individual taking acknowledgment)

2.03 BY SURETY COMPANY

STATE OF _____)

SS:

COUNTY OF _____)

On this _____ day of _____, 20_____, before me personally came _____, to me known, who being by me duly sworn, did depose and say that he/she resides in _____ _____; that he/she is the _____ of the _____ the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

_____
(Notary Public or Commissioner of Deeds)

END OF SECTION

SECTION 00 61 13
LABOR AND MATERIALS PAYMENT BOND

1.0 LABOR AND MATERIALS PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that _____

_____

(hereinafter called the "Principal") and _____

(hereinafter called the "Surety") are held and firmly bound to the _____

_____ (hereinafter called the "Owner") and the United States of America and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns, in the full and just sum of _____ Dollars ($_____) good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds itself, its heirs, executors, administrators, successors and assigns, and the Surety binds itself, its successors and assigns jointly and severally, firmly by these present.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the _____ day of _____ 20____, with the Owner for the _____ a copy of which Contract is annexed to and hereby made part of this bond as though herein set forth in full; and

WHEREAS, the Owner has required this Bond guaranteeing prompt payment of monies due to all persons furnishing the Principal or any subcontractor of the Principal with labor or materials in the prosecution of the work provided in such Contract;

NOW, THEREFORE, the conditions of the foregoing obligation is such that if the Principal shall promptly pay all monies due to all persons furnishing the Principal or any subcontractor or the Principal with labor or materials in the prosecution of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, the Surety for value received, hereby stipulates and agrees, that no change, extension, alteration, or addition to the terms of the said Contract or specifications accompanying the same, shall in anywise affect its obligation under this Bond, and it does hereby waive notice of any such change, extension, alteration or addition, and further;

PROVIDED, HOWEVER, that the place of trial of any action on this Bond shall be in the county in which the said Contract was to be performed, or if said Contract was to be performed in more than one county, then in any such county, and not elsewhere; and further

PROVIDED, HOWEVER, that this Bond shall be enforceable in accordance with the terms and provisions of local Finance Law.

IN WITNESS WHEREOF, the Principal has hereunto set its hand and seal and the surety has caused this instrument to be signed by its _____, and its corporate seal to be hereunto affixed this _____ day of _____ 20_____.

(If Corporation add Seal and Attestation.)

_____
Principal

By: _____

Attest: _____
Secretary

By: _____

Add Corporation Seal.

Attest: _____

2.00 ACKNOWLEDGMENTS

2.01 ACKNOWLEDGMENT BY A PERSON IN NEW YORK STATE (RPL 309-a)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned,

_____

personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
(signature and office of individual taking acknowledgment)

2.02 ACKNOWLEDGMENT BY A PERSON OUTSIDE NEW YORK STATE (RPL 309-b)

STATE OF _____)

SS:

COUNTY OF _____)

On the _____ day of _____ 20_____, before me, the undersigned, _____personally appeared personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual(s) made such appearance before the undersigned in

_____
(insert the city or other political subdivision and the state or country or other place the acknowledgment was taken)

_____
(signature and office of individual taking acknowledgment)

2.03 BY SURETY COMPANY

STATE OF _____)

SS:

COUNTY OF _____)

On this _____ day of _____, 20_____, before me personally came _____, to me known, who being by me duly sworn, did depose and say that he/she resides in _____ _____; that he/she is the _____ of the _____ the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

_____
(Notary Public or Commissioner of Deeds)

END OF SECTION

SECTION 00 72 00
GENERAL CONDITIONS

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PART 1 - CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 The Contract Documents

The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General, and Special), the Drawings, the Specifications, and all Addenda issued prior to, and all Modifications, issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the Architect/Engineer pursuant to Subparagraph 2.2.8, or (4) a written order for a minor change in the work issued by the Architect/Engineer pursuant to Paragraph 12.6.

1.1.1.1 PRECEDENCE OF DOCUMENTS

In case of discrepancy between the Contract Documents, preference shall be given in the following order, with later dates taking preference over earlier dates:

(1) Modifications

(2) Agreement

(3) Special Conditions

(4) General Conditions

(5) Addenda

(6) Revisions to the Drawings

(7) Revisions to the Specifications

(9) Drawings

(a) Schedules and piping and wiring diagrams take precedence over other data shown on the drawings.

(b) Notes take precedence over other data shown on the drawings, except schedules and piping and wiring diagrams.

(8) Specifications

1.1.2 The Contract

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by Modification as defined in Subparagraph 1.1.1. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Architect/Engineer and the Contractor, but the Architect/Engineer shall be entitled to performance of obligations intended for his/her benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect/Engineer and any Subcontractor or Sub-subcontractor.

1.1.2 The Work

The work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.3 The Project

The Project is the total construction of which the work performed under the Contract Documents may be the whole or a part.

1.1.4 Project site

The price site is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of the project.

1.1.5 Testing Agencies

A testing agency is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on and, if required, to interpret results of

those inspections or tests.

1.1.6 FURNISH

"Furnish" shall be considered to mean supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations of all equipment and/or materials with necessary or appropriate accessories, essential to the performance of its function, or required in joining or adding to another thing.

1.1.7 INSTALL

"Install" shall be considered to mean operations including unloading, storage, unpacking, assembling, erecting, mounting, building, anchoring, applying, finishing, curing, cleaning, protecting or other similar operations to establish in-place equipment, materials, or systems as required for use or service.

1.1.8 CONNECT

"Connect" shall be considered to mean the labor and materials necessary to join or attach equipment, materials, or systems to perform the function intended.

1.1.9 PROVIDE

"Provide" shall be considered to mean furnish, install, and connect complete, ready for intended use.

1.2 INTENT

1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations, which have well-known technical or trade meanings are used in the Contract Documents in accordance with such, recognized meanings.

1.2.2 The organization of the specifications into divisions, section and articles, and the arrangement of drawings shall not control the Contractor in dividing the work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.3 SITE CONDITIONS

1.3.1 The Contractor shall satisfy itself concerning the nature and location of work and the general and local conditions, and particularly, but without limitation with respect to the following: those affecting transportation, access, disposal, handling and storage of materials, availability and quality of labor, climatic conditions and seasons; physical conditions at the work sites and the project area as a whole, topography and ground surface conditions, and nature and quantity of surface and subsurface materials to be encountered, equipment and

facilities needed preliminary to and during performance of the Contract; and all other matters which can in any way affect performance of the Contract, or the cost associated with such performance. The failure of the Contractor to acquaint itself with any applicable condition will not relieve it from the responsibility for properly estimating either the difficulties or the costs of successfully performing the Contract.

1.3.2 By executing the Contract, the Contractor represents that he/she has visited the site, familiarized him/her with the local conditions under which the work is to be performed, and correlated his/her observations with the requirements of the Contract Documents.

1.3.3 Where the Owner has made investigations of sub-surface conditions in areas where work is to be performed under the Contract, such investigations are made only for the purpose of study and design. The records of such investigations are not a part of the Contract and are furnished solely for the convenience of the Contractor.

1.3.4 The Contractor shall promptly notify the Owner when site conditions are discovered which differ materially from those indicated in the Contract, or unknown physical conditions at the site, of any unusual nature, differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract. The Owner will, as promptly as practicable, investigate the conditions and make a determination. If it is determined that such conditions do materially so differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of any part of any work under the Contract, whether or not changed as a result of such conditions, an equitable adjustment will be made and the Contract modified in writing accordingly. No claim of Contractor under this Article will be allowed unless the Contractor has given the required notice.

1.4 OWNERSHIP AND USE OF DOCUMENTS

1.4.1 All Drawings, Specifications and copies thereof furnished by the Architect/Engineer are and shall remain his/her property. They are to be used only with respect to this Project and are not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Architect/Engineer at the completion of the work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect/Engineer's common law copyright or other reserved rights.

1.5 CONTRACT TIMES

1.5.1 The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

1.6 SUBSTANTIAL COMPLETION

1.6.1 The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can

be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

PART 2 – ARCHITECT/ENGINEER

2.1 DEFINITION

2.1.1 The Architect/Engineer is the person lawfully licensed to practice engineering and/or architecture, or an entity lawfully practicing engineering and/or architecture identified as such in the Owner-Contractor Agreement, and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect/Engineer means the Architect/Engineer or his/her authorized representative.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The Architect/Engineer will provide administration of the Contract as hereinafter described.

2.2.2 The Architect/Engineer will be the Owner's representative during construction and until final payment is due. The Architect/Engineer will advise and consult with the Owner. The Owner's instructions to the Contractor shall be forwarded through the Architect/Engineer. The Architect/Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with Subparagraph 2.2.16.

2.2.3 The Architect/Engineer will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the work and to determine in general if the work is proceeding in accordance with the Contract Documents.

2.2.4 The Architect/Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the work, and he/she will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents. The Architect/Engineer will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the work.

2.2.5 The Architect/Engineer shall at all times have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Architect/Engineer may perform his/her functions under the Contract Documents.

2.2.6 Based on the Architect/Engineer observations and an evaluation of the Contractor's Application's for Payment, the Architect/Engineer will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in Paragraph 9.4.

2.2.7 The Architect/Engineer will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and the Contractor.

2.2.8 The Architect/Engineer will render interpretations necessary for the proper execution or progress of the work, with reasonable promptness and in accordance with any time limit agreed upon. Either party to the Contract may make written request to the Architect/Engineer for such interpretations.

2.2.9 Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the work or the interpretation of the Contract Documents shall be referred initially to the Architect/Engineer for decision, which he/she will render in writing within a reasonable time.

2.2.10 All interpretations and decisions of the Architect/Engineer shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

2.2.11 The Architect/Engineer will have authority to reject work, which does not conform to the Contract Documents. Whenever, in his/her opinion, he/she considers it necessary or advisable for the implementation of the intent of the Contract Documents, he/she will have authority to require special inspection or testing of the work in accordance with Subparagraph 7.7.2 whether or not such work be then fabricated, installed, or completed. However, neither the Architect/Engineer authority to act under this Subparagraph 2.2.11, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect/Engineer to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the work.

2.2.12 The Architect/Engineer will review or take other appropriate action upon Contractor's submittals such as shop drawings, product data, and samples, but only for conformance with the design concept of the work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Architect/Engineer review of a specific item shall not indicate approval of an assembly of which the item is a component.

2.2.13 The Architect/Engineer will prepare Change Orders in accordance with Article 12, and will have authority to order minor changes in the work as provided in Subparagraph 12.6. The Architect/Engineer will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and forward to the Owner for the Owner's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of Paragraph 9.9.

2.2.14 If the Owner and Architect/Engineer agree, the Architect/Engineer will provide one or more Inspectors to assist the Architect/Engineer in carrying out his/her responsibilities at the site. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The Inspector is not authorized to revoke, alter or waive any requirements of the specification, nor is authorized to approve or accept any portion of the completed project. He shall call the attention of the Contractor to any failure of the work or materials to conform to the specifications and Contract and shall have the

authority to reject materials. Any dispute between the Inspector and Contractor shall be referred to the Architect/Engineer. Any advice, which the Inspector may give the Contractor, shall in no way be construed as binding the Architect/Engineer in any way or releasing the Contractor from fulfilling any of the terms of the Contract.

2.2.15 The duties, responsibilities and limitations of authority of the Architect/Engineer as the Owner's representative during construction as set forth in the Contract Documents will not be modified or extended without written consent of the Owner, the Contractor and the Architect/Engineer.

2.2.16 In case of the termination of employment of the Architect/Engineer, the Owner shall appoint an Architect/Engineer against whom the Contractor makes no reasonable objection whose status under the Contract Documents shall be that of the former Architect/Engineer. Any dispute in connection with such appointment shall be subject to arbitration.

PART 3 - OWNER

3.1 DEFINITION

3.1.1 The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or his/her authorized representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

3.2.1 The Owner shall furnish all surveys describing the physical characteristics, legal limitations and utility locations for the site of the project, and a legal description of the site.

3.2.2 Except as provided in Subparagraph 4.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.3 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the work.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of drawings and specifications reasonably necessary for the execution of the work.

3.2.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to work by Owner or by Separate Contractors, Payments and Completion, and Insurance in Articles 6, 9, and 11, respectively.

3.3 OWNER'S RIGHT TO STOP OR SUSPEND THE WORK

3.3.1 If the Contractor fails to correct defective work as required by Paragraph 13.2 or persistently fails to carry out the work in accordance with the Contract Documents, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in

writing, may order the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

3.3.2 When there is no responsible agent to the Contractor on the work or if the Contractor fails to perform the work according to specifications, or if the Contractor does not follow permits under which the work is allowed to proceed, the Architect/Engineer may order the work, or any part thereof, suspended and no extra payment will be due the Contractor for suspension on these grounds.

3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

3.4.1 The Owner has the right, in cases of improper or imperfect performance of the work, or failure to prosecute the work to insure its completion within the time limits specified by the Contract Documents, and upon recommendation of the Architect/Engineer that sufficient cause exists to justify action, to give written notice to the Contractor and the Surety stating said default. If the Contractor does not remedy such default within ten (10) days after such notice if given, the Owner has the right to suspend all work by the Contractor. When the Contractor and Surety are notified that the Owner has elected to suspend the work, the Contractor shall cease to have the right to occupancy of the work site, and the Owner shall have the right to forthwith take possession of the work site. The Surety shall have the right to complete the Contract, but in the event that performance has not been commenced by the Surety within ten (10) days from the date of the notice of suspension, the Owner has the right to continue in the possession of and utilize, for the completion of the Contract, any and all materials, tools, equipment and plans which the Contractor has had delivered upon the site of the work, and to prosecute the work to the completion, either by force account or by Contract.

3.4.2 Expenditures made by the Owner in completing the work under the Contract and in payment of valid claims arising under the terms of the Contract shall be deducted from monies due or which would have become due the Contractor upon completion of the Contract. No claims for "extras" arising from the Owner's actions in completing the work will be allowed. The Contractor and Surety shall be liable and shall reimburse the Owner for any costs, in excess of the Contract amount, required to complete the work.

3.5 OWNER'S RIGHT TO CLEAN UP

3.5.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.15, the Owner may clean up and charge the cost thereof including a reasonable charge for the efforts of Owner, its agents, contractors and/or employees to the Contractors responsible therefore as the Architect/Engineer shall determine to be just.

3.6 OWNER'S USE OF COMPLETED PORTIONS

3.6.1 The Owner shall have the right to take possession of and use any completed or partially completed portions of the work not withstanding at the time for completing the entire work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract

PART 4 - CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his/her authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect/Engineer any error, inconsistency or omission he may discover. The Contractor shall perform no portion of the work at any time without Contract Documents or, where required, reviewed Shop Drawings, Product Data or Samples for such portion of the work.

4.2.2 Construction Methods and Procedures: Certain methods and procedures may be specifically required by the Contract Documents. All other methods and procedures, which the Contractor uses to perform the work, are his sole responsibility.

4.2.3 The Contractor shall be responsible for performing the work items specified or shown in specifications and accompanying drawings issued as a part of its Contract, and shall coordinate its work with that of other Contractors.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct the work, using his/her best skill and attention. He/she shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his/her employees, Subcontractors and their agents and employees, and other persons performing any of the work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his/her obligations to perform the work in accordance with the Contract Documents either by the activities or duties of the Architect/Engineer in his/her administration of the Contract, or by inspections, tests or approvals required, or performed under Paragraph 7.7 by persons other than the Contractor.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the work.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his/her employees and shall not employ on the work any unfit person or anyone not skilled in the task assigned to him.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner, and the Architect/Engineer that all materials and equipment furnished under this Contract will be new unused or un-reconditioned, unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not conforming to these requirements, including substitutions not properly approved and authorized may be considered defective. The Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by the provisions of Paragraph 13.2.

4.6 TAXES

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the work or portions thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

4.7 PERMITS, FEES AND NOTICES

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the work, which are customarily secured after execution of the Contract and which are legally required at the time bids are received.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations and lawful orders of any public authority bearing on the performance of the work.

4.7.3 It is the responsibility of the Architect/Engineer to make certain that the Contract Documents are in accordance with applicable laws, statutes, and building codes and regulations. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he/she shall promptly notify the Architect/Engineer in writing, and any necessary changes shall be accomplished by appropriate modification.

4.7.4 If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules

and regulations, and without such notice to the Architect/Engineer, he/she shall assume full responsibility, therefore, and shall bear all costs attributable thereto.

4.8 SUPERINTENDENT

4.8.1 The Contractor shall employ a competent full-time on site superintendent and necessary assistants who shall be in attendance at the project site during the progress of the work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be so confirmed on written request in each case. The Owner shall have the right to require replacement of the Superintendent.

4.9 PROGRESS SCHEDULE

4.9.1 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's and Architect/Engineer information an estimated progress schedule for the work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the work.

4.10 DOCUMENTS AND SAMPLES AT THE SITE

4.10.1 The Contractor shall maintain at the site for the Owner one record copy of all drawings, specifications, addenda, change orders, and other modifications, in good order and marked currently to record all changes made during construction, and reviewed shop drawings, product data and samples. These shall be available to the Architect/Engineer and shall be delivered to him for the Owner upon completion of the work.

4.10.2 The Contractor shall obtain at his/her expense one set of construction contract drawings in non-reproducible black and white prints, for the purpose of recording "as-built" conditions.

4.10.3 The Contractor shall be responsible for all survey work required for the location and construction of the work required to complete Record Drawings. Record Drawings shall, as a minimum, show the relative location by dimension with respect to each other of the final location of all work items.

4.10.4 It shall be the responsibility of the Contractor to mark each sheet of the non-reproducible drawings in sharp red pencil and to record thereon in a neat and current form, any and all approved field changes and conditions as they may occur. Sufficient detail shall be recorded for the Owner to accurately locate the facilities following construction and restoration. A complete file of approved field sketches, diagrams, and other changes, as may become necessary during the progress of the work, shall also be maintained and attached to the record set of contract drawings. Record drawings shall be maintained current as the work progresses. The Architect/Engineer will review the drawings before approving each progress payment, and may withhold approval until such time as the drawings meet the above requirements. At completion of the work, each sheet of record prints, plus all approved field sketches and diagrams, shall be submitted to the Architect/Engineer for his/her approval

and use in establishing a basis for semi-final payment.

4.10.5 Before semi-final payment, the Contractor shall deliver to the Architect/Engineer the complete bound set of non-reproducible record drawings for the Owner's permanent files.

4.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

4.11.1 Shop drawings are drawings, diagrams, schedules and other data specially prepared for the work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work.

4.11.2 Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the work.

4.11.3 Samples are physical examples, which illustrate materials, equipment or workmanship, and establish standards by which the work will be judged.

4.11.4 The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the work or in the work of the Owner or any separate contractor, all shop drawings, product data and samples required by the Contract Documents.

4.11.5 By approving and submitting shop drawings, product data and samples, the Contractor represents that he/she has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he/she has checked and coordinated the information contained within such submittals with the requirements of the work and of the Contract Documents.

4.11.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architect/Engineer review of shop drawings, product data or samples under Subparagraph 2.2.12 unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submission and the Architect/Engineer has given written acknowledgment to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the shop drawings, product data or samples by the Architect/Engineer's review thereof.

4.11.7 The Contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data or samples, to revisions other than those requested by the Architect/Engineer on previous submittals.

4.11.8 No portion of the work requiring submission of shop drawings, product data or samples shall be commenced until the submittal has been reviewed by the Architect/Engineer as provided in Subparagraph 2.2.12. All such portions of the work shall be in accordance with reviewed submittals.

4.12 USE OF SITE

4.12.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.13 CUTTING AND PATCHING OF WORK

4.13.1 The Contractor shall be responsible for all cutting, fitting, or patching that may be required to complete the work or to make its several parts fit together properly.

4.13.2 The Contractor shall not damage or endanger any portion of the work or the work of the Owner, or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor.

4.14 CLEANING UP

4.14.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his/her operations. At the completion of the work, he/she shall remove all his/her waste materials and rubbish from and about the project as well as all his/her tools, construction equipment, machinery, and surplus materials. Contractor shall use a hydraulicly driven broom to clean all streets and roadways at the end of each work day.

4.14.2 If the Contractor fails to clean up at the completion of the work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof shall be charged to the Contractor.

4.15 ROYALTIES AND PATENTS

4.15.1 The Contractor shall pay all royalties and license fees. He/she shall defend all suits of claims for infringement of any patent rights and shall save the Owner harmless from any loss including, but not limited to, attorney's fees on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process, or the product of a particular manufacturer, or manufacturers is specified; but, if the Contractor has reason to believe that the design, process, or product specified is an infringement of a patent, he/she shall be responsible for such loss unless he/she promptly gives such information to the Architect/Engineer. To save harmless provisions contained herein shall be additional to and shall not be interpreted to limit in any way the indemnification provisions contained in Section 4.16 below.

4.16 INDEMNIFICATION

4.16.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to

bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity, which would otherwise exist as to any party or person, described in this Paragraph 4.16.

4.16.2 In any and all claims against the Owner or the Architect/Engineer, or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.16 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

4.17 HARASSMENT

4.17.1 The Contractor and its employees shall comply with all Local, State, and Federal regulations governing worker and employee conduct. The Contractor and his/her workers, employees, subcontractors and their workers, etc., may not fraternize with local residents, or Town personnel, or its representatives. At no time will it be appropriate to say anything derogatory or vulgar to any individuals. Harmful threats and harassment, verbal or otherwise directed towards any individual will not be tolerated. If an incident of fraternizing or harassment arises, the Contractor will be directed to permanently remove the worker from the site and replace the worker at no additional cost to the Project.

PART 5 - SUBCONTRACTORS

5.1 DEFINITION

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his/her authorized representative. The term Subcontractor does not include any separate contractor or his/her subcontractors.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform any of the work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise required by the Contract Documents or the Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Owner

and the Architect/Engineer in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the work. The Architect/Engineer will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect/Engineer, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect/Engineer to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Architect/Engineer has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he/she has reasonable objection.

5.2.3 If the Owner or the Architect/Engineer has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Architect/Engineer has no reasonable objection and no increase in the Contract Sum shall be allowed for any such substitution.

5.2.4 The Contractor shall make no substitution for any Subcontractor, person or entity previously selected if the Owner or the Architect/Engineer makes reasonable objection to such substitution.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By an appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect/Engineer. Said agreement shall preserve and protect the rights of the Owner and the Architect/Engineer under the Contract Documents with respect to the work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his/her Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed Subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to his/her Sub-subcontractors.

PART 6 - WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform work related to the project with his/her own forces, and to award separate contracts in connection with other portions of the project or other work on the site under these or similar Conditions of the Contract. If the Contractor claims

that delay or additional cost is involved because of such action by the Owner, he/she shall make such claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner will provide for the coordination of the work of his/her own forces and of each separate contractor with the work of the Contractor, who shall cooperate therewith as provided in Paragraph 6.2.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his/her work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's work depends for proper execution or results upon the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the work, promptly report to the Architect/Engineer any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acceptance of the Owner's or separate contractors' work as fit and proper to receive his/her work, except as to defects, which may subsequently become apparent in such work by others.

6.2.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefore.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of the Owner, or to other work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.3.1.

6.2.5 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues or initiates an arbitration proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings at the Owner's expense, and if any judgement or award against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorney's fees and court or arbitration costs which the Owner has incurred.

PART 7 - MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 The Contract shall be governed by the law of the place where the Project is located.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his/her partners, successors, assigns, and legal representatives to the other party hereto and to the partners, successors, assigns, and legal representatives of such other party with respect to all covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner. Any assignment made in violation hereof shall be deemed void ab initio.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity, or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail, to the last business address known to him who gives the notice.

7.4 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

7.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder if, and as, required in the Bidding Documents or in the Contract Documents.

7.5 RIGHTS AND REMEDIES

7.5.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.5.2 No action or failure to act by the Owner, Architect/Engineer, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder or any subsequent breach thereunder, except as may be specifically agreed in writing.

7.6 TESTS

7.6.1 Where the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any portion of the work to be inspected, tested or approved, the Contractor shall give the Architect/Engineer timely notice of its readiness so the Architect/Engineer may observe such inspection, testing, or approval. The Contractor shall bear all costs of such inspections, tests, or approvals required by the Owner and by public authorities, unless otherwise noted.

7.6.2 If the Architect/Engineer determines that any work requires special inspection, testing, or approval which Subparagraph 7.7.1 does not include, he/she will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing or approval,

and the Contractor shall give notice as provided in Subparagraph 7.7.1. If such special inspection or testing reveals a failure of the work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Architect/Engineer additional services made necessary by such failure; otherwise the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.6.3 Required certificates of inspection, testing, or approval shall be secured by the Contractor and promptly delivered by him to the Architect/Engineer.

7.6.4 If the Architect/Engineer is to observe the inspections, tests, or approvals required by the Contract Documents, he/she will do so promptly and, where practicable, at the source of the supply.

PART 8 - TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, the Contract Time is the number of calendar or working days shown in the Contract Documents representing the time allowed for the completion of work contemplated in the Contract.

8.1.2 The date of commencement of the work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement, or such other date as may be established therein.

8.1.3 The term day, as used in the Contract Documents, shall mean calendar days, Sundays and Holidays included, unless otherwise specifically designated.

8.1.4 Substantial Completion: The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof. This includes all work in and excludes restoration work.

8.2 PROGRESS AND COMPLETION

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the work on the date of commencement as defined in Subparagraph 8.1.2. he/she shall carry the work forward expeditiously with adequate forces and shall complete the work within the Contract Time. No work shall begin prior to the date of commencement.

8.2.3 When the Contract Documents require completion of the Contract by a specific date, all work, including clean up of the work site, must be complete by that date.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 The Architect/Engineer or the Owner shall have the authority to immediately stop the work wholly or in part by written order for such period as he/she may deem necessary due to conditions considered unfavorable for the suitable prosecution of the work.

8.3.2 If the Contractor finds it is impossible to complete the work on or before the time specified for completion, he/she may make written request for an extension of time. He/she shall set forth fully in his/her request the reasons he/she believes justify the granting of his/her request.

8.3.3 Contractor agrees to make no monetary claim for delays, interferences or hindrances of any kind in the performance of this Agreement caused by any act or omission to act of the Owner or its employees or representatives, and further agree that any such claim shall be fully compensated for by an extension of time to complete performance of the work. the Owner may extend the contract time by Change Order for completion as appears reasonable and proper. The extended time for completion shall then be considered as in full force and effect as if it were the original time for completion.

8.3.4 Any claim for extension of time shall be made in writing to the Architect/Engineer not more than twenty (20) days after the commencement of the delay; otherwise it shall be waived. In the case of a continuing delay, only one claim is necessary. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the work.

8.3.5 If no agreement is made stating the dates upon which interpretations as provided in Subparagraph 2.2.8 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until fifteen (15) days after written request is made for them, and not then unless such claim is reasonable.

8.4 FAILURE TO COMPLETE WORK ON TIME

8.4.1 Failure to complete the specified sections of the work within the time required by the Contract, including extensions granted thereto as determined by the Architect/Engineer, shall entitle the Owner to deduct from the monies due, or to become due to the Contractor, an amount equal to the amounts provided in the THIRD section of 004200 BID PROPOSAL for each calendar day of delay in the Substantial Completion of work, said sum being fixed and agreed as Liquidated Damages, and not as a penalty.

8.4.2 Permitting the Contractor or Surety to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of the Owner of any of its rights under the Contract.

8.5 CONTRACTOR TO BE CHARGED FOR INSPECTION AFTER TIME ALLOWED FOR COMPLETION HAS EXPIRED

8.5.1 The Contractor will be charged for each and every day inspection is required on all construction projects after the time allowed for completion has expired. This per diem rate

for inspection will include the cost of inspection, construction supervision, clerical and administrative costs, traffic control, vacations, pensions, holidays, overtime, and other similar overhead charges. This charge for inspection will be deducted from monies due the Contractor at the completion of the Contract. The amount of the per diem charge will be in accordance with current rates for such personnel as required to complete the work.

PART 9 - PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Owner-Contractor Agreement and, including authorized adjustments thereto, is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents.

9.2 APPLICATIONS FOR PAYMENT

9.2.1 At least ten (10) days before the date for each progress payment established in the Owner-Contractor Agreement, the Contractor shall submit to the Architect/Engineer an itemized Application for Payment, notarized if required, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect/Engineer may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents.

9.2.2 Unless otherwise provided in the Contract documents, partial payments may be made for some stored materials as follows and only if approved by the Owner in advance. Payments may be made on account of large quantities of materials or major equipment components not incorporated in the Work but delivered and suitably stored either at the site, or some other location agreed upon in writing with the Owner. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of paid bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site.

9.2.3 The Contractor warrants that title to all work, materials, and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens"; and that no work, materials, or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other person performing work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

9.2.4 When requested by the Architect/Engineer, the Contractor shall furnish a breakdown of the actual quantities and unit prices used in preparing his/her bid price for each item in the proposal. The breakdown must be balanced and not contain prices which are proportionally higher for work to be completed first. The Architect/Engineer reserves the right to order such changes as may, in his/her opinion, be necessary to balance such breakdown.

9.3 CERTIFICATES FOR PAYMENT

9.3.1 After the receipt of the Contractor's Application for Payment, the Architect/Engineer will either issue a Certificate for Payment to the Owner, with a copy to the Contractor for such amount as the Architect/Engineer determines is properly due, or notify the Contractor in writing his/her reasons for withholding a certificate as provided in Subparagraph 9.5.1.

9.3.2 The issuance of a Certificate for Payment will constitute a representation by the Architect/Engineer to the Owner, based on his/her observations at the site and the data comprising of the Application for Payment, that the work has progressed to the point indicated; that, to the best of his/her knowledge, information and belief, the quality of the work is in accordance with the Contract Documents.

9.4 PROGRESS PAYMENTS

9.4.1 At least ten (10) days before each progress payment falls due (but not more often than once a month) the Contractor will submit to the Architect/Engineer a partial payment estimate filled out and signed by the Contractor covering the work performed during the period covered by the partial payment estimate and supported by such data as the Architect/Engineer may reasonably require. Requests shall be submitted on FmHA 1924-18 or similar format.

9.4.2 If payment is requested on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect his/her interest herein, including applicable insurance.

9.4.3 The Architect/Engineer will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his/her approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing his/her reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate.

9.4.4 The Owner shall act on partial progress estimates approved by the Architect/Engineer on the succeeding regularly scheduled meeting

9.4.5 The retainage shall not be less than an amount equal to five percent (5%) of an approved partial payment estimate. The sum or sums withheld by the Owner shall not exceed five percent (5%) of the value completed, unless a dispute arises between one prime contractor occasioned by the delays or actions of the second prime contractor. In such event, additional retainage in the sum of one and one-half (1-1/2) times the amount of possible liability may be withheld until such time as a final resolution is agreed to by all parties.

9.4.6 After the Architect/Engineer has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents.

9.4.7 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his/her Sub-subcontractors in a similar manner. The Contractor and all Subcontractors shall provide reasonable proof at the request of the Owner or Architect/Engineer of timely payment of all sums due Subcontractors and/or Sub-subcontractors as required herein.

9.4.8 Neither the Owner nor the Architect/Engineer shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.

9.4.9 No Certificate for a progress payment, nor any progress payment, nor any partial or entire use, or occupancy of the project by the Owner, shall constitute an acceptance of any work not in accordance with the Contract Documents.

9.5 PAYMENTS WITHHELD

9.5.1 The Architect/Engineer may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to such extent as may be necessary in his/her reasonable opinion to protect the Owner from loss on account of:

1. Defective work not remedied.
2. Claims filed or reasonable evidence indicating probable filing of claims.
3. Failure of the Contractor to make payments properly to the Subcontractor(s) or for labor, materials, or equipment.
4. A reasonable doubt that the Contract can be completed for the balance then unpaid.
5. Damage to the Owner or another Contractor.
6. Failure to comply with provisions of the Contract Documents relating to the receipt of State and/or Federal aid for the project and after receiving notification from the Owner that said compliance is necessary.

9.5.2 When the above grounds in Subparagraph 9.5.1 are removed, payment will be made for amounts withheld because of them.

9.6 PARTIAL ACCEPTANCE

9.6.1 Upon the request of the Owner pursuant to General Condition 3.6 or, when requested by the Contractor and upon specific approval of the Architect/Engineer, prior to final inspection and acceptance, the Contractor may be relieved of maintenance of sections of the work which have been completed. Such partial acceptance and assumption of the maintenance by the Owner shall be covered by a written notice from the Architect/Engineer to the Contractor, and

such notice shall definitely designate the sections of the work on which the Contractor is to be relieved of maintenance and shall also set forth the date upon which such notice will be effective.

9.6.2 The assumption of maintenance by the Owner, however, will not relieve the Contractor of any responsibility for defective workmanship, or materials, or for damages caused by his/her own operations.

9.6.3 Such action will not be construed to be a final inspection or acceptance of any part of the work, or waiver of any legal rights.

9.7 FINAL COMPLETION

9.7.1 The Architect/Engineer will make an inspection of the work included in the Contract as soon as practical after notification by the Contractor that the entire work has, in its opinion, been completed and final cleanup performed.

9.7.2 Should the inspection disclose any work, in whole or in part, as being unsatisfactory, the Architect/Engineer will give the Contractor the necessary instructions for correction of the same, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made. The Contractor shall bear all costs of re-inspection(s).

9.7.3 When all work included in the Contract has, in the opinion of the Architect/Engineer, been completed, the Architect / Engineer will certify the date of completion of the work.

9.8 LIEN WAIVERS AND CLAIM RELEASE

9.8.1 Neither the final payment nor any part of the retained percentage shall become due until the Contractor, delivers to the Owner (1) a complete release of any claims arising out of the Contract, and (2) an affidavit which certifies that all labor and materials for which a lien could be filed, have been paid in full.

9.8.2 Contractor does hereby covenant, promise and agree, to that no mechanic's lien or other lien of any kind whatsoever shall be filed or maintained against the project or the property of the Owner by any subcontractor, materialmen, or laborer for work done or materials furnished under the Contract or by any other party acting through or under them or any of them for and above the project or any part thereof. The contractor shall, at his/her own expense by bonding or otherwise, secure the prompt discharge of any liens which may be filed against the project as a result of this Contract.

9.9 FINAL ACCEPTANCE

9.9.1 When all of the Contractor's obligations under the Contract have, in the opinion of the Architect / Engineer and the Owner, been fully satisfactorily performed, the governing body of the Owner shall adopt a resolution establishing the final acceptance of the Project, and the date thereof.

9.10 FINAL PAYMENT

9.10.1 When the project has been finally completed and accepted the Contractor shall then be paid the entire sum found to be due after:

1. Deducting all previous payments and all amounts to be deducted under the provisions of the Contract.

2. Delivery to and acceptance by the Architect/Engineer of the Record Drawings

3. Acceptance of releases and affidavits as required under Paragraph 9.9 LIENS

9.10.2 All prior estimates and payments shall be subject to correction in the final estimate and payment.

9.10.3 The acceptance by the Contractor of the "Final Payment" provided for in the Contract shall operate as, and shall be, a release to the Owner and its representatives from all claims by the Contractor for anything done or furnished for or relating to the work, or for any act or neglect of the Owner, or of any person relating to or affecting the work.

9.10.4 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

1. Unsettled liens,

2. Failure of the work to comply with the requirements of the Contract Documents, or

3. Terms of any warranties required by the Contract Documents.

PART 10 - PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.

10.1.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury of loss.

10.1.3 The Contractor shall designate a responsible member of his/her organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and the Architect/Engineer.

10.2 EMERGENCIES

10.2.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at

his/her discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for Changes in the work.

10.2.2 In the event it becomes necessary for the Owner to perform emergency maintenance and protection, which is the responsibility of the Contractor under the Contract Documents, the cost of such work shall be billed to the Contractor and deducted from his/her final payment if not paid.

10.3 PROTECTION OF WORK-PUBLIC AND PRIVATE

10.3.1 During performance and up to the final acceptance of the work, the Contractor shall be under an absolute obligation to protect finished and unfinished work against any damage, loss or injury; and in the event of such damage, loss or injury he/she shall promptly replace or repair such work, whichever the Architect/Engineer shall determine to be preferable.

10.3.2 All private properties shall be fully protected by the Contractor. All trees, bushes, shrubs, sod, etc., on private property damaged by the Contractor shall be repaired or replaced by the Contractor at no cost to the private owner, and to the satisfaction of the Architect/Engineer.

10.3.3 Whenever the work is to be prosecuted through private property for which the Owner has obtained an easement, the Contractor must abide fully with the terms of the easement, a copy of which is on file with the Owner.

10.4 CLAIMS FOR DAMAGES – PERSONAL INJURY / PROPERTY DAMAGE

10.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of his/her employees, agents or others for whose acts he/she is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

10.5 STREET BARRICADES, SIGNS, AND WARNING DEVICES

10.5.1 The Contractor shall be responsible for the erection and maintenance of all barricades, lights and signs necessary for public safety and convenience in accordance with all applicable requirements. Adequate protection shall be provided around all openings wherever required to safeguard the work for the public. In general, all hazards within the limits of the work or on detour around the work must be marked with well-painted, well-maintained barricades, reflectors, electrical lights, flashers, and warning and directional signs in sufficient quantity and size adequate to protect life and property. These safeguards shall be moved, changed, increased, or removed as required during the progress of the work to meet changing conditions.

10.5.2 When a street or road is closed to through traffic, barricades shall be placed at the adjacent intersections as well as at the locations of the obstruction. Detour signs shall be attached to the barricades at the adjacent intersections. Detour signs shall be adequately illuminated and/or reflectorized so as to be clearly visible at all times. All signs shall conform to the current New York State Manual of Uniform Traffic Control Devices.

10.5.3 The Architect/Engineer reserves the right to require that "snow fence" be installed at locations where streets or alleys are closed for the full width of the roadway. Barricades shall be maintained in rigidly assembled condition. All warning devices shall be kept clean and in good repair so as to be readily discernible at all times.

10.6 ACCESS TO PROPERTIES AND FACILITIES-PUBLIC AND PRIVATE

10.6.1 The Contractor shall maintain vehicular traffic as specified in the Contract Documents or as otherwise directed by the Architect/Engineer. The Contractor shall neither shut off, nor unnecessarily interfere with, either pedestrian or vehicular access to property without the consent of the Architect/Engineer.

10.6.2 Whenever the Contractor's operations obstruct or endanger a traffic lane, and no marked detour has been provided, he/she shall furnish a flagman to direct traffic through or around the congested area. The Architect/Engineer shall have the right to require additional flagmen as he/she may deem necessary.

10.6.3 Access must always be maintained to fire hydrants, fire alarms and police call boxes, water and gas gate valves, catch basins, and sewer, water, utility and other manholes. Whenever access to any such facility shall have been obstructed or interfered with during the progress of the work, the Contractor must immediately remove at his/her own expense such obstruction or interference.

10.6.4 The Contractor shall be responsible for immediate removal of snow from those sections of streets which he/she has obstructed.

10.7 DRAINAGE

10.7.1 Drainage must not be obstructed at any time. When necessary, a continuous pipe or timber drain, of ample capacity, shall be laid to carry off the storm water. Such pipe shall be kept open and free of obstruction.

10.7.2 All storm or ground water, which is to be removed from the site of the work, must be conveyed to an inlet of a storm sewer, or, when so approved by the Architect/Engineer, to some other point of disposal. All sanitary sewage must be conveyed by closed pipe or hose to an inlet of a sanitary sewer, or when so approved by the Architect/Engineer, to some other point of disposal. Proper precautions must be taken to prevent excessive quantities of clay, sand or silt from entering existing sewers or drainage channels. All existing structures which are disturbed must be restored to a condition at least equal to their original condition and to the satisfaction of the Architect/Engineer.

10.8 APPROVAL OF RESTORATION

10.8.1 Prior to final payment, the Contractor shall send a notice to all easement grantors and properties adjoining the project, by certified mail, return receipt requested, a copy of which shall be filed with the Owner, said notice to be similar to the following:

The undersigned Contractor has completed the restoration of the construction site. If said

site restoration is not completed to your satisfaction, please contact (name of Architect/Engineer, address and name of municipality) in writing and arrangements will be made immediately to view the site and restore the site in conformance with our Contract obligations. If (name of Architect/Engineer, address, name of municipality) does not hear from you in writing within ten (10) days from the above date, site restoration of your property will be deemed completed and approved by you.

(Name of Contractor)
(Address of Contractor)

Owner shall furnish Contractor with names and addresses of easement grantors.

10.8.2 Upon receipt of a notice of deficiency, the Owner or his/her representative will examine the site, and direct the Contractor to complete all work which may be necessary to satisfy the terms of the Contract. Should the Contractor refuse to comply, the Owner reserves the right to have the work done by Contract or force account and deduct the cost thereof from the monies due the Contractor. Should conditions exist which preclude the Contractor from completing satisfactory restoration, the Owner may require the Contractor to furnish a bond in a sum sufficient to cover any legal claims for damages. When the Owner is satisfied that the work has been completed in agreement with the Contract Documents and the terms of the licenses or easement, he/she reserves the right to waive the requirement of obtaining the statement.

PART 11 - LIABILITY AND INSURANCE

11.1 HOLD HARMLESS

11.1.1 The Contractor shall hold harmless the Owner and Architect/Engineer, whose name is given on the Contract Document cover, from any claims and from any and all damages to the property of the Owner, whose name is given on the Contract Document cover, or any third party, or personal injuries sustained by anyone as the result of the operations of the Contractor on this Project.

11.1.2 The Contractor and the Surety will be held responsible for and shall save the Owner and Architect/Engineer harmless from all liability for damages occasioned by the digging up, use or occupancy of the street, alley, highway, public grounds and private grounds, or which may result therefrom, or which may result in any way from the negligence or carelessness of the Contractor, his/her agents, employees or workman; or by reason of the elements, unforeseen or unusual difficulties, obstructions, or obstacles encountered in the prosecution of the work; and they shall indemnify the Owner and Architect/Engineer for and save it harmless from all claims and liabilities, actions and causes of action, and liens for materials furnished or labor performed in the construction or execution of the work, and from all costs, charges and expenses incurred in defending such suits or actions, and from and against all claims and liabilities for injury or damage to persons or property emanating from defective or careless work methods, or from and against all claims or liabilities for royalties, license fees, actions, suits, charges and expenses or damage from infringement for reason of the use of any invention or improvement in tools, equipment or plant or any process, invention or improvement in tools, equipment or plant or any process, device, or combination of devices used in the construction of the work.

11.1.3 The indemnification, hold harmless and/or save harmless provisions contained above shall not be interpreted to limit in any way the indemnification contained in Section 4.16 above.

11.2 INSURANCE – CONTRACTOR'S LIABILITY INSURANCE

11.2.1 The Contractor shall purchase from and maintain a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. claims under workers compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

4. claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

6. claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and

7. claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

8. All policies shall name the Owner & Engineer additional insured on a primary and non-contributing basis. A copy of the Additional Insured Endorsement must be submitted with Certificate of Insurance.

11.2.2 Contractor shall for the protection and benefit of the Indemnities and the Contractor and as part of the Contractor's efforts to satisfy the obligations set forth in Paragraph 11.2.1, procure, pay for and maintain in full force and effect, at all times during the performance of the Work until successful completion of the guarantee period Final Acceptance of the Work or for such duration as required, policies of insurance issued by a responsible carrier or carriers acceptable authorized by the New York State Department of Insurance, to the Owner, and in form and substance reasonably satisfactory to the Owner, which afford the coverages set forth in the Contract Agreement.

1. The Contractor shall maintain the following insurances and limits as imposed by law or the Contract with respect to all work and operations performed under the Contract by the Contractor and each of his Subcontractors:

a. Worker's Compensation and Employer's Liability Insurance. Limits: Not less than required by law.

b. New York State Disability Insurance Limits: Not less than required by law.

c. Comprehensive General Liability, including:

Premises – Operation

Explosions, Collapse, and Underground Hazard (XCU)

Public Liability (XC, U Property damage exclusion eliminated)

Contractual Liability including "hold harmless" clause

Products Liability - Completed Operations

Contractor's Protective Liability

Products/Completed Operations Hazard

Contractual Insurance

Broad Form Property Damage

Independent Contractors

Personal Injury Liability, Hazard A, B, and C

Each Policy shall have limits not less than:

Comprehensive General Liability

Each Occurrence $1,000,000.00

Aggregate $2,000,000.00

d. Comprehensive Automobile Liability, including non-ownership and hired car coverage, as well as owned vehicles. Limits not less than: Bodily Injury Liability and Property Damage Liability.

Each Occurrence $1,000,000.00

e. Excess Liability, Umbrella Form, covering Bodily Injury, Property Damage and Automobile Liability. Limits not less than $5,000,000.00 for each occurrence, dedicated to the named Project.

f. Each policy shall be written on a full occurrence basis. No time limitations or expiration clauses will be accepted.

11.2.3 The Contractor hereby agrees to deliver to the Owner, on or before the execution of this Agreement and prior to any equipment or personnel being brought onto the site of the Work or the Project site, certified copies of all insurance policies required by and in compliance with this Contract, procured by the Contractor. Each insurance carrier for the contractor and subcontractor(s) will complete and submit a Certificate of Insurance on the standard ACORD form. Certificates of Insurance in form and substance satisfactory to the Architect, Construction Manager, and the Owner evidencing the required coverages with limits not less than those specified in the Contract Documents. The coverage afforded under any insurance policy obtained shall be primary to any valid and collectible insurance carried separately by any of the Indemnities naming each of them Additional Insureds. Further, all policies and Certificates of Insurance shall expressly provide that no less than sixty (60) days prior written notice shall be given the Owner in the event of material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy of evidenced such certificate copy of Certificate of Insurance. If the initial insurance expires prior to the end of the guarantee period, renewal certificates, in the form identical to the attached Certificate of Insurance, shall be furnished at least thirty (30) days prior to the date of expiration.

11.2.4 If the Contractor fails to purchase and maintain any insurance required by the Contract Documents, Owner may, but shall not be obligated to, upon five (5) days' written notice to the Contractor, purchase such insurance on behalf of the Contractor and shall be entitled to be reimbursed by the Contractor upon demand.

11.2.5 Any aggregate limit under the Contractor's liability insurance shall, by endorsement, apply to this Project separately.

11.3 CONTRACT BONDS

11.3.1 The Contractor shall furnish and pay the premium for payment, guarantee, performance and contract bonds by a surety. The bonds required herein shall be provided on the forms contained in these contract specifications or where no such form is provided in these contract specifications, on forms approved by the Owner. The bonds shall be T-listed in the Federal Registry.

11.3.2 The amount of the bonds issued for the awarded Contract shall be the full amount of the Contract and shall be adjusted to incorporate all extras, credits, and change orders through a final payment.

11.4 WEEKLY PAYROLL RECORDS

11.4.1 The Contractor shall submit weekly a copy of all payrolls to the Owner. The Contractor shall be responsible for the submission of copies of payrolls of all Subcontractors. The copy shall be accompanied by a statement signed by the Contractor indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classifications set forth for each laborer or mechanic including apprentices and trainees, conform with the work he/she performed.

PART 12 - CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.1 A Change Order is an agreement signed by the Owner, Contractor, and the Architect/Engineer, issued after execution of the Contract, authorizing a change in the work involving an adjustment in the contract sum and / or the contract time. The contract sum and the contract time may be changed only by a fully executed Change Order.

12.1.2 The Owner, without invalidating the Contract, may order changes in the work within the general scope of the Contract consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.3 No extra work of any kind will be allowed unless ordered in writing by the Architect/Engineer prior to commencing work which will entail such extras. No verbal orders shall be construed as authorizing or laying the foundation for extra compensation for either work or materials, or for extra contract time. Verbal orders or suggestions may be given from time to time, as to the performance of the work, but in case they appear to the Contractor to involve extra work for which he/she should receive extra compensation, he/she must ask for a written Change Order.

12.1.4 The Architect/Engineer will have authority to order minor changes in the work not involving adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

12.1.5 In the event of any disagreement as to the amount of work involved under any authorized order for extra work, it is hereby agreed that the decision of the Architect/Engineer shall be binding and conclusive.

12.1.6 If the Owner deems it proper or necessary in the execution of the work to make any alteration, which will increase or diminish the quantity of labor or materials, or the cost of the work, such alteration shall not annul or vitiate the Contract or agreement, nor release the Surety. The Contractor shall furnish the necessary labor, material, etc., to complete the Contract as altered within the time limit originally specified or as extended by the Architect/Engineer. Additions or deductions need not be accepted by the Contractor if the total cost of the additions or deductions exceeds twenty percent (20%) of the total cost of the project as originally bid by the Contractor. The value of the work so added or omitted shall be added or deducted from the amount otherwise due the Contractor, as the case may be, and shall be determined in accordance with the methods described in Subparagraph 12.1.6.

12.1.7 The method of determining the basis of payment or credit resulting from such altered work shall be:

1. For such items where the unit prices have been established in the Contract, the unit

prices shall be utilized.

2. For such items for which unit prices have not been established in the Contract, by agreement with the Contractor following a request by the Architect/Engineer for a written quotation for the item of work to be performed or the elimination of the work. Contractor shall submit quotations, which are properly itemized and supported by sufficient substantiating evidence to permit evaluation by the Architect/Engineer.

3. If an agreement cannot be made between the Contractor and the Architect/Engineer for items of work for which unit prices are not set forth in the Contract, then the value shall be determined by using the actual cost of labor, materials and use of equipment to be determined as the work progresses and as outlined in Paragraph 12.2 plus overhead and profit as outlined in Paragraph 12.3.

12.2 ACTUAL COST

12.2.1 Actual cost of labor and material shall be defined as the amount paid for the following items, to the extent determined reasonable and necessary.

1. Materials

Cost of materials delivered to the job site for incorporation into the Contract work.

2. Wages

Wages paid to workmen and foremen and wage supplements paid to labor organizations in accordance with current labor agreements.

3. Statutory Benefits

Premiums or taxes paid by the Contractor for workmen's compensation insurance, unemployment insurance, FICA tax, and other payroll taxes as required by law, net of actual and anticipated refunds and rebates.

4. Sales Tax

Sales taxes paid as required by law, unless the Owner is exempt from Federal, State, and local sales tax.

5. Equipment Rental

A. Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

B. Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate in the Rental Rate Book for Construction Equipment. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

C. With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

6. Self-Owned Equipment

Self-owned equipment is defined to include equipment rented from controlled or affiliated companies. Rented equipment will be paid for at the actual rental cost. Gasoline, oil, and grease required for operation and maintenance will be paid for at the actual cost. When, in the opinion of the Contractor, and as approved by the Architect/Engineer, suitable equipment is not available on the site, the moving of said equipment to and from the site will be paid for at actual cost.

7. Documentation and Verification

Claims for such work will not be considered unless the Contractor presents to the Architect's/Engineer's representative a daily itemized statement in duplicate of the hours of labor, quantities of materials, etc. upon which payment is to be based. The Architect's/Engineer's representative on the work will check such amounts daily and will retain the original for the Architect/Engineer and return the copy to the Contractor. The approval of such items by the Architect's/Engineer's representative, shall not in itself, however, be construed as authorizing or accepting such claims. No claims will be considered until the original bills, receipts, or vouchers have been furnished to the Architect/Engineer by the Contractor.

12.3 OVERHEAD AND PROFIT

12.3.1 Overhead shall be defined as an allowance to compensate for all costs, charges, and expenses, direct or indirect, except for the actual cost of labor and materials as defined by Subparagraph 12.2.1. Overhead shall be considered to include, but not be limited to, insurance (other than mentioned in Subparagraph 12.2.1) bond or bonds, field and office supervisors and assistants above the level of foreman, use of small tools and minor equipment, incidental job burdens, general office expense, etc.

12.3.2 The amounts allowed for overhead and profit shall not exceed the applicable percentages as established in the two following paragraphs, in reference to Subparagraph 12.1.6.

12.3.3 If the work is done directly by the Contractor, overhead in an amount of five percent (5%) may

be added if method 12.1.6.2 or 12.1.6.3 is used, and to the cost of labor and materials plus overhead, there may be added ten (10%) percent for profit. The percentages for overhead and profit may vary according to the nature, extent and complexity of the work involved, but in no case shall exceed the percentages set forth in this paragraph and in the paragraph below.

12.3.4 No percentages for overhead and profit will be allowed on payroll taxes or on the premium portion of overtime pay.

12.3.5 If the work is done by a Subcontractor, Subcontractor's overhead in the amount of five percent (5%) may be added to cost of labor and materials if method 12.1.6.3 is used and to the cost of labor and materials plus overhead, there may be added ten percent (10%) for the Subcontractor's profit. To this amount there may be added an amount not exceeding ten percent (10%) for the Contractor's combined overhead and profit. No percentage for overhead and profit will be allowed on payroll taxes or on the premium portion of overtime pay.

12.3.6 For change orders over one hundred thousand dollars ($100,000), the percentages for overhead and profit are subject to negotiation.

12.4 CONCEALED CONDITIONS

12.4.1 Should concealed conditions encountered in the performance of the work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, the contract sum shall be equitably adjusted by Change Order upon claim by either party made within twenty (20) days after the first observance of the conditions.

12.5 CLAIMS FOR ADDITIONAL COST

12.5.1 If the Contractor wishes to make a claim for an increase in the contract sum, he/she shall give the Architect/Engineer written notice thereof within twenty (20) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Paragraph 10.3. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the contract sum, it shall be determined by the Architect/Engineer. Any change in the contract sum resulting from such claim shall be authorized by Change Order.

12.5.2 If the Contractor claims that additional cost is involved because of, but not limited to, (1) any written interpretation pursuant to Subparagraph 2.2.8, (2) any order by the Owner to stop the work pursuant to Paragraph 3.3 where the Contractor was not at fault, (3) any written order

for a minor change in the work issued pursuant to Paragraph 12.4, or (4) failure of payment by the Owner pursuant to Paragraph 9.7, the Contractor shall make such claim as provided in Subparagraph 12.5.1.

12.5.3 The parties mutually waive claims against each other for consequential damages arising out of or in connection with the Project.

12.6 CONTINUING CONTRACT PERFORMANCE

12.6.1 Pending final resolution of a Claim or a disputed determination by the Architect/Engineer, the Contractor shall proceed diligently with the performance of the Contract, and the Owner shall continue to make payments in accordance with the Contract Documents.

12.7 DISPUTE RESOLUTION

12.7.1 The Architect/Engineer shall serve as the initial decision maker for all disputes arising out of or in connection with this Agreement.

12.7.2 Claims or disputes which cannot be resolved by the parties shall be subject to mediation as condition precedent to binding dispute resolution. Unless otherwise agreed the mediation will be conducted in accordance with the Construction Industry Mediation Procedures of the American Arbitration Association effective as of the date this Agreement.

12.7.3 For claims or disputes of less than $250,000, excluding interest, not resolved by mediation and unless otherwise agreed, the parties agree to arbitration to be conducted in accordance with the Arbitration Rules of the American Arbitration Association effective as of the date of this agreement. For unresolved claims or disputes of $250,000 or more the parties agree to litigation to be venued in Monroe County, New York.

PART 13 - UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 All materials and each part or detail of the work shall be subject at all times to inspection by the Architect/Engineer or his/her authorized representatives, and the Contractor will be held strictly to the true intent of the specifications in regard to quality of materials, workmanship, and the diligent execution of the Contract. Such inspection may include mill, plant, or shop inspection, and any material furnished under these specifications is subject to such inspection. The Architect/Engineer or his/her representatives shall be allowed access to all parts of the work, and shall be furnished with such information and assistance by the Contractor as is determined by the Architect/Engineer or his/her representative, to make a completed and detailed inspection.

13.1.2 If any portion of the work should be covered contrary to the request of the Architect/Engineer or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect/Engineer, be uncovered for his/her observation and shall be replaced

at the Contractor's expense.

13.1.3 The Contractor shall, if the Architect/Engineer requests remove or uncover such portion of the finished work as the Architect/Engineer may direct before the final acceptance of the same. After the examination, the Contractor shall restore said portion of the work to the standard required by the specifications. If the work thus exposed or examined proves acceptable, the expense of uncovering or removing and replacing of the parts removed shall be paid for as extra work; but, if the work so exposed or examined is unacceptable, the expense of uncovering or removing and replacing of the same in accordance with the specifications shall be borne by the Contractor.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all work rejected by the Architect/Engineer as defective or as failing to conform to the Contract Documents whether observed before or after substantial completion and whether or not fabricated, installed, or completed. The Contractor shall bear all costs of correcting such rejected work, including compensation for the Architect's/Engineer's additional services made necessary thereby.

13.2.2 If, within two (2) years after the date of substantial completion of the work or designated portion thereof, or within two (2) years after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by terms of any applicable special warranty required by the Contract Documents, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner's representative to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 All materials not conforming to the requirements of the Contract Documents shall be considered defective, and all such materials, whether in place or not, shall be rejected and shall be removed from the work by the Contractor at his/her expense. Upon failure on the part of the Contractor to comply with any order of the Architect/Engineer relative to the provisions of this article, the Architect/Engineer shall have authority to remove and replace such defective material and to deduct the cost of removal and replacement from any monies due or which may become due the Contractor.

13.2.4 The Contractor shall promptly remove from the premises all materials condemned by the Architect/Engineer as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly re-execute his/her own work in accordance with the Contract and without expense to the Owner and shall bear the expense of making good all work of other Contractor(s) destroyed or damaged by such removal or replacement.

13.2.5 If the Contractor does not remove such condemned work and materials within ten (10) days after written notice, the Owner may remove them and may store the materials at the expense of the Contractor. If the Contractor does not pay the expense of such removal within ten (10) days time thereafter, the Owner may, upon ten (10) days written notice, sell such materials at auction or at private sale and shall pay to the Contractor the net proceeds thereof, after

deducting all the costs and expense that should have been borne by the Contractor, including compensation for the Architect's/Engineer's additional services made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate change order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one (1) year after the date of final acceptance or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the work, and has no relationship to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his/her obligations other than specifically to correct the work.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the Owner prefers to accept defective or non-conforming work, he/she may do so instead of requiring its removal and correction in which case a Change Order will be issued to reflect a reduction in the contract sum where appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

PART 14 - TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract upon ten (10) days notice, if the work should be stopped under an order of any Court, or other public authority, for a period of three (3) months through no act or fault of the Contractor or of anyone employed by him; or if the Owner should fail to pay the Contractor any sum certified by the Architect/Engineer within sixty (60) days of its maturity and presentation, providing no appeal is taken.

14.1.2 Upon termination of the Contract, the Contractor shall receive from the Owner payment in full for all work executed and/or materials delivered to the site, as determined from prices contained in the detailed bid or from the breakdown of a unit price bid. No claim for extra compensation of damages shall be made by the Contractor or allowed by the Owner because of such termination of the Contract by the Contractor.

14.2 TERMINATION BY THE OWNER

14.2.1 If the Contractor fails to correct defective work or persistently fails to carry out the work in accordance with the Contract Documents, or if the Contractor is adjudged a bankrupt, or if he/she makes a general assignment for the benefit of his/her creditors, or if a receiver is appointed on account of his/her insolvency, or if he/she persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly

skilled workmen or proper materials, or if he/she fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, upon certification by the Consulting Architect/Engineer that sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the Contractor and his/her surety, if any, seven (7) days written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the work by whatever method he/she may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished.

14.2.2 If the unpaid balance of the contract sum exceeds the costs of finishing the work, including compensation for the Consulting Architect's/Engineer's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Architect/Engineer upon application, in the manner provided in Paragraph 9.3, and this obligation for payment shall survive the termination of the Contract.

14.2.3 Failure of the Owner to exercise any of the rights under this paragraph shall not excuse the Contractor from compliance with the provisions of this order nor prejudice rights of the Owner to recover damages for such defaults, nor prejudice the rights of the Owner to take any action permitted herein as a result if a subsequent breach by the Contractor.

14.3 OWNER MAY TERMINATE FOR CONVENIENCE

A. Upon seven days written notice to Contractor, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for, without duplication of any items:

1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. Other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, in connection with the unperformed work of the Contract, or other economic loss arising out of or resulting from such termination.

END OF SECTION

SECTION 00 73 00
SPECIAL CONDITIONS

1.01 GENERAL NOTES

A. All prospective Contractors are urged to carefully read the Contract Documents to determine whether they will be able to comply with all requirements contained therein.

B. The Contractor agrees in working on the project to comply with all applicable codes and safety regulations as they apply to the work and as set forth in the Occupational Safety and Health Act of 1970, as revised.

C. The Contractor shall restrict construction hours to 7:00 a.m. to 5:00 p.m. Monday through Friday, unless: otherwise requested 48 hours in advance and approved by the Owner, o required due to an emergency.

D. Before payment is made by or on the behalf of the Owner any sum due on the contract, the Contractor and each and every subcontractor of the Contractor shall submit to the Owner certified payrolls on behalf of any and all laborers for daily or weekly wages and supplements on account of labor performed upon the work of the contract.

E. Contractor insurance certificates shall name the following as additional insureds:

Town of Manlius
LaBella Associates, DPC
Onondaga County

F. The Owner will provide an on-site staging area for the Contractor's use. The Contractor will assume all risk of storing, protecting and securing his equipment and materials in this area. Contractor will be responsible for cleanup and restoration of the construction site and storage areas.

G. The Contractor is responsible for obtaining permits, licenses, and approvals necessary for completion of the work.

H. All final restoration work shall be completed within ten (10) calendar days of initial excavation. Temporary restoration shall be maintained until final restoration is completed.

1.02 SITE CONDITIONS

A. Special care shall be taken to protect all site amenities, street appurtenances, survey monuments, landscaping etc., whether shown or not shown on the contract plans. Any damage as a result of the Contractor's work shall be repaired or replaced as determined by the Owner and to the satisfaction of the Owner at no additional cost to the Owner.

B. Any trees or shrubs damaged or destroyed as result of the Contractor's work shall be replaced in kind, as determined by the Owner at no additional cost to the Owner.

1.03 UTILITY NOTES

A. The Contractor shall call for a utility stakeout at least five (5) complete working days in advance of any excavations. All pavement trenches shall be saw cut to full pavement depth prior to excavation.

1.04 MAINTENANCE AND PROTECTION OF TRAFFIC

A. General maintenance and protection of traffic will be required for the duration of the project. The Contractor shall be responsible to furnish and erect, move, and remove reflectorized construction signs, barricades, pavement delineation, and equipment necessary to safely direct motorists and pedestrians. Road closure must be permitted and coordinated with the owner prior to signage being erected at each site. Contractor shall be responsible for maintaining homeowner driveway access for duration of project. The Contractor shall coordinate work schedule with the Owner.

B. All MPOT procedures and signage must comply with all State, County, and Local MPOT requirements.

1.05 DELEGATED DESIGN

A. Certain portions of the design work have been delegated to the Contractor. For portions of the work where design has been delegated, the Consultant has provided, elsewhere in this Project Manual, the complete parameters which the design must satisfy and other requirements. The Contractor must assign responsibility for the design of the delegated portions of the work to person(s) who are New York State licensee(s), or otherwise authorized, who signs and certifies the design work and are approved by the Consultant.

B. Schedule of delegated design (note, this list provides a general summary of work delegated in the technical specifications and may not be all inclusive. In case of conflict or omission, the requirements of the technical specification takes precedence over this list):

a. **Section 31 50 00** Excavation Support and Protection

1.06 MAINTENANCE BOND

A. The Contractor shall guarantee the work accomplished under this Contract for a period of **one (1) year** from the date of issuance of final certificate. During this Guarantee Period, the Contractor shall procure and submit at his expense guarantee bond for the full amount of the contract.

B. The Contractor, at the convenience of the Owner, shall remove, replace and/or repair at its own cost and expense any defects in workmanship, materials, ratings, capacities or characteristics occurring in or to the work covered by the Contract within the two year warranty or within such longer period as may otherwise be provided in the Contract, the period of such guarantee to commence with the Owner's final acceptance of all work covered under the Contract or at such other date or dates as the Owner may specify prior to that time, and the Contractor, upon demand, shall pay for all damage to all other work resulting from such defects and all expenses necessary to remove, replace and/or repair such other work which may be damaged in removing, replacing or repairing the said defects. The obligations of the Contractor under the provisions of this paragraph or any other guarantee provisions of

the Contract Documents are not limited to the monies retained by the Owner under the Contract.

C. Unless such removal, replacement and/or repair shall be performed by the Contractor within ten (10) working days after it receives written notice from the Owner specifying such defect, or if such defect is of such a nature that it cannot be completely removed, repaired and/or replaced within said ten (10) day period and the Contractor shall not have diligently commenced removing, repairing and/or replacing such defect within said ten (10) day period and shall not thereafter with reasonable diligence and in good faith proceed to do such work, the Owner may employ such other person, firm or corporation as it may choose to perform such removal, replacement and/or repair and the Contractor agrees, upon demand, to pay to the Owner all amounts which it expends for such work.

END OF SECTION

SECTION 00 73 43
WAGE RATE DETERMINATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. The project is public works governed by the prevailing wage rate. Each workman, laborer, or mechanic shall be paid or provided not less than the prevailing wage rate in effect at the time the work is performed. The Contractor is responsible for obtaining up to date rates schedules.

B. Contractors may obtain up to date prevailing wage rates for the project by logging on to the New York State Department of Labor Website at: https://applications.labor.ny.gov/wpp/showFindProject.do?method=showIt and entering the project specific Prevailing Rate Case Number (PRC#): 2025013252.

C. The Owner will not be responsible for any of the Contractor's increased labor costs which result from defects in the Wage Rate Schedule, or from amendments to the Prevailing Wage Rate Schedule, whether that increase occurs before advertisement, before Bid opening, before award of the Contract, after the Contract has been let, or during construction. No change in the contract price shall be allowed to the Contractor for any such increases.

END OF SECTION

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

Change Order No. _____

Date of Issuance: Effective Date:

Owner: Town of Manlius Owner's Contract No.:

Contractor: Contractor's Project No.:

Engineer: LaBella Associates, D.P.C. Engineer's Project No.: 2251531

Project: Muirfield Drive Stormwater Improvements Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	**CHANGE IN CONTRACT TIMES** *[note changes in Milestones if applicable]*
Original Contract Price: $_____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. __ to No. __: $_____	[Increase] [Decrease] from previously approved Change Orders No. __ to No. __: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: $_____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: $_____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: $_____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (if required)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title _____	Title _____
Date: _____	Date _____	Date _____

~~Approved by Funding Agency (if applicable)~~

By: _____ Date:

Title: _____

ALLOWANCE AUTHORIZATION

Project:	Muirfield Drive Stormwater Improvements	Authorization No.:	000
		From:	LaBella Associates, D.P.C.
To:		Date:	
		Engineer's Project No.:	2251531
Re:		Contract:	

You are authorized to perform the following item(s) of work and to adjust the Allowance Sum accordingly:

THIS IS NOT A CHANGE ORDER AND DOES NOT INCREASE OR DECREASE THE CONTRACT AMOUNT

Original Allowance	$0.00
Allowance Expenditures prior to this Authorization	$0.00
Allowance Balance prior to this Authorization	$0.00
Allowance will be decreased by this Authorization	$0.00
New Allowance Balance	$0.00

APPROVAL RECOMMENDED

LaBella Associates, D.P.C.
Engineer

By Date

OWNER APPROVAL

Town of Manlius
Owner

By Date

CONTRACTOR ACCEPTANCE

Contractor

By Date

[X] Attachments: (1) Documentation from Contractor,

Copies: ☐ Owner ☐ Contractor ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ File

SECTION 01 21 00
ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Contingency Allowance

C. Related Requirements:

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

A. Coordinate with the Engineer and Town of Manlius for field orders due to unexpected conditions.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 CONTINGENCY ALLOWANCE

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

1. Allowance No. 1: Contingency Allowance: Include an allowance as indicated on the bid proposal form for use according to Owner's written instructions.

END OF SECTION

SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 EQUIVALENT MATERIALS AND EQUIPMENT

A. In most cases only one brand or make of material, device, or equipment is specified. Other brands or makes may be regarded as equal. Final acceptance of products not specified will be in the opinion of the Architect/Engineer. Quality, workmanship, economy of operation, material of construction, performance, and suitability for the purpose intended will be considered in determining equality.

B. No substitute for the named brands shall be ordered or installed without the written approval of the Architect/Engineer who shall be the judge of equality. The Contractor shall be responsible for all expenses to the Owner and Architect/Engineer for evaluation of the requested substitution whether the substitution is accepted or rejected. Where material, devices, and equipment other than those upon which the drawings or specifications are based is approved by the Architect/Engineer for use in the project, the Contractor shall be responsible for all related changes and coordination necessitated by the substitution and shall pay all expenses that may result therefrom to the Architect/Engineer and to the Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use form provided in Project Manual following this section or acceptable to Architect.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.

b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.

e. Samples, where applicable or requested.

f. Certificates and qualification data, where applicable or requested.

g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.

h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.

i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.

j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.

k. Cost information, including a proposal of change, if any, in the Contract Sum.

l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.

m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor through Owner of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.

b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

b. Substitution request is fully documented and properly submitted.

c. Requested substitution will not adversely affect Contractor's construction schedule.

d. Requested substitution has received necessary approvals of authorities having jurisdiction.

e. Requested substitution is compatible with other portions of the Work.

f. Requested substitution has been coordinated with other portions of the Work.

g. Requested substitution provides specified warranty.

h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 19
PRECONSTRUCTION MANAGEMENT MEETING

PART 1 - GENERAL

1.1 SCHEDULE

A. Within fifteen (15) calendar days following the award of the Contract, the Prime Contractor(s) involved shall submit to the Owner and Architect/Engineer a detailed work progress schedule utilizing the bar graph, or equivalent method, showing the order and duration of each phase of the work, and covering the performance of all work on the project. The total duration of the schedule shall not exceed the completion date.

B. Preconstruction management meetings will be arranged by the Architect/Engineer on behalf of the Owner, at which time all comments pertaining to the schedule will be considered.

C. It is obligatory that each prime Contractor be represented and prepared to provide information essential to preparing a final work progress schedule. Representatives shall be authorized to give approval of decisions reached at the conference.

D. Attendance of key subcontractors and/or suppliers as determined by the Architect/Engineer shall be required.

E. Following the conference, the agreed upon final work progress schedule shall be approved by the Architect/Engineer and distributed to all parties concerned including the Owner, and Architect/Engineer, and other authorities, as the official project schedule.

F. Minimum Agenda: Distribute Data On, and Discuss:

1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and Architects/Engineers.

2. Channels and procedures for communications.

3. Construction schedule, including sequence of critical work.

4. Contract Documents, including distribution of required copies of original documents and revisions.

5. Processing of schedule of values, shop drawings, substitutions, and other data submitted to the Architect/Engineer to review.

6. Processing of field decisions and change orders.

7. Applications for payments and Contract Closeout procedures.

8. Rules and regulations governing performance of the work.

9. Procedures for security, quality control, housekeeping, and other related matters.

END OF SECTION

SECTION 01 31 20
PROGRESS MEETINGS

PART 1 - GENERAL

1.1 DESCRIPTION

A. To enable orderly review during progress of the work, and to provide for systematic discussion of problems, the Architect/Engineer will conduct progress meetings throughout the construction period.

1.2 QUALITY ASSURANCE

A. Persons designated by the Contractor to attend and participate in the project meetings shall have all required authority to commit the Contractor to solutions agreed upon in the project meeting.

1.3 SUBMITTALS

A. The Contractor shall submit in writing to the Owner and to the Architect/Engineer a monthly progress statement. Where the work falls behind schedule, the Contractor shall proceed with the work at such times and places, and with such forces and machinery as the Architect/Engineer may approve to secure completion as required.

B. To the maximum extent practicable, advise the Architect/Engineer at least 72 hours in advance of project meeting regarding all items to be added to the agenda.

C. The Architect/Engineer will compile minutes of each project meeting and will furnish copies to the Contractors.

D. Every month the schedule shall be updated by the Contractor, with variations noted and revisions to allow completion within the completion date shown. Copies of updating shall be submitted promptly to the Owner and the Architect/Engineer.

E. The Architect/Engineer shall be responsible for coordination of work progress schedule among multiple prime Contractors.

1.4 LOCATION

A. To the maximum extent practicable, meetings will be held at the job site.

1.5 REPRESENTATION

A. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the work. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspects of the work are involved.

B. Minimum Agenda:

1. Review, revise as necessary, and approve minutes of previous meeting.
2. Review progress of the work since last meeting, including status of submittals for approval.
3. Field observations and decisions.
4. Review delivery schedules and construction progress schedules.
5. Identify problems which impede planned progress.
6. Develop corrective measures and procedures to regain planned schedule.
7. Planned progress during succeeding work period.
8. Effect of proposed changes on progress schedule and coordination
9. Complete other current business.

1.6 FAILURE TO COMPLY WITH SCHEDULE

A. Any expense to the Owner arising from delay in completion due to deviation from the approved schedule will be assessed to the Contractor responsible.

END OF SECTION

SECTION 01 33 23
SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.1 NO CONSTRUCTION BEFORE SHOP DRAWING APPROVAL

A. Before construction is started on any portion of the work, all shop and/or placing drawings pertaining to that portion of the work shall have been submitted and approved by the Engineer.

B. Materials used / installed without a reviewed & completed shop drawing must be removed without any additional cost to the owner.

1.2 SHOP DRAWING SCHEDULE

A. Within ten days after the final work progress schedule has been distributed each Prime Contractor shall submit to the Engineer a preliminary schedule of shop drawing submissions. The Engineer shall be notified immediately of changes in the preliminary schedule.

B. Names of the manufacturers of each specified item in Division 2 through 16 shall be submitted with the shop drawing schedule.

1.3 ADDITIONAL REQUIREMENTS

A. Certain materials in this specification have strict shop drawing submission requirements. See individual material specification sections for specific requirements.

PART 2 – PRODUCT – NOT USED

PART 3 - EXECUTION

3.1 SHOP DRAWING REVIEW PROCEDURES

A. Contractor must allow at least 5 business days for each shop drawings to be reviewed and returned by the engineer.

B. Shop drawings include all drawings, diagrams, illustrations, brochures, catalog cut sheets, schedules, and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier, or distributor and which illustrate the equipment or some portion of the work. The shop drawing submittal must also comply with Paragraph 3.5 of this section.

C. The Engineer may designate additional required shop drawings.

D. Shop drawings shall be submitted in accordance with the preliminary schedule of shop drawing submissions and any changes thereto. Each submission shall be accompanied by the cover sheet completed by the Contractor. Where shop drawing submissions or parts thereof have a priority, the priority shall be indicated.

E. One (1) electronic copy of all shop drawings shall be submitted to the Engineer. One (1) electronic copy will be returned to the Contractor with any comments or changes noted.

Where returned approved drawings from one Contractor affect the work of another Contractor or Subcontractor, the submitting Contractor shall promptly prepare additional copies, and distribute them to such Contractors and Subcontractors.

F. Shop drawings will be considered by the Engineer for review only if they are signed by the Contractor to indicate that they have been checked and approved by him.

G. All pages of submissions shall be properly identified to indicate location and function. Submissions for interrelated products and for any process, structural, mechanical or electrical system shall be complete. Review will not be made in segments. Publications in the form of catalogues and data sheets shall be marked in ink to clearly define the specific product offered. Where a complete functioning system is submitted, identification, connections and coordination of the parts shall be clearly indicated.

H. Shop drawings (except for illustrations, brochures and catalog cut sheets) shall have room on the face for application of a 3" x 3" stamp indicating the results of the Engineer's review. Where more than two related shop drawings of similar size are submitted, they shall be bound in a set. Each set of diagrams, illustrations, brochures, catalogue cut sheets, or schedules shall be preceded by an index sheet. the index sheet shall be in a form prescribed by the Engineer. The Contractor's and the Engineer's review stamp may be placed on the index sheet instead of the individual pages. However, any drafted shop drawings included in the set, regardless of size, shall be individually approved and stamped.

I. The Contractor may submit a shop drawing "presubmittal" (prior to submitting shop drawings) for any process, mechanical or electrical system. The submission shall be identified as "presubmittal" and shall be identical with the intended shop drawing submittal. One (1) electronic copy of a presubmittal shall be furnished; One (1) electronic copy will be returned to the Contractor with any comments noted. The Contractor shall make any required corrections and resubmit the submittal for shop drawing review. Comment on presubmittal data does not constitute shop drawing approval. The Engineer reserves the right to make additional corrections, if required, in the final review of shop drawings.

J. The Engineer is not responsible to check quantities or dimensions shown on the shop drawings.

K. The Engineer's shop drawing review does not relieve the Contractor from responsibility for deviations from contract documents unless he has, in writing, called the Engineer's attention to a specific deviation requested at the time of submission; nor does the approval of a shop drawing relieve him from responsibility for errors in the submission, for quality of materials and workmanship, nor for the number and fit of parts when installed, nor for the other deviation from other requirements of the Contract Documents.

L. All costs incurred by the Engineer in reviewing substitutions submitted in lieu of the material or equipment specified, submission of a second supplier once a supplier has been approved, or resubmission of rejected shop drawings due to insufficient information, shall be borne by the Contractor making the submission. All costs of extra work incurred by other Contractors, either directly or indirectly, as a result of a substitution being incorporated into the work shall be borne by the Contractor making the substitution. The cost of any further review of subsequent substitutions shall also be borne by the Contractor. These fees shall be deducted directly from the contract amount.

M. Shop drawings are to be submitted by e-mail. The address will be provided with the Notice to Proceed.

3.2 SAMPLES

A. Samples are required as indicated in the Contract Documents. Samples of additional items may be required by the Engineer.

B. Samples shall be submitted in sufficient quantity as required by the Engineer to permit the prescribed inspection and testing. Samples shall be delivered prepaid to places designated by the Engineer. All costs of testing samples of materials proposed for or used in the work shall be paid by the Contractor.

3.3 NATURAL MATERIALS TESTING

A. Natural materials shall be tested at the Contractor's expense by an approved laboratory for compliance with the specifications, except that the Engineer may waive the laboratory testing requirements and apply visual and field testing procedures. The Engineer's approval shall be obtained before any natural materials are delivered to the job site.

3.4 MANUFACTURER'S DATA

A. Concurrent with submittal of shop drawings and as part of the shop drawings the Contractor shall submit to the Engineer five (5) copies of the following manufacturer's data for each piece of equipment or process system: None.

B. Equipment name as used in specifications and plans and manufacturers equipment name and model number. Two (2) operating and maintenance manuals for the equipment with reference to the manual pages pertaining to the specific equipment supplied. An itemization of the maintenance program for the specific equipment item supplied in the following formula:

Time Schedule	Maintenance Program
Daily, Weekly, Monthly, etc.	Maintenance duties to be performed corresponding to each time increment with all lubrication points, lubricants, and operating parameter settings and adjustments specified for the specific equipment item supplied.

C. List of original spare parts supplied and a recommended spare parts inventory.

D. The shop drawing submittal will be considered incomplete without this data.

3.5 CERTIFICATION

A. Manufactured materials shall be accompanied by the manufacturer's notarized certification of conformance to the specifications and approved shop drawings.

B. An original and two (2) copies of the certification shall be turned over to the Engineer at the time of delivery.

C. No materials shall be incorporated into the work without proper certification.

END OF SECTION

LaBella
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(Attach to each submittal)

SUBMITTAL COVER SHEET

DATE:

PROJECT NAME: Muirfield Drive Stormwater Improvements		
Specification Section	*Submittal #*	*Rev.#*

Project Information:

OWNER:	ARCHITECT:	CONTRACTOR:
Town of Manlius 301 Brooklea Dr Fayetteville, New York 13066	LaBella Associates, D.P.C. 300 State Street, Suite 201 Rochester, NY 14614	

Submittal Information:

SUBMITTAL NAME/DESCRIPTION:				CONTRACTOR SUBMITTAL #:	SUBCONTRACTOR:
SPECIFICATION:	**PARAGRAPH:**	**DRAWING:**	**DETAIL:**	**SUPPLIER:**	**SUBSTITUTION:**

ACTION / INFORMATIONAL SUBMITTALS:

- ☐ Product Data
- ☐ Shop Drawing
- ☐ Sample
- ☐ Coordination Drawing
- ☐ Qualification Data
- ☐ Certificates
- ☐ Warranty Sample
- ☐ Other: _____

RECORD SUBMITTAL:

- ☐ Field Test Report
- ☐ Operation/Maintenance Data
- ☐ As-built Drawing
- ☐ Warranty
- ☐ Attic Stock / Turnover
- ☐ Other: _____

Contractor Review:

This submittal has been reviewed, checked and approved for compliance with the Contract Documents.
*Any **substitutions / deviations** are noted below.*

Signed: _____ Dated: _____

Construction Manager Review:

This submittal has been received for coordination. Any observations noted below do not replace final review and acceptance by the Architect/Engineer of record.

Signed: _____ Dated: _____

Architect/Engineer Review:

- ☐ Reviewed
- ☐ Rejected
- ☐ Revise and Resubmit
- ☐ Furnish as Noted

Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

LaBella Associates, D.P.C.

Signed: _____ Dated: _____

Architect/Engineer Comments:

SECTION 01 42 19
APPLICABLE STANDARDS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Throughout the Contract Documents, reference is made to codes, regulations and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.

B. Where materials or workmanship are required by the Contract Documents to meet or exceed the specifically named code or standard, it is the Contractor's responsibility to provide materials and workmanship which meet or exceed the most recently adopted named code or standard.

C. It is also the Contractor's responsibility, when so required by the Contract Documents or by written request from the Architect/Engineer to deliver to the Architect/Engineer all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested in writing by the Architect/Engineer and generally will be required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the Architect/Engineer.

1.2 QUALITY ASSURANCE

A. Familiarity with pertinent codes and standards: In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements.

B. Rejection of non-complying items: The Architect/Engineer reserves the right to reject items incorporated into the work, which fail to meet the specified minimum requirements. The Architect/Engineer further reserves the right, and without prejudice to other recourse the Architect/Engineer may take, to accept non-complying items subject to an adjustment in the Contract amount as approved by the Architect/Engineer and the Owner.

C. Applicable standards listed in these specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organization:

1. AASHTO = American Association of State Highway and Transportation Officials, 341 National Press Building, Washington, DC 20004.

2. ACI = American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48419.

3. AISC = American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York 10020.

4. ANSI = American National Standards Institute (successor to the USASI and ASA), 1430 Broadway, New York, New York 10018

5. ASME = American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, New York 10017.

6. ASTM = American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

7. AWS = American Welding Society, Inc., 2501 N.W. 7th Street, Miami, Florida 33125.

8. AWWA = American Water Works Association, Inc. 6666 West Quincy Avenue, Denver, Colorado 80235.

9. CRSI = Concrete Reinforcing Steel Institute, 228 North LaSalle Street, Chicago, Illinois 60610.

10. Federal Specifications and Federal Standards = Specifications Sales (3FRI), Bldg. 197, Washington Navy Yard, General Services Administration, Washington, DC 20407.

11. FR = Federal Register, National Archives and Records Service, Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

12. NAAMM = The National Association of Architectural Metal Manufacturers, 1033 South Boulevard, Oak Park, Illinois 60302.

13. NEC = National Electrical Code (see NFPA).

14. NEMA = National Electrical Manufacturers Association, 155 East 44th Street, New York, New York 10017.

15. NFPA = National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 02210.

16. NYSDOT = New York State Department of Transportation.

17. OSHA = Occupational Safety and Health Act.

17. SDI = Steel Deck Institute, 135 Addison Avenue, Elmhurst, Illinois 60125.

18. SSPS = Steel Structures Painting Council, 4400 5th Avenue, Pittsburgh, Pennsylvania 15213.

19. UL = Underwriters' Laboratories, Inc., 207 East Ohio Street, Chicago, Illinois 60611.

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

PART 1 - GENERAL

1.1 INSPECTION

A. No work shall be started at any location, nor shall work, which has been discontinued, be resumed at any location without notice, either to the inspector (observer) in person, or at least one day in advance to the office of the Architect/Engineer.

B. The Observer may reject unsatisfactory materials and require the correction of work improperly done. The Observer has no authority to change any plans or specifications. The Observer may transmit to the Contractor directions of the Architect/Engineer and the Contractor may request written confirmation thereof. The Contractor shall provide the Observer and Architect/Engineer safe access to all parts of the work and sources of material and shall furnish any labor required to assist the Observer or Architect/Engineer. Failure of the Observer to reject inferior work or acceptance of such work shall not bar the Owner from recovery of damages, or the cost of rebuilding such work. If any work should be covered up before it is observed and without the inspector's consent, the work shall be, where requested, uncovered for examination and properly restored at the Contractor's expense. Any work, which is covered with the inspector's consent, and is subsequently required by the Architect/Engineer to be uncovered for additional inspection or testing, shall be done by the Contractor and thereafter restored. The Owner will pay the cost of such openings, testing, and restoration, provided the work and material is found to be acceptable. Where the work and materials are found to be unsatisfactory, the Contractor shall pay all costs of opening, testing, correcting and restoring the work. The Architect/Engineer has no authority to direct construction methods and procedures, nor do they have authority to enforce governmental laws and rules.

1.2 INTERPRETATION OF CONTRACT DOCUMENTS

A. All questions or controversies as to the meaning of Contract Documents shall be submitted promptly to the Architect/Engineer. Plans shall not be scaled for dimensions. References to standard specifications and codes mean the latest adopted version. As the work proceeds, the Architect/Engineer will give needed information and may issue supple-mentary directions and drawings detailing the work. The Architect/Engineer will decide all questions and controversies, which arise as to the interpretation of the Contract Documents and as to the conformity of materials and work with the Contract Documents. The Architect's/Engineer's decision, in writing, shall be final and binding on the Contractor.

B. In any case involving time of completion or financial consideration, where such decision is unsatisfactory to the Owner or Contractor, the Architect/Engineer will attempt to negotiate a settlement agreeable to both.

1.3 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Contractor shall monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Contractor shall comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, Contractor shall request clarification from Architect/Engineer before proceeding.

D. Contractor shall comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Contractor shall secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.4 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications Sections for review by Architect/Engineer.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified in individual Sections to be removed, clear area after work represented by field sample is completed and accepted.

1.5 INSPECTION AND TESTING LABORATORY SERVICES

A. Contractor shall arrange for services using an independent testing laboratory acceptable to the Architect/Engineer. Contractor shall submit name and qualifications of proposed testing laboratory. Acceptable testing laboratories include but are not limited to: Atlantic Testing or CME.

B. The independent firm will perform inspections, tests, and other services specified in individual specification Sections and as required by the Architect/Engineer or Owner.

C. Reports will be submitted by the independent firm to the Contractor and to the Architect/Engineer, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

D. Cooperate with independent firm; furnish samples of materials, design mixes, equipment, tools, storage and assistance as requested.

1. Notify independent firm and Engineer 24 hours prior to expected time for operations requiring services.

2. All costs associated with testing of natural materials and compaction shall be borne by the Contractor.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations, observer subject to review of Architect/Engineer.

B. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable, and to initiate instructions when necessary.

C. Individuals shall report to Architect/Engineer observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Submit report in duplicate within 14 days of observation to Architect/Engineer for review.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1. DESCRIPTION

A. Temporary facilities required for this work includes, but are not necessarily limited to:

1. Utilities such as water, electricity, temporary heat, telephone and sanitary facilities.

B. Temporary controls required for this work includes, but are not necessarily limited to:

1. Dust, water, noise, and pollution control.

2. Enclosures, fencing, security, and barriers.

C. Removal of temporary utilities, facilities, and controls.

1.2. RELATED WORK SPECIFIED ELSEWHERE

A. Except that all equipment furnished by subcontractors shall comply with all requirements of pertinent safety regulations, the ladders, planks, hoists, and similar items normally furnished by the individual trades in execution of their own portions of the Work are not part of this section.

B. Permanent installation and hook-up of the various lines are described in the pertinent sections of these specifications.

C. Erosion and Sediment Control – **Section 31 25 00**

1.3. PRODUCT HANDLING

A. Use all means necessary to maintain temporary facilities and controls in proper condition throughout progress of the work.

1.4 JOB CONDITIONS

A. Make all required connections to existing utility systems with minimum disruption to services in the existing utility systems. When disruption of the existing service is required, do not proceed without the Architect/Engineer's approval, and when required, provide alternate temporary service. All connections shall be made under the authority of the specific utility owner.

1.5 SUBMITTALS

A. Prior to starting work, Contractor shall submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All temporary utilities shall be subject to the Architect/Engineer's approval.

2.2. WATER

A. Water required during construction for filling, flushing and testing shall be provided by the Contractor.

2.3 ELECTRICITY

A. Temporary electricity shall be provided by the contractor, as necessary for his own use.

2.4 TELEPHONE

A. The Contractor shall make all necessary arrangements for providing their own temporary telephone service to the project site and shall pay all costs for this service. Cellular telephone service is acceptable provided that acceptable reception is available at project site.

B. The temporary telephone services shall remain until substantial completion of the work.

C. The Contractor shall maintain telephone services such that the Architect/Engineer or Owner can contact him at all times during the term of the contract.

D. Telephone service shall be equipped with voice mail or answering machine.

2.5 HEAT

A. The Contractor shall provide temporary heat as necessary for protection of the work.

2.6 SANITARY FACILITIES

A. The Contractor shall provide temporary sanitary facilities as necessary throughout the work sites for the use of all personnel and maintain these facilities in a sanitary condition at all times so as to not create and nuisance conditions.

2.7 DUST CONTROL

A. Execute Work by methods that minimize raising dust from construction operations.

B. Provide positive means to prevent airborne dust from dispersing into atmosphere and adjacent areas.

C. Water for sprinkling shall be clean, free of salts, oil, acids, alkalis or other injurious matter (pH 6.0 to 8.0).

2.7 WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment. Protect site from puddles or running water. Provide temporary measures and/or devices to prevent water flow.

2.8 NOISE CONTROL

A. Provide methods, means, and facilities to minimize noise produced by construction operations. Operations should not create nuisance or inconvenience to others.

2.9 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.

2.10 ENCLOSURES, FENCING, SECURITY AND BARRIERS

A. Provide temporary fencing and/or barriers around project area to prevent unauthorized entry to construction area and to protect existing facilities and adjacent properties from construction operations.

B. Protect work and materials from theft, vandalism, and unauthorized entry.

C. Tree and Plant Protection: Preserve and protect existing trees and plants designated to remain. Protect areas within drip lines from traffic, parking, storage, dumping, chemically injurious materials and liquids, ponding, and continuous running water

PART 3 - EXECUTION

3.1 ENCLOSURES

A. Furnish, install, and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work.

3.2 DUST CONTROL

A. Debris is to be swept or flushed from the roads at the end of each day.

B. Apply water by approved methods and equipment, including a tank truck with gauge equipped pressure pump and spray bar, dispersing water through nozzles at rate sufficient to

control dust, but low enough to avoid puddles and muddy surfaces. Dust control methods, materials, and frequency will be subject to approval of the Architect/Engineer.

3.3 MAINTENANCE AND REMOVAL

A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work, unless otherwise specified herein. Remove all such temporary facilities and controls as rapidly as progress of the work will permit, or as directed by the Architect/Engineer.

END OF SECTION

SECTION 01 70 00
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Contractor shall be responsible for final project cleanup of their contract section; furnishing all required record drawings, manuals, certifications; furnishing copies of warranties and maintenance schedules (where applicable) for all materials (triplicate); the necessary warranties, maintenance bonds, and lien releases as required by the Contract Documents.

1.2 EXECUTION

A. The contract section shall be substantially returned to its preconstruction condition which includes, but is not limited to,

   a. Removal of all construction materials and construction equipment not permanently incorporated into the project.

   b. Complete all road and surface restoration.

   c. Removal of all trash and debris associated with the project.

B. Contractor shall have the required record drawings (in accordance with Section 1.3) and warranties and certifications submitted to the Owner in triplicate.

C. Contractor shall have the necessary, bonds, warranties and lien releases submitted to the Owner.

D. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.

E. Contractor shall complete final cleanup requirements.

1.3 RECORD DOCUMENT SUBMITTALS

A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Architect/Engineer's reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line whiteprints of contract drawings and shop drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where shop drawings are used, record a cross-reference at the corresponding location on the contract drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the work.

2. Mark new information that is important to the Owner but was not shown on the contract drawings or shop drawings. As a minimum provide the following:

   a. Measured underground utility burial depths, whenever greater or less than the stated minimum.

   b. Measured vertical clearance at each underground utility crossing.

   c. Measured horizontal and vertical locations of underground utilities and appurtenances (including but not limited to all mains, services, fittings, valves, hydrants, meter boxes, test connections, service taps, and abandoned taps or valves), referenced to permanent surface improvements.

   d. Measured location and depth of rock removal area, where applicable.

   e. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.

   f. Field changes of dimension and detail.

   g. Refer to General Conditions Section 007200 for additional information.

3. Note related change-order numbers where applicable.

4. Maintain a complete file of approved field sketches, diagrams and other changes, as may becomes necessary during the progress of the work and attach to the record set of Contract Drawings.

5. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets, print suitable titles, dates, and other identification on the cover of each set.

C. Record Specifications: Maintain one complete copy of the project manual, including addenda. Include with the project manual one copy of other written construction documents, such as change orders and modifications issued in printed form during construction.

1. Mark these documents to show substantial variations in actual work performed in comparison with the text of the specifications and modifications.

2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.

3. Note related record drawing information and product data.

4. Upon completion of the work, submit record specifications to the Architect/Engineer for the Owner's records.

5. Legibly mark and record in Part 2 of each section of the specifications, a description of the actual products installed, including the manufacturer's name and product model and number.

D. Record Product Data: Maintain one copy of each product data submittal. Note related change orders and markup of record drawings and specifications.

1. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.

2. Give particular attention to concealed products and portions of the work that cannot otherwise be readily discerned later by direct observation.

3. Upon completion of markup, submit complete set of record product data to the Architect/Engineer for the Owner's records.

E. Miscellaneous Record Submittals: Refer to other specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the work. Immediately prior to the date or dates of final completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect/Engineer for the Owner's records.

END OF SECTION

SECTION 01 71 00
GRADES, LINES AND LEVELS - LAYOUT OF WORK

PART 1 - GENERAL

1.1 LAYOUT OF WORK

A. Elevations and dimensions provided are from record drawings and are not guaranteed. Each Contractor shall take field measurements, verify critical dimensions and elevations in advance of construction. Report any discrepancies to the Engineer before proceeding with the work. Minor variations from record dimension/elevations can be anticipated and are not cause for a change in scope. The Contractor is responsible for all re-work required as a result of his failure to complete verification of critical elevations prior to the start of all construction.

B. From the information provided by the Engineer, each Contractor shall layout his work. The Contractor shall provide competent qualified men, all necessary instruments, stakes, and other material to perform the layout. The exact position of the work on the site shall be established from central control points which are shown on the plans or will be established by the Engineer.

C. Any error, apparent discrepancy, or absence of data shown or required for accurately accomplishing the stake out shall be referred to the Engineer for interpretation.

D. The Contractor shall be responsible for the accuracy of his work and shall maintain all reference points. The Engineer may check any or all portions of the layout or survey work or notes made by the Contractor. This checking does not relieve the Contractor of any responsibility for the accuracy or completeness of his work.

E. All computations, survey notes, and other records shall be neatly made. These shall be made available to the Engineer upon request and shall be furnished to the Engineer upon completion of the Contract.

END OF SECTION

SECTION 02 41 19
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected site elements.
2. Salvage of existing items to be reused or recycled.
3. Reconnection of temporarily discontinued utilities.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where and how indicated.

C. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. The Owner has the right of first refusal for salvaged and removed items they request, all other items are to become property of the contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to The Owner that may be uncovered during demolition remain the property of the Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.

2. Interruption of utility services. Indicate how long utility services will be interrupted.

3. Coordination for shutoff, capping, and continuation of utility services.

4. Coordination of Owner's continuing occupancy of portions of existing buildings and of Owner's partial occupancy of completed Work.

C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

D. Pre-demolition Photographs or Video: Submit before Work begins.

E. Submit disposal location.

F. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 QUALITY ASSURANCE

A. Removals shall be completed by company or companies familiar with the work, has appropriate equipment to complete the work, and has completed at least 5 previous similar removals and proper disposals.

1.8 FIELD CONDITIONS

A. Owner will occupy portions of building and site immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Owner's Designated Representative and Architect/Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: Refer to Hazardous Materials Drawings for locations of known hazardous materials that will be encountered in the Work.

1. Complete known hazardous materials removal where required in accordance with appropriate regulations and contract documents.

2. If other suspected hazardous materials are encountered, do not disturb; immediately notify Site Representative and Architect/Engineer. A determination will be made whether to remove hazardous materials or reroute the intended work.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner if available. Owner does not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Owner's Representative.

E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes.

1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

2. Before selective demolition or removal of existing building elements or site features that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.

2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, parking lots, and other adjacent occupied and used facilities.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.

2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3. Protect walls, and other existing finish work that are to remain or that are exposed during selective demolition operations.

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.

4. Maintain adequate ventilation when using cutting torches.

5. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.

2. Protect items from damage during transport and storage.

3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner's Representative, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them.

1. Do not allow demolished materials to accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.8 PROJECT SPECIFIC PHOTOS

A. Existing underground detention basin (see photos below), prior to installation of gabion basket walls.



PHOTO NO. 1



PHOTO NO. 2



PHOTO NO. 3

END OF SECTION

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

1. Section 31 20 00 "**Earth Moving**"

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:

a. Contractor's superintendent.

b. Independent testing agency responsible for concrete design mixtures.

c. Ready-mix concrete manufacturer.

d. Concrete Subcontractor.

e. Special concrete finish Subcontractor.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

D. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

1. Location of construction joints is subject to approval of the Architect.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

B. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.

2. Admixtures.

3. Fiber reinforcement.

4. Repair materials.

C. Material Test Reports: For the following, from a qualified testing agency:

1. Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.

D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer, detailing fabrication, assembly, and support of formwork.

1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and reshoring installation and removal.

E. Minutes of preinstallation conference.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI- certified Concrete Flatwork Technician.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

1.8 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1. Include the following information in each test report:

a. Admixture dosage rates.

b. Slump.

c. Air content.

d. Seven-day compressive strength.

e. 28-day compressive strength.

f. Permeability.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

1.10 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301 .

2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.

3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

B. Hot-Weather Placement: Comply with ACI 301 and as follows:

1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301 .

2. ACI 117 .

2.2 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Plywood, metal, or other approved panel materials.

2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:

a. High-density overlay, Class 1 or better.

b. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.

c. Structural 1, B-B or better; mill oiled and edge sealed.

d. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.

3. Overlaid Finish birch plywood.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel, stiffened to resist plastic concrete loads without detrimental deformation.

D. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.

E. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch , minimum.

F. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.

G. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

H. Form Ties: Factory-fabricated, removable or snap-off glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.

2. Furnish ties that, when removed, leave holes no larger than 1 inch in diameter in concrete surface.

3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

2.3 CONCRETE MATERIALS

A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

B. Cementitious Materials:

1. Portland Cement: ASTM C 150/C 150M, Type I, gray.

2. Fly Ash: ASTM C 618, Class F or C.

3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.

4. Silica Fume: ASTM C 1240, amorphous silica.

C. Normal-Weight Aggregates: ASTM C 33/C 33M, Class 1N coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at

least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.

1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

D. Air-Entraining Admixture: ASTM C 260/C 260M.

E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II. Water: ASTM C 94/C 94M and potable.

2.4 RELATED MATERIALS

A. Bonding Agent: ASTM C 1059/C 1059M, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:

1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

C. Reglets: Fabricate reglets of not less than 0.022-inch-thick, galvanized-steel sheet. Temporarily fill or cover face opening of reglet to prevent intrusion of concrete or debris.

D. Dovetail Anchor Slots: Hot-dip galvanized-steel sheet, not less than 0.034 inch thick, with bent tab anchors. Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris.

2.5 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 .

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent.

2. Combined Fly Ash and Pozzolan: 25 percent.

3. Slag Cement: 50 percent.

4. Combined Fly Ash or Pozzolan and Slag Cement: 50 percent Portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.

5. Silica Fume: 10 percent.

6. Combined Fly Ash, Pozzolans, and Silica Fume: 35 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.

7. Combined Fly Ash or Pozzolans, Slag Cement, and Silica Fume: 50 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.

2. Use water-reducing and-retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a w/c ratio below 0.50.

2.6 CONCRETE MIXTURES FOR:

A. Footings, Foundation Walls, Grade Beams, Retaining Walls, Pads, Manhole Benches and Channels, and Piers: Normal-weight concrete.

1. Minimum Compressive Strength: 4,500 psi at 28 days.

2. Maximum W/C Ratio: 0.45.

3. Slump Limit: 4 inches, plus or minus 1 inch . If admixtures are used in improve workability, the maximum slump limits may be relaxed with Engineer's approval.

Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2 inch nominal maximum aggregate size.

2.15 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.16 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F , reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F , reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 , to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:

1. Class A, 1/8 inch for smooth-formed finished surfaces.

2. Class B, 1/4 inch for rough-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.

2. Do not use rust-stained steel form-facing material.

F. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely

braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

G. Chamfer exterior corners and edges of permanently exposed concrete.

H. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

I. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

J. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

K. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.

2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3. Install dovetail anchor slots in concrete structures as indicated.

3.3 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of

weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.

2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.

2. Maintain reinforcement in position on chairs during concrete placement.

3. Screed slab surfaces with a straightedge and strike off to correct elevations.

4. Slope surfaces uniformly to drains where required.

5. Begin initial floating using bull floats or darbies to form a uniform and open- textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.4 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view or surfaces to receive a rubbed finish.

C. Rubbed Finish: Apply the following to smooth-formed-finished as-cast concrete where indicated:

1. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix 1-part portland cement to 1- 1/2 parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.5 MISCELLANEOUS CONCRETE ITEM INSTALLATION

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations:

1. Coordinate sizes and locations of concrete bases with actual equipment provided.

2. Construct concrete bases 4 inches high unless otherwise indicated, and extend base not less than 6 inches in each direction beyond the maximum dimensions of supported equipment unless otherwise indicated or unless required for seismic anchor support.

3. Minimum Compressive Strength: 3500 psi at 28 days.

4. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.

5. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete substrate.

6. Prior to pouring concrete, place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

7. Cast anchor-bolt insert into bases. Install anchor bolts to elevations required for proper attachment to supported equipment.

3.6 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.

C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

    a. Water.

    b. Continuous water-fog spray.

    c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture- retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.

    a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.

    b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.

    c. Curing compounds: Not permitted.

END OF SECTION

SECTION 22 13 14
TEMPORARY BY-PASS PUMPING

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This section covers the installation temporary by-pass pumping to maintain flows around the work area.

B. Furnish and install all materials, labor, equipment, power, maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing flow around the work area for the duration of the project.

C. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.

1.2 SUBMITTALS

A. The submittal shall include a written description and sketch of the Plan and shall address the quantity, capacity, and location of all pumping equipment. All pumping equipment submitted shall include the manufacturer's performance curves. The size, type and routing of all suction and discharge pipes and the means of connecting the system shall also be included.

1.3 MINIMUM REQUIREMENTS

A. It is required under this section that the Contractor provide all necessary means to safely convey the normal flows past the work area. It will not be permitted to stop or impede the main or any sideline flows under any circumstances.

B. The temporary pumping system will be required to handle flows the capacity of the larger of the existing or proposed pumps.

C. All pumps used shall be centrifugal, end suction, fully automatic self-priming units that do not require the use of foot-valves, vacuum pumps, or diaphragm pumps in the priming system. The pumps may be electric, or diesel powered. All pumps shall not be the hydraulic submersible type. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows.

D. To prevent the accidental spillage of flows, all discharge systems must be constructed of rigid pipe with positive type CH, leak proof connections. Discharge hose will only be allowed by specific permission of the Engineer.

E. The Contractor shall provide the necessary start/stop controls and power for pump.

F. The Contractor shall ensure that the temporary pumping system is properly maintained and a responsible operator shall be on hand at all times when pumps are operating.

G. The temporary pumping system shall be placed in service a minimum of 24 hours before any other work may begin. It shall remain operable for at least 72 hours after the repairs are completed and its removal is approved by the engineer in writing.

H. Once written permission is issued, the Contractor shall remove all components of the temporary pumping system. The Contractor shall perform all restoration work to the satisfaction of the engineer.

PART 2 - PRODUCTS

2.1 TEMPORARY BY-PASS PUMPS

A. The temporary pump(s) will be used to pump raw sewage.

B. Provide standby pumping by backing up pumps size by size, if necessary.

C. The pump(s) and accessories shall be supplied by the pump manufacturer.

D. The pump(s) shall be fitted with a fully automatic priming system. The pump must be capable of running totally dry.

E. The diesel engine driven pump unit shall be mounted with tires that can be towed on the road at 50 M.P.H. and shall be wired for over the road usage, per applicable D.O.T. Standards.

F. Pump to be fully automatic, needing no form of adjustment on priming system. The pump shall be capable of static suction lifts to 25 feet, vertical, at sea level. The pump must be capable of pumping sewer inflows. It shall also be capable of operation using extended suction lines.

G. The pump offered shall be a manufacturer's standard production model. It shall have been in continuous use by municipal and industrial owners for a minimum of five years.

H. Pump must have an alarm system with cell phone dialer system.

2.2 DESIGN REQUIREMENTS

A. Minimum solids handling size: 3-inches.

B. The larger of the existing and proposed pumps under site conditions.

2.3 ACCEPTABLE MANUFACTURERS/VENDORS

A. The pump shall be manufactured by Godwin Pumps, Bridgeport, New Jersey or approved equal.

2.4 EQUIPMENT

A. Pump shall be supplied with an integral type check valve mounted on the discharge flange of the pump, allowing unrestricted flow into the impeller. The type check valve shall prevent in-line return of flow when the pump is shut off. Non-return valve elastomers shall be Nitrile Rubber, and shall be field replaceable.

B. Diesel shall be air or liquid cooled engine. Engine shall drive pump by use of direct connected intermediate drive plate. Starter shall be 12 volt electric. Safety shut down switches for low oil pressure and high temperature shall be provided. Battery shall have 180 Amp hour rating. Unit shall include a tachometer and an hour meter. A certified continuous duty engine curve shall be supplied to the Engineer.

C. Governor shall be mechanical type. Engine speed shall be adjustable to operate the pump between maximum and minimum design operation speeds.

D. Integral trailer fuel tank capacity shall be sufficient to provide at least 24 Hrs. of operating time at full load. The engine shall be capable of operating satisfactorily on a commercial grade of distilled No. 2 fuel oil.

E. Exhaust system shall include muffler and silencer of suitable size. The noise produced by the pumps must not exceed 70 A-weighted decibels (dba).

PART 3 - EXECUTION

3.1 MANUFACTURERS SERVICES

A. The manufacturer shall furnish the services of a competent factory representative to do the following:

1. Inspect the system prior to delivery, supervise the startup and testing of the system, and certify the system has been properly furnished and is ready for operation.

2. Instruct the Contractor's operating personnel in the proper operation and maintenance of the system.

3.2 OPERATION AND MAINTENANCE

A. Provide maintenance and fuel as required for continuous duty.

B. The Contractor is responsible of all damages should the pumping system fail.

END OF SECTION

SECTION 31 10 00
SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. It is the intent of this section to limit the area of clearing and grubbing to the minimum area possible to allow for the proper installation of the work and to preserve all plantings, trees, shrubs, grass, and natural vegetation to the maximum extent possible.

2. Provide general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

3. Provide clearing and grubbing of all trees, plants, undergrowth, shrubs, brush, other vegetation and debris within the limits indicated on the Contract Drawings and as required to complete the work.

4. Protect existing trees and plants scheduled to remain.

5. Prune existing trees and plants affected by the execution of the work.

6. Remove all fence, sidewalk, granite curb, concrete curb, asphalt pavement, concrete pavement, utility structures, pipes, conduits, site lighting, utility poles and other items as indicated on the Contract Drawings or as needed to complete the work.

7. Remove all site amenities as designated on the Drawings or as needed to complete the work including but not limited to: signs, guide rails, etc.

8. Disconnect, cap or seal, and remove and/or abandon site utilities in place. Provide bypassing of flows as needed to complete and protect the work.

9. Properly dispose of all removed materials not designated to be reused or delivered to the Owner.

10. Fill and properly compact voids left from clearing and grubbing and buried utility removal activities with backfill materials to meet the finished treatments. (Refer to Part 3 "Clearing and Grubbing)

11. Building and foundation demolition are covered under other specification sections.

B. Related Sections:

1. Division 31 Section **"Earth Moving"**
2. Division 31 Section **"Erosion and Sediment Control"**
3. Division 32 Section **"Maintenance and Protection of Traffic"**

1.3 DEFINITIONS

A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, materials toxic to plant growth, or other nonsoil materials.

D. Plant-Protection Zone: Area surrounding planting beds, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.

E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.

F. Caliper: Diameter of a trunk measured by a diameter tape at 6 inches (150 mm) above the ground for trees up to, and including, 4-inch (100-mm) size; and 12 inches (300 mm) above the ground for trees larger than 4-inch (100-mm) size.

G. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials become Contractor's property and must be removed from Project site. Contractor to provide owner opportunity to retain salvaged items prior to disposal.

1.5 SUBMITTALS

A. Submit name and qualifications of certified Arborist and tree service firm to be utilized.

B. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction. Data shall include:

1. Species and size of tree.

2. Location on site plan. Include unique identifier for each.

3. Reason for pruning.

4. Description of pruning to be performed.

5. Description of maintenance following pruning.

C. Samples:

1. Organic Mulch: 1-quart volume of organic mulch; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch.

D. Existing Conditions: Documentation of existing trees and plantings, indicated to remain and adjoining construction and/or site improvements which establishes preconstruction conditions that might be misconstrued as damage caused by site clearing or other construction related activities.

1. Use sufficiently detailed photographs or videotape.

2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

E. Label or pruning paint data proposed for use. Provide MSDS for materials used on-site.

F. Antirust coating data proposed for use. Provide MSDS for materials used on-site.

G. Contractor's schedule indicating dates upon which Contractor and Owner's Designated Representative will traverse the site to allow Contractor to indicate the trees and plantings which he has determined to be necessary to remove, trimmed, or replanted and to obtain Owner's Designated Representative's approval.

H. Detailed plan on handling of bypass flows during construction including equipment and methods proposed, timeline, crews and contingency plan. This plan will be reviewed by the Architect/Engineer and no bypass operations will be permitted without an approved plan.

I. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this project.

B. Pre-installation Conference: Conduct conference at Project site.

1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:

a. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.

b. Enforcing requirements for protection zones.

c. Field quality control.

C. Confine clearing and grubbing operations to within the limits shown on the Contract Drawings or as otherwise designated by the Architect/Engineer. General limits include:

1. All areas where work is required to be done, but, to the minimum extent possible to properly install the work.

2. Within the grading limits shown on the Drawings.

3. Within existing public rights-of-way or easement.

4. Within contract limits.

D. No trees, plants, shrubs, flowers or vegetation shall be removed or trimmed without prior permission of the Architect/Engineer or Owner's Designated Representative, except where otherwise specified or directed.

E. Pruning of trees shall be completed by a certified, trained arborist.

F. Provide at least one person who shall be present at all times during clearing and grubbing operations who shall be thoroughly familiar with the following:

1. The types of trees and plantings encountered.

2. The proper procedures and methods for preserving trees.

3. The proper procedures and methods for felling, trimming, pruning, and caring for trees and plants and their roots.

Such person(s), firm(s), or subcontractor(s) must be totally familiar with this type of work, must be regularly engaged in similar work and shall be responsible for directing all work affecting trees, plantings, and vegetation.

G. Comply with all applicable local, state, and federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

H. Erosion control measures in accordance with Division 31 Section "Erosion and Sediment Control", shall be followed.

I. Obtain and pay for all required inspections, permits, and fees. Provide notices required by governmental authorities.

1.7 PROJECT CONDITIONS

A. Burning or burial of materials at the site is not permitted.

B. Explosives are not permitted for clearing and grubbing operations.

C. Minimize interference with adjoining roads, streets, walks, parking areas and other adjacent occupied or used facilities during site-clearing operations. Refer to Division 32 Section "Maintenance and Protection of Traffic" for traffic maintenance information.

D. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property, if any will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by Owner's Designated Representative.

E. Do not grub along the side slopes of the embankments.

F. Perform all clearing and grubbing within 5-feet of the embankments by pulling debris, sediment or any other materials away from the embankment slope to help protect the downhill areas. Do not push materials down the embankment slope.

G. Arrange for disconnection, disconnect, and seal or cap all utilities and services designated to be removed before start of site work operations. Perform all work in accordance with the requirements of the applicable utility company or agency involved. Pay costs for all utility related work including coordination with and charges from the utility company for work they may require in order to accomplish the work shown or implied.

H. If uncharted or incorrectly charted underground piping or other utilities and services be encountered during site work operations, notify the applicable utility company or utility owner immediately to obtain utility company/owner in maintaining active services in operation. The Contractor bears the cost of any and all repair work.

I. Locate, protect, and maintain benchmarks, monuments, control points, and project engineering reference points. Reestablish disturbed or destroyed items at Contractor's expense.

J. The location and size of trees, plantings, vegetation, as well as location, size and material of construction of drives, sidewalks, curbs, fences, existing utilities and other living and non-living items, as shown on the Drawings, have been determined by actual surveys at the time

surveys were made. Since that time, additional items may have been built, modified, improved or planted, some items may have been removed or replaced, and the condition of things may have changed.

K. Carefully examine the site prior to bidding and become fully acquainted with the existing conditions as the contract price includes the cost for removing and replacing all obstacles and obstructions, as required, whether shown on the Drawings or not. Include restoration for all disturbed or damaged areas with in-kind materials at the time of construction, whether shown on the Contract Drawings or not, unless otherwise indicated in the Contract Documents.

L. Protect and maintain streetlights, parking and sidewalk lighting, emergency phones, utility poles and services, curb boxes, valves, utility structure/piping castings, and other services, except items designated for removal.

M. The following practices are prohibited within tree- and plant-protection zones:

1. Storage or stockpiling of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging, unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
8. Do not direct vehicle or equipment exhaust towards protection zones.
9. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.
10. Do not store materials potentially harmful to tree roots. Potentially harmful materials include, but are not limited to: petroleum products; cement; lime; paints; detergents; acids; and, cleaning agents.

1.8 STORAGE AND HANDLING

A. Stockpile earth spoil or excess earth material on the site or storage of excavated materials for reuse in a manner which will not hinder the progress of the work; cause any nuisance; or cause spillage or tracking of materials from the transporting vehicle onto public or private roadways and pavements, or cause an inconvenience to adjacent property owners or the active facility.

B. Obstruction of roads, driveways, parking areas, sidewalks, or interference with drainage along curbs, ditches, or drainage channels with stored material is not permitted.

C. Store fences, signs, granite curb and other items at approved locations for subsequent reinstallation.

D. Promptly remove materials not specified to be stored or reused.

1.9 SCHEDULING

A. Avoid interference with the use of, and passage to and from, adjacent properties, buildings, facilities, driveways, walks, drainage systems, and roads etc.

B. Do not commence site clearing operations until temporary erosion- and sedimentation-control and tree- and plant-protection measures are in place.

C. Pavements which are required to be removed, including streets, roadways, driveways, parking areas, and walkways, may be saw cut in advance, but do not remove until the work is ready to be installed.

D. Do not remove signs, guide rails, and all other control, safety and warning devices until just prior to the installation of the work.

E. Do not remove fences until the property owners affected are notified at least four days in advance of such removal. Unless written permission from a fence owner is received, do not remove a fence more than 48 hours in advance of the installation of the work affecting the fence.

F. Leave all items affecting traffic, safety, lives, and the containment of humans and animals and all items essential to the protection of property or the operation of a business be left in place as long as possible and replaced as soon as possible when such items must be removed.

1.10 PROTECTION AND COORDINATION

A. Persons and Property:

1. Carefully protect and guard all trees, shrubs, and vegetation to remain.

2. Take every precaution to avoid damage to utilities, buildings, structures, facilities, and other property. All curbs, gutters, pavements, structures, utility lines, and other features along the street rights-of-way, adjacent property and the existing facility shall be protected.

3. Barricades/Enclosures: Properly protect persons and property at all times against harm or damage of any kind during construction and site improvement operations. Provide substantial barricades/enclosures around all openings as soon as they are uncovered, to block access and afford protection to workmen, facility employees, and the general public.

4. Signals: Provide lanterns or other signalization, as may be required by law or directed by the Owner's Designated Representative in the vicinity of any open excavations or unsafe areas, and be certain that such devices are operable at all times during hours of darkness, or when the work area is left unattended.

5. Shoring/Bracing: Provide necessary shoring and bracing for support of buildings scheduled for demolition and for protection of adjacent structures and facilities caused by demolition operations. Cost of repair shall be paid by the Contractor and at no additional cost to the Owner.

6. Maintain all barricades and signals for the duration of the Contract.

B. Utilities:

1. Preserve Active Lines: Preserve in operating condition, all active utilities indicated on the Contract Drawings to remain. This applies to all utilities, which traverse the project site, or exist in the immediate vicinity of the site, including, but not limited to, mains, conduits, manholes, handholes, catch basins, valve boxes, poles, guy anchors, and appurtenances. Damage to any utility line or related appurtenances resulting from work under this Contract shall be repaired or replaced by the Contractor to the satisfaction of the Architect/Engineer, Owner, utility company, utility owner and/or local authority. All costs associated with this repair shall be paid by the Contractor at no additional cost to the Owner.

2. Damaged Utility Lines: If active utility lines are broken or damaged during any site improvements operations, take all necessary steps immediately to avoid endangering persons or property, and notify the Owner's Designated Representative, Architect/Engineer, and the affected utility company, and municipal engineer's office to obtain a decision regarding this treatment and/or assistance in the repair of the damaged line.

3. Prior Notification: Notify all utility companies, utility owners, municipal engineer's office, and/or the respective water and sewer department, prior to the commencement of any operations on the site. Confirm locations with all utility companies/owners involved, of all live or active lines within, or immediately adjacent to, the contract limit lines of this project.

4. Water Damage: In the event that water, storm sewer, sanitary, or other utility lines are broken, or that springs, ground water, or other sources of water are encountered, take all necessary steps immediately to divert water away from construction, site improvement operations and storage areas to prevent erosion, undermining or other damage. If permanent corrective measures other than those indicated on the Contract Drawings become necessary, request a written decision from the Architect/Engineer.

C. Adjacent Properties:

1. Protection: Protect all adjacent properties and structures and use every means possible to prevent erosion, flooding, undermining excessive excavation or other damage during any construction or site improvement operations. Repair all damage

in a manner specified by, and to the satisfaction of the Owner's Designated Representative and the Architect/Engineer. The Contractor shall pay the cost of any repairs necessary at no additional cost to the Owner.

D. Restoration:

1. Injured or damaged trees shall be repaired in accordance with accepted nursery industry standards and as acceptable to the Architect/Engineer.

2. Contractor shall bear the cost of repair and replacement of trees scheduled to remain that are damaged or removed by construction operations.

3. All trees, shrubs or plantings, which are taken-up for subsequent reuse, and die, shall be replaced with first class balled and bur lapped nursery grown representatives of the same species and caliper at the expense of the Contractor.

4. Damage to existing curbs, gutters, pavements, structures, utility lines, or other features should be replaced or repaired to the satisfaction of the Architect/Engineer, Owner's Designated Representative, and/or utility owner, at no additional cost to the Owner.

5. Fill, grade, and compact disturbed areas to the grades and lines as shown on the Contract Drawings. Grade compacted surface to meet adjacent grades and provide proper surface drainage. Provide uniform levels and slopes. All work shall be completed in accordance with specification Division 31 Section "Earth Moving".

PART 2 - PRODUCTS

2.1 MATERIALS

A. Asphalt base paint specially formulated for horticultural application to cut or damaged plant tissue.

B. Satisfactory Soil and Granular Material: Requirements for satisfactory soil and granular materials are specified in Division 31 Section "Earth Moving."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

2. Provide imported granular materials.

3. Provide imported planting soil.

C. Backfill Soil: Stockpiled soil mixed with planting soil of suitable moisture content and granular texture for placing around tree; free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.

1. Mixture: Well-blended mix of two parts stockpiled soil to one part planting soil.

D. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.

1. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

E. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:

1. Type: Shredded hardwood.

2. Size Range: 3 inches maximum, 1/2 inch minimum.

3. Color: Natural.

F. Tree- and Plant- Protection Zone Fencing:

1. The Contractor is to furnish all labor, materials, equipment, and supplies and perform all operations required to complete this work.

2. Protection zone fencing shall be temporary orange construction fence, a minimum of 4-feet in height, mounted to 2-inch x 4-inch wood or steel fence posts, set a maximum of 10 feet o.c. Fence enclosure shall reach the outer limits of the spread of the branches, a minimum radius from face of tree trunk as shown in the Contract Plans, or as determined by the arborist, whichever is greater.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

B. Prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.2 PREPARATION

A. Monuments: Locate, protect and maintain benchmarks, monuments, batter boards, survey control points and other reference points from disturbance during construction. Protect all reference points against movement, injury, and displacement and replace those, which become disturbed as the result of any operations of this Contract. Monuments, benchmarks, and other reference features shall be carefully protected by Contractor. Should any be disturbed or damaged by any cause, the Contractor shall have same replaced to original location, elevation and condition by a NYS Licensed Land Surveyor at the cost and expense of the Contractor.

B. Verify all limiting boundaries such as permanent and temporary easements, property lines, rights-of-way and grading limits have been accurately located and clearly marked. Where appropriate, verify that pipeline routings and other work limits have been accurately located and clearly marked.

C. Locate and clearly identify trees, shrubs, and other vegetation to be removed or relocated. Wrap a 1-inch blue vinyl tie tape flag around each tree trunk at 54+/- inches above the ground.

D. Carefully plan and execute operations so as to avoid damage to trees, shrubs, plants, etc.

E. Verify that temporary erosion- and sedimentation-control measures are in place.

F. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner's Designated Representative.

3.3 EROSION AND SEDIMENTATION CONTROL

A. Complete work in accordance with Division 31 Section "Erosion and Sediment Control".

3.4 TREE AND PLANT PROTECTION

A. Prior to the start of any site operations, fence all trees and groups of trees, shrubs or planting beds which may interfere with site operations and are not designated to be removed. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation. Maintain fencing during full construction period. Remove temporary fencing when no longer needed or when acceptable to the Architect/Engineer.

B. Protect trees against cutting, breaking, bruising of bark. Where, in the opinion of the Architect/Engineer, the Contractor does not exercise reasonable care, the Architect/Engineer may require trunks to be wrapped with protective fencing.

C. Tie back flexible limbs that may be damaged by passage or activity of equipment beneath trees. Where limbs cannot be tied back and equipment cannot avoid limbs or branches, prune back limbs, only after approval of the Architect/Engineer.

D. Protect tree, shrub, perennial and turf root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

E. If recommended by the Arborist, mulch areas inside tree-protection zones and other areas indicated. Apply 2-inch average thickness of organic mulch. Do not place mulch within 6-inches of tree trunks.

F. Protect Tree- and Plant- Protection Zones. Refer to Part 1 "Project Conditions" for additional information.

G. Maintain protection zones free of weeds and trash. Mow grass as needed to maintain a 2-to 4-inch grass height.

H. Certified arborist to conduct all work on tree branches and roots, including but not limited to branch cutting and pruning, root cutting and pruning, redirecting roots, and tying back branches.

I. Trenching near Trees: Obtain arborist approval for work required in root zones and protection zones. Where utility trenches are required within protection zones, hand excavate or use air spade under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Tunnel past established trees for a minimum distance of 7 feet each side of the trunk. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.

J. Arborist to redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, certified arborist to cut roots approximately 3 inches back from new construction and as required for root pruning.

K. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

L. Certified arborist to prune roots that are affected by temporary and permanent construction. Prune roots as follow:

1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.

2. Cut Ends: Coat cut ends of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other coating formulated for use on damaged plant tissues and that is acceptable to arborist.

3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.

4. Cover exposed roots with burlap and water regularly.

5. Backfill as soon as possible according to requirements in Division 31 Section "Earth Moving."

M. Root Pruning at Edge of Protection Zone: Prune roots 12 inches outside of the protection zone, by cleanly cutting all roots to the depth of the required excavation.

N. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks or air spade, comb soil to expose root. Certified arborist to cleanly cut roots as close to excavation as possible.

O. The Contractor is responsible for damage to trees as a result of not following the procedures outlined herein, not exercising reasonable care or by negligence.

P. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect/Engineer or Owner's Designated Representative.

Q. Dead or Dying Trees:

1. Remove all trees, which, upon completion of the project, are found to be in a dead or dying condition (more than 50% dead or in an unhealthy condition) as the result of the failure to adhere to the above precautionary measures to 12 inches below finished grade and replaced, in a designated location, with a tree of like size and species at the expense of the Contractor. Provide a 12 month guarantee or the project's guarantee period for all trees, whichever is longer.

R. Damaged Trees:

1. Repair trees damaged in any manner, but deemed savable, to the satisfaction of the Architect/Engineer, by an approved tree surgery company.

2. Remove and replaced repaired tree(s) that die within 12 months of final acceptance of the project and replace as indicated as above.

S. Relocation of Trees/Shrubs/Plants:

1. Qualified Landscape contractor to dig trees/shrubs/plants during appropriate season and plant immediately in the designated location. Should it be necessary, due to the sequence of work, to delay planting in the new permanent location, dig and store tree/shrubs/plants in accordance with accepted standard practices. Trees may be dug with a tree spade, but must be planted immediately in the permanent or an approved temporary location.

3.5 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Notify applicable utility company or utility owner and obtain approval for shutting off and terminating existing utility services.

2. Perform work in accordance with applicable utility company requirements.

3. Identify utility service terminations on project record documents. Place markers to indicate location of disconnected utility service below grade.

4. Notify Owner's Designated Representative in writing when disconnecting and sealing/capping of each utility service is complete.

B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Coordinate at least two weeks in advance with the Architect/Engineer, facility, and Owner's Designated Representative to schedule temporary service shut downs needed to complete the work.

2. Notify Owner's Designated Representative in writing not less than 48-hours in advance to confirm proposed utility interruptions.

3. Any one disruption shall not exceed 4-hours unless mutually agreed to by the Owner, Owner's Designated Representative, Architect/Engineer and Contractor.

4. Temporary service shutdown durations, time of day, and day of the week will be restricted by the Owner. Temporary shut downs will not be permitted during normal weekday business hours for the facility. The Contractor shall include in the price bid all costs for labor, equipment and materials necessary to complete the connections when the facility is not in operation (e.g. weekends, holidays, or if approved by the facility weekdays between 5:00 p.m. and 6:00 a.m.). The date, time and duration of any service shutdown shall be mutually agreed upon between the Contractor, Owner's Designated Representative, facility, and Architect/Engineer, prior to start of work.

5. Do not proceed with utility interruptions without Owner's Designated Representative written permission.

C. Provide bypassing of flows as needed.

3.6 CLEARING AND GRUBBING

A. All trees must be "topped" and "limbed" before felling unless otherwise approved.

B. Schedule and conduct operations to minimize erosion of in accordance with Division 31 Section "Erosion and Sediment Control".

C. Protect all existing site utilities, appurtenance and amenities to remain.

D. Conduct all operations in a manner so that present growth will blend with the limits of construction and a natural appearance will be attained.

E. Clearing consists of cutting and properly disposing of all trees (designated to be removed) and other vegetation, down timber, snags, stubs, brush, shrubs, bushes, as well as boulders, rubbish, debris, and other objectionable matter and materials occurring within areas to be cleared.

F. In wooded areas, trees may be removed and/or trimmed as required, for the proper installation of the work. Gross and unnecessary removal of trees is not permitted.

G. Grubbing consists of the removal and proper disposal of all stumps, roots, duff, grass, turf, sod, debris, vegetation, foundations, buried structures and pipes, as well as other objectionable matter and materials occurring within the areas to cleared and grubbed.

H. Remove stumps and roots to their full depth within 5-feet of underground structures, utility lines, footings and concrete or paved surfaces. Remove stumps and roots to a clear depth of 3-feet below subgrade in other locations.

I. Use hand method for grubbing within protection zones of trees to remain.

J. Stumps of trees removed shall be grubbed, ground or cut.

3.7 FELLING OR PRUNING TREES

A. If it is impractical to fell trees as a whole, remove them in sections according to standard practices of professional tree removal. Fall trees to the center of the area being cleared to minimize damage to trees that are to be left standing.

B. Fall trees away from the slope embankments; stream banks, wetlands, swamps or other water courses; buildings; public or private roadways or sidewalks; and, trees/shrubs to remain.

C. Fall trees in a manner to minimize damage to existing pavements or structures.

D. Immediately after felling a tree, remove branches, cut trunk and limbs, and remove all materials from the site. All merchantable timber and wood, which is removed, shall become the property of the Contractor.

E. All trees left standing, which have been trimmed or become scarred by Contractor's operations, shall be promptly repaired by properly cutting, smoothing, and painting.

F. Trees to be trimmed shall be evenly cut to achieve neat severance with the least possible damage to trees.

G. Arborist to prune branches that are affected by temporary and permanent construction. Prune branches as follows:

1. Prune branches that are affected by temporary and permanent construction. Prune branches under direction of arborist.

    a. Prune to remove only injured, broken, dying, or dead branches unless otherwise indicated. Do not prune for shape unless otherwise indicated.

    b. Prune trees to remain to compensate for root loss caused by damaging or cutting root system.

2. Unless otherwise directed by arborist and acceptable to Owner's Representative, do not cut tree leaders.

3. Pruning Standards: Prune trees according to ANSI A300 (Part 1) and the following:

a. Type of Pruning: Cleaning.

b. Specialty Pruning: Restoration.

4. Cut branches with sharp pruning instruments; do not break or chop.

5. Do not paint or apply sealants to wounds.

6. Provide subsequent maintenance pruning during Contract period as recommended by arborist.

7. Chip removed branches and dispose of off-site.

H. Where roots are cut or damaged, apply wet burlap to prevent drying out.

3.8 TOPSOIL STRIPPING.

A. Place erosion control measures around materials temporarily stockpiled prior to use or removal from site. Existing topsoil in good condition, deemed acceptable by the Engineer, may be reused.

B. Topsoil deemed unsuitable by the Engineer to be amended for reuse or removed from site.

3.9 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove all below-grade wood, organic material, and metal construction within demolition or removal area.

C. Remove slabs, paving, curbs, gutters, and aggregate base as indicated. Remove to the minimum extent possible to complete the work while utilizing existing joints.

1. Prior to full depth removal, saw cut asphalt and concrete paved surfaces. Use a saw, which will cut a neat, straight joint line along line of existing pavements to remain. Saw-cut faces vertically.

2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3. Carefully remove walks and curbs to the minimum extent possible. Store and protect for reuse if so designated.

D. Carefully remove all fences, signs, and other obstructions and store for subsequent replacement.

E. Do not disturb property markers unless absolutely necessary. If it becomes necessary to disturb or remove a property marker, have a licensed land surveyor provide four (4) ties to the marker. The licensed land surveyor shall replace the marker as soon as possible.

F. Remove and turn over to the facility all items indicated to be salvaged.

G. Remove, store, protect, and reinstall all items indicated for relocation.

H. Remove and dispose off-site underground structures and piping indicated for removal on the Contract Drawings.

3.10 REGRADING AT OR ADJACENT TO PROTECTION ZONES

A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.

1. Root Pruning: Arborist to prune tree roots exposed by lowering the grade. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots as required for root pruning.

C. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

D. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place planting soil in a single uncompacted layer and hand grade to required finish elevations.

3.11 BACKFILLING

A. Backfill in accordance with Division 31 Section "Earth Moving"

B. Backfill all stump holes and holes resultant from plant, tree or structure removal and properly compacted to the satisfaction of the Owner's Designated Representative and/or Architect/Engineer. Backfill within one (1) week after start of work as follows:

1. In areas under and within 5 feet of structures or buildings use Engineered Fill

2. in areas under and within 5 feet of pavements (asphalt, concrete or similar) and utility structures use Subbase Material

3. In all other areas use Select Earth

C. Place a minimum of 6" planting soil over backfill materials in areas to be restored to lawn

3.12 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them in accordance with requirements of all federal, state, local laws and ordinances off Owner's property. Remove cleared materials from the site as the work progresses.

B. Remove cleared materials from the site as the work progresses. Dispose all wood and brush within 15 days after cutting or felling unless otherwise approved by the Architect/Engineer.

C. Leave site in a neat and orderly condition.

3.13 DUST & NOISE CONTROL

A. Complete dust and noise control in accordance with Division 31 Section "Earth Moving".

3.14 DEWATERING

A. Complete dewatering in accordance with Division 31 Section "Earth Moving".

3.15 MAINTENANCE OF TRAFFIC

A. Complete maintenance and protection of traffic in accordance with Division 32 Section "Maintenance and Protection of Traffic".

END OF SECTION

SECTION 31 20 00
EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Earth, boulder and rock excavation
2. Preparation of subgrade, including excavation and backfill, for structures, and foundations.
3. Excavating and backfilling trenches for utilities and pits for buried utility structures.
4. Preparing subgrades, including excavation and backfill, for slabs-on-grade, walks, pavements, turf and grasses, and plants
5. Excavation and removal of unsuitable bearing material
6. Soils and backfill materials consolidation and compaction.
7. Grading outside building lines
8. Furnishing and placing earth and granular materials
9. Removing from site excess and/or unsuitable fill
10. Topsoil amendment as required.
11. Spreading of topsoil in all areas unless indicated to be otherwise treated.
12. Testing and samples as required.
13. Submittals as required.
14. Cleanup and restoration.
15. All other associated earthwork as necessary to perform the work under this Contract in conformance with the alignments, grades and detailed sections provided.

B. Related Sections:

1. Divisions 33 Sections for installing underground facility utilities and buried utility structures.

2. Division 31 Section **"Site Clearing"** or site grubbing and removal of above- and below-grade improvements and utilities.

3. Division 31 Section **"Erosion and Sediment Control"**

4. Division 32 Section **"Turf and Grasses"** for finish grading in turf and grass areas.

1.3 SPECIAL REQUIREMENTS

A. Upon excavation, the subgrade shall be inspected by a qualified and independent testing representative obtained by the Owner. Subgrade shall be approved by the Owner's representative before any new construction begins. Results of the tests must be reviewed and approved by the Architect/Engineer.

B. All excavation, fill or backfill placement, and utility construction shall be performed in the dry. The contractor shall be prepared to dewater as necessary. Subsurfaces shall be kept free of water, subjected to minimum amount of construction traffic, exposed no longer than necessary, and not permitted to freeze. Perched groundwater shall be anticipated. It is the Contractor's responsibility to maintain adequate water control.

C. Onsite soils, excluding deleterious organics and particles larger than 2-inches in greatest dimension may be used for foundation backfill, general fill, or trench backfill (not pipe envelope backfill) in grass areas only. Excess soils and fill materials shall be removed from the site.

D. Excavated granular materials meeting the requirements of Structural Fill may be reused as general fill in grass areas, or as embankment fill under roadways below the stone subbase layer, if kept clean and free of deleterious organic materials and oversized material (particles larger than 2-inches in greatest dimension) and the material is properly moisture conditioned. Excess granular materials shall be removed from the site.

E. Cobbles and boulders may be encountered. Removal shall be required at no additional cost.

F. On-site soils are considered slightly moisture sensitive and frost susceptible and can become unstable with typical earthwork and construction traffic especially when wet. Provide and maintain proper soils and subgrade protection and dewatering.

G. Remove any waste material, excess soil/fill, cobbles/boulders, or other debris that has accumulated as a result of the work of this section and dispose in conformance with applicable legal requirements and in a manner acceptable to the Owner's Designated Representative or Architect/Engineer.

1.4 DEFINITIONS

A. Backfill: Aggregate or earthen material or controlled low-strength material used to fill a trench excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.

2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Bedding Course: Specified granular material layer placed over the excavated subgrade in a trench before laying pipe.

C. Borrow Soil: Satisfactory soil imported from off-site (or on-site if permitted) for use as fill or backfill.

D. Excavation: Removal of material encountered to subgrade elevations, lines, and dimensions required and the subsequent disposal of materials removed.

1. Additional Excavation: When excavation has reached required subgrade elevations, notify the Owner's Designated Representative, who will make an inspection of the conditions. If Architect/Engineer determines that bearing materials at required subgrade elevations are unsuitable, continue excavation until suitable bearing materials are encountered and replace excavated material as directed by Architect/Engineer.

2. Unauthorized Excavation: Consists of removal of materials beyond required subgrade elevations or dimensions without specific direction of the Architect/Engineer or Owner's Designated Representative. Unauthorized excavation, as well as remedial work directed by the Architect/Engineer or Owner's Designated Representative, shall be at Contractor's expense. Fill of unauthorized excavations shall be as follows:

a. Under footings or foundation bases, fill of unauthorized excavations under footing or foundation bases shall be accomplished by extending lean concrete or well-graded crushed aggregate fill to bring elevations to proper position, when acceptable to Architect/Engineer.

b. In locations other than those above, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by the Owner's Designated Representative.

3. Unclassified Excavation: Unclassified excavation shall consist of the excavation and disposal of all materials or obstructions, of any description, encountered during construction, unless otherwise specified.

E. Fill: Aggregate and/or earthen soil materials used to raise existing grades.

F. Loam: Soil mixture consisting of the following proportions:

Sand	30 - 50%
Silt	30 - 50%
Clay	0 - 20%

G. Rock: Solid hard material located in ledges, bedded deposits and un-stratified masses, and all natural conglomerate deposits so firmly cemented as to present all the characteristics of solid rock, which must be removed by blasting or pneumatic hammers. Rock does not include shale, slate, soft sandstone, hardpan, masonry or concrete rubble, boulders less than 2 cubic yards, such other rock material which is decomposed, stratified, weathered or shattered, or any material capable of being removed by a well maintained Caterpillar 225 power shovel, or equivalent.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, utility structures, pole bases, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and asphalt pavement, concrete pavement, hardscape or stabilized topsoil area.

J. Subgrade or Subgrade Surface: Uppermost undisturbed surface of an excavation or the top surface of a compacted fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Suitable Material: A material whose composition is satisfactory for use in embankment, backfill, or fill construction. Determinations of whether a specific material is suitable for a specific application shall be made by the Owner's Designated Representative or Architect/Engineer.

L. Topsoil: Refer to Division 31 Section "Site Clearing".

M. Unstable Material: (if encountered) Unstable material shall mean debris and all wet, soft, or loose material, which does not provide sufficient bearing capacity to satisfactorily support pipes, structures or other work placed thereon.

N. Unsuitable Material: Unsuitable material shall mean excavated material, which in the opinion of the Owner's Designated Representative or Architect/Engineer, does not meet specification requirements for backfilling, embankment, or filling purposes and includes unstable material.

1. Unsuitable material shall fall into two specific categories. The first shall be that material which would be unsuitable under any circumstances including unstable materials. This category includes materials containing humus, spongy material, roots, stumps, muck, peat, and any other objectionable material. This material shall be disposed of in an approved off-site spoil area.

2. The second category shall consist of material, which is unsatisfactory for backfill because of its moisture content at the time of excavation. This material shall be stockpiled in approved areas on the Project site. This stockpiled material, when satisfactory for backfill, as determined by the Architect/Engineer, shall be used in other areas lacking backfill.

3. Excavated materials, which become unsuitable as a direct result of the Contractor's work shall result in rejection of the unsuitable material by the Architect/Engineer.

4. The Owner's Designated Representative or Architect/Engineer shall be the sole judge of what constitutes unsuitable material and into which category it falls.

O. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

P. General Fill: Materials that contain only soil, sand, gravel, or rock, (no non-soil constituents) as defined in the All work in accordance with NYSDEC Part 360 Series for Solid Waste Management Facilities regulations with no evidence of historical impacts such as reported spill events, or visual or other indication (odor, etc.) of chemical or physical contamination.

1.5 SUBMITTALS

A. Product Data: For each type of the following manufactured products required:

1. Geotextiles.

2. Low-strength material, including design mixture.

3. Warning tapes.

B. Material Test Reports: Contractor shall submit test results for laboratory gradation, moisture content (Proctor Tests), and maximum density tests certified by an approved testing laboratory or other requirements on the various imported soil and granular items, from each approved material source, prior to their use on the project:

1. Classification according to ASTM D 2487.

2. Laboratory compaction curve according to ASTM D 1557.

C. Topsoil testing results. Topsoil amendment procedures, if testing confirms required.

D. Provide material certifications for imported materials.

E. Submit list indicating locations where various soil earthen and granular materials will be utilized.

F. List of compaction plans of proposed compaction equipment and description.

G. Copies of measurements and computed volumes of unsuitable material removed shall be submitted to the Architect/Engineer.

H. Details of proposed sheeting must be submitted by the Contractor to the Architect/Engineer for review and no sheeting must be installed until written acceptance from the Architect/Engineer. Sheeting design must be stamped by NYS licensed professional engineer.

I. Submit Qualification Data: For qualified independent testing agency.

J. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

K. Submit copies of 364 Waste transporter permit; Landfill and/or Recycling Facility Permit; testing requirements of Landfill and/or Recycling Facility to accept materials; and laboratory and analytical testing completed for determination of beneficial use.

L. Submit Part 360 Series Waste Tracking Documents

M. Provide signed manifests, weight tickets, receipts, bill of laden, and invoices for materials removed from site.

N. Recycling and Processing Facility Records: Provide Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include signed manifests, weight tickets, receipts, bill of laden, and invoices.

O. Landfill Disposal Records: Indicate receipt and acceptance of waste by landfills licensed to accept them. Include signed manifests, weight tickets, receipts, bill of laden, and invoices

1.6 QUALITY ASSURANCE

A. All finished grades shall be as shown on the Drawings or as specified by the Architect/Engineer. Contractor shall verify that survey benchmark and intended elevations for the work are as indicated. Contractor shall verify existing site conditions.

B. Contractor's independent testing agency shall be approved by the Architect/Engineer.

C. Codes and standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction, and in accordance with the current Occupational Safety and Health Administration (OSHA) Standards of Excavation.

D. The Contractor shall have hauled in topsoil proposed for work in this Section tested at a reputable testing laboratory. The test results and report shall be submitted to the Architect/Engineer. The Contractor shall pay for the testing services.

1. The Contractor shall employ and pay a qualified independent testing laboratory acceptable to the Owner's Representative to perform the topsoil testing services.

2. Topsoil test shall consist of a qualitative analysis for nitrates, phosphorous, potassium, percentage of organic content, and acidity.

3. Hauled in topsoil shall also be tested for soluble salts.

4. The report shall indicate test results and the suitability of the topsoil for growing and maintaining plant materials and lawns.

5. The report shall include certification that the topsoil proposed for use has not been treated with plant growth or seed germination inhibitors within the period of the immediate or residual effective life of the inhibitors and shall identify the location of the hauled in topsoil source.

6. Topsoil amendment: If the testing indicates that topsoil conditions are outside of the specified range or lack the suitability for growing and maintaining plant materials, the

Contractor shall prepare a soil amendment procedure to adjust the topsoil conditions to meet the requirements.

7. If hauled in topsoil test indicates the presence of soluble salts, that topsoil will not be acceptable under any circumstances, with or without soil amendment.

E. Erosion control measures in accordance with Division 31 Section "Erosion and Sediment Control". Do not commence earth-moving operations until temporary site fencing and erosion- and sedimentation-control measures are in place.

F. When placing fill and backfill, all compaction and soil moisture requirements as delineated in this specification shall be followed. Lift thickness, and the compactive capabilities of the equipment used, shall be continually monitored by the Contractor to obtain the compaction efforts required.

G. Provide on-site at least one person who shall supervise the soil compaction operations, and who shall be thoroughly familiar with the various types of compaction equipment, proper compacting techniques and methods, and soils behavior, and who shall direct the compaction operations.

H. It is the responsibility of the Contractor to select, furnish and properly maintain equipment, which will compact the fill uniformly to the required density.

I. The Architect/Engineer will be the sole judge of the conformance of materials, workmanship, and compaction with the requirements of the Contract Documents.

J. Work referencing NYSDOT (New York State Department of Transportation) shall be in compliance with the New York State Department of Transportation Standard Specifications (NYSS) May 1, 2008 (and any subsequent revisions).

K. Special Inspections: Owner may engage a qualified special inspector to perform the Special Inspections as outlined in Divisions 1.

L. Complete all work in accordance with NYSDEC Part 360 Series for Solid Waste Management Facilities regulations. The contractor is responsible for all testing and sampling requirements for pre-determined beneficial use of fill materials.

M. It is the responsibility of the Contractor to determine current waste handling, transportation and disposal regulations for the work site and the waste disposal landfill. The contractor must comply fully with these regulations, all appropriate U.S. Department of Transportation, EPA and Federal, State and locally applicable regulations, and all other current legal requirements. The Contractor shall bear responsibility for managing, handling, stockpiling, and transporting the waste at each stage of operation and properly disposing off-site.

N. All laboratory and analytical testing shall be performed a laboratory currently certified by the New York State Department of Health's Environmental Laboratory Approval Program (ELAP).

1.7 COMPACTION TESTING AND REPORTS

A. Owner may engage and pay for a qualified and independent testing and inspecting agency to complete field compaction density testing for all soils and granular materials utilized in the

Work. All materials not meeting proper compaction requirements shall be removed and replaced. Costs to the Owner for additional testing of replacement materials shall be the responsibility of the Contractor.

B. Owner may engage and pay for a qualified and independent testing and inspecting agency to take samples and perform tests to determine optimum moisture content, and maximum density testing of various on-site soils to be utilized in the Work. Reports will be provided to the Contractor.

C. The Owner reserves the right to request testing of all Contractor imported materials to verify conformance with approved materials. All soils and granular materials not meeting the proper gradation requirements nor previously approved laboratory maximum density tests as submitted by the Contractor shall be removed. Costs to the Owner for testing of materials, which are found not in conformance with approved materials, shall be the responsibility of the Contractor.

D. Laboratory test reports:

1. As a minimum, the laboratory maximum density testing reports shall contain the following:

   a. Laboratory's name.

   b. Date, time, and specific location from which sample was taken and name of person who collected the sample.

   c. Moisture - Density Curve plotted on graph paper to as large a scale as is practical with all points used to derive the curve being clearly visible.

   d. Designation of the test method used.

   e. The optimum density and moisture content.

   f. A description of the sample.

   g. The date the test was performed and the person who performed the test.

   h. The project name, identification, and contractor's name.

   i. The signature of a responsible officer of the testing laboratory certifying to the information contained in the report.

1.8 PROJECT CONDITIONS

A. When work is in public rights-of-way, the Contractor shall make necessary arrangement for permits, as required, at no extra cost to the Owner.

B. The Contractor shall be required to ascertain the complete extent of all permits required governing dewatering operations, and shall be bound by their conditions and provisions.

C. Provide and maintain emergency ingress/egress to the site at all times. Provide and maintain pedestrian and vehicle access to active facility, including but not limited to designated doors, sidewalks, and parking areas.

D. If trench widths and depths are exceeded, concrete cradles or other special installation procedures may be required and shall be provided where directed by Architect/Engineer. All additional costs, including the cost of redesigns, shall be borne by Contractor.

E. Moisten or dry backfill materials to the proper moisture content as determined in accordance with ASTM D1557, Method C in order to obtain proper compaction.

F. Utilities shown on the Contract Drawings are for the convenience of the Contractor, exact locations are not guaranteed. The Contractor shall verify existing utilities with the proper authorities.

G. Notify Dig Safely New York (UFPO) prior to commencing any excavation. Locate and identify existing underground and overhead services and utilities within contract limit work areas. Provide adequate means of protection of utilities and services, which are not designated to be removed. Repair utilities damaged during site work operations at Contractor's expense.

H. The project site Owner is not a member of Dig Safely New York. The Contractor alone shall be responsible to locate all utilities and services outside the public rights-of-way. The Contractor shall complete test pits as needed to confirm underground utilities and services. The cost of all test pits shall be included in the price bid. Provide adequate means of protection of utilities and services, which are not designated to be removed. Repair utilities damaged during site work operations at Contractor's expense.

I. Minimize interference with adjoining roads, streets, walks, parking areas and other adjacent occupied or used facilities during earth moving operations. Refer to Division 32 Section "Maintenance and Protection of Traffic" for traffic maintenance information.

J. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by Owner's Designated Representative.

K. Locate, protect, and maintain benchmarks, monuments, control points, and project engineering reference points. Reestablish disturbed or destroyed items at Contractor's expense.

L. The control of dust, noise, erosion, and sediment originating from construction operations is considered a critical responsibility of the Contractor. The Owner's Designated Representative will be the final judge of the adequacy of the Contractor's dust, noise, erosion, and sedimentation control. Work may be suspended by the Owner's Designated Representative until adequate dust, noise, erosion, and sedimentation control is attained. Surfaces (e.g. buildings, roadways, walkways etc.) where dust collects as a result of work in support of this project shall be cleaned by the Contractor at no additional cost to the Owner.

M. Protect structures, utilities, sidewalks, pavements, buildings, and other services or facilities on site and adjacent to the site from damage caused by earth moving operations or other

work in support of Contractor operations. Cost of repair and restoration of damaged items shall be at Contractor's expense.

N. Protect from harm the work of other contractors on site, existing facilities, as well as adjacent property. The Contractor shall be responsible for all damage or injury done to pipes, structures, utilities, pavement, buildings, property or person as a result of work performed to complete this contract. The Contractor at his own expense shall repair or replace such property or item to the satisfaction of the property owner, utility owner, public agency having jurisdiction, Architect/Engineer and Owner's Designated Representative.

O. When it is necessary to haul materials over public or private streets, roads, drives, parking areas, walkways or other pavements, provide suitable tight vehicles so as to prevent deposits on these pavements. If any material is dropped from the vehicles, clean up the same as often as directed and keep the crosswalks, streets, roads, drives, parking areas, walkways, and drainage ways (e.g. swales, ditches, gutters, catch basins, manholes, piping, etc.) clean and free from dirt, mud, stone, and other hauled materials. Include all costs in bid price.

P. Contractor shall be responsible for cleaning private and public; roads, parking areas or walkways, of any material carried onto these roads or pavements by trucks or other equipment completing work in support of this project. Associated costs shall be included in price bid.

Q. The following practices are prohibited within tree- and/or plant-protection zones:

1. Storage of or stockpiling of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
8. Do not direct vehicle or equipment exhaust towards protection zones.
9. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.
10. Do not store materials potentially harmful to tree roots. Potentially harmful materials include, but are not limited to petroleum products, cement, lime, paints, detergents, acids and cleaning agents.

R. The Owner and Architect/Engineer do not guarantee that all required excavation can be executed by use of machinery. In some cases, it may be necessary to revise proposed alignments, which may preclude the use of machinery. In this event, the Contractor shall be

required to perform this work by any method at the same price(s) bid in the Proposal, with no additional compensation due to the inability to use machinery.

S. The existing ground elevations as shown on the Drawings are believed to be reasonably correct. The Contractor shall satisfy himself, however, by actual examination of the sites of the work, as to the existing elevations and the amount of work required under this section. No claim shall be made by the Contractor for additional compensation for conditions other than that shown.

T. Remove any waste material or other debris that has accumulated as a result of the work of this section and dispose in conformance with applicable legal requirements and in a manner acceptable to the Owner's Designated Representative or Architect/Engineer.

U. Soil reports and boring logs: Refer to Attached Geotechnical Report.

1.9 TRIAL EXCAVATIONS

Contractor shall construct test pit excavations to determine the locations of underground utilities or structures as shown on the plans, as needed to locate connection points, and/or as ordered by the Owner's Designated Representative or Architect/Engineer. Underground utilities and/or structures shall be located and tied off for future stake out. The test pit shall be properly backfilled and compacted. Surface restoration shall be performed as required and as ordered by the Owner's Designated Representative or Architect/Engineer. No additional payment will be made for additional test pits if required / necessary; include all costs for trial excavations in bid price.

1.10 STORAGE AND HANDLING

A. Stockpile earth spoil or excess earth material on the site and store excavated materials for reuse in a manner that does not hinder the progress of the work; cause any nuisance; or cause spillage or tracking of materials from the transporting vehicle onto public or private roadways, parking areas, sidewalks or pavements, or cause an inconvenience to adjacent property owners or tenants, general public, other contractors, or facility operations.

B. Do not obstruct roads, driveways, parking areas, sidewalks, or interfere drainage along curbs, gutters, ditches, or drainage channels with stored material.

C. Excavate and stockpile on-site topsoil suitable for final placement and grading shall be excavated and stockpiled on-site for future use in accordance with Division 31 Section "Site Clearing". Imported topsoil shall be stockpiled on-site in a separate location from on-site topsoil. Each stockpile shall be well-shaped and graded in order to shed water and to avoid contamination by other granular or earth materials temporarily stockpiled on-site. Provide erosion control (silt fence or equivalent) around stockpiles.

1.11 SCHEDULING

A. If required to complete the work properly, obtain grading releases from property owners near trenching or other grading operations at least ten (10) days before commencement of the work.

B. Do not commence site earth moving operations until temporary erosion- and sedimentation-control and tree- and plant-protection measures are in place.

C. Allow time to rework, screen and moisture condition on-site and/or imported soils for placement.

D. Do not open more than 200 feet of trench at one time, unless authorized by the Architect/Engineer. Not more than 100 feet of trench may be opened in advance of the completed pipe laying operations; and not more than one street or drive crossing may be obstructed by the same trench at any one time.

E. Schedule the work to allow ample time for laboratory tests and to permit the collecting of samples and the performing of field density tests during the backfilling and compaction operations.

F. Architect/Engineer or Owner's Designated Representative must approve all subgrades before pipes, structures, and facilities are installed or concrete is placed. Results of the tests must be reviewed and approved by the Architect/Engineer.

G. Do not backfill against concrete elements until bearing surfaces have reached design strength or are properly braced and backfilling operations are approved.

H. Do not compact in freezing weather or when materials to be compacted are frozen, too wet or moist, or too dry.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. **Common Earth:** (for use under non-paved areas located at least 5-feet outside building/structure limits only) - Sand, loam, gravel, or similar materials free from debris, frozen materials, organic materials, or other deleterious material, and containing some rock fragments, stones, and pebbles, not exceeding 4 inches in their largest dimension and meeting the following requirements:

1. Plasticity index of not more than 30 - ASTM D424.

2. Minimum laboratory dry weight at optimum moisture content of 110 pounds per cubic foot.

Provide imported Common Earth fill materials as required to complete the work. Contractor shall obtain rights and pay all cost for imported materials.

Proposed Common Earth fill (imported or site excavated) material shall be inspected, tested, and laboratory report issued prior to use in the work.

B. **Select Earth:** Sand, gravel, and similar material which shall be free from silt, clay, loam, organic material, roots, debris, waste, frozen material, or other deleterious materials, and shall only contain small amounts (less than 10 percent) of stone, pebbles, or lumps over one inch in greatest dimension, but none over 2 inches in greatest dimension.

Imported select earth materials shall meet requirements of the NYSDOT Standard Specifica-

tion Section 203-2.02C except that no material shall exceed 2-inches in their largest dimension.

C. **Imported Topsoil:**Provide imported topsoil as indicated on Division 32 Section "Turf and Grasses".

D. Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

E. Acceptance of all types of soil materials shall be based on the above requirements, and the Owner's Designated Representative or Architect/Engineer shall make final acceptance. Such acceptance or rejection of materials is binding upon the Contractor.

2.2 GRANULAR MATERIALS

A. **Crushed Stone:** Material shall be clean, sound, crushed stone of uniform quality. It shall be a 50-50 mixture of NYSDOT primary size designation #1 and #2 stone as per NYSDOT Standard Specifications, Section 703-02, Material Designation 703-0201. Mixture shall meet the following gradation requirements:

Sieve Size	Percent Passing by Weight
1-1/2 inch	100
1 inch	95-100
½ inch	45- 57.5
1/4 inch	0 - 7.5

B. **Subbase Material (Crusher Run):** Shall meet the requirements of NYSDOT Standard Specification Section 304-2, material designation 733.0402 – Subbase Course, Type 2.

C. **Select Granular Fill:** The material shall meet the requirements of NYSDOT Standard Specification Section 203-2.06, Material Designation 733.1101, for Select Granular Fill.

D. **Controlled Low Strength Material (CLSM/Flowable Fill):** CLSM shall have a 28 day unconfined compressive strength of 40 psi – 150 psi and conform to the requirements of Section 204-2.01 of the NYSDOT Standard Specifications with no fly ash allowed. Material shall conform to shall conform to NYSDOT Standard Specifications Table 733-01A, Table 733-01B and Table 733-01C.

E. Acceptance of all types of fill shall be based on the above requirements, and the Architect/Engineer shall make final acceptance. Such acceptance or rejection of materials is binding upon the Contractor.

GEOTEXTILES

F. **Woven Separation Fabric:** The geotextile fabric for pavement stabilization shall be Mirafi 500X as manufactured by Mirafi, US Fabrics US250, Carthage Mills FX-60, or approved equal. The geotextile fabric shall be woven fabric of only continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. The fabric shall be UV stabilized.
Acceptable

Fabric Properties – Mirafi 500x	Value	Test Method
Grab Tensile Strength, lbs	200	ASTM D4632
Elongation at Failure, %	15	ASTM D4632
Trapezoidal Tear Strength, lbs	75	ASTM D4533
CBR Puncture Strength, lbs	700	ASTM D6241
Apparent Opening Size (AOS)	40	US Std. Sieve
	0.43 mm	ASTM D4751
Permittivity, sec^{-1}	0.05	ASTM D4491
Flow Rate, $l/min/m^2$ (gal/min/sf)	204 (5.0)	ASTM D4491
UV Resistance after 500 hrs, % strength	70	ASTM D4355

G. **Drainage Separation Fabric (higher flow, permanent):**
1. GeoTex 601
2. Mirafi 160N
3. WINFAB 600N
4. Approved equivalent.

2.3 ACCESSORIES

A. **Detectable Warning Tape:** Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility in bold readable lettering, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30-inches deep; colored as follows: (Detectable warning tape shall be a minimum of 12-inches wide for utilities where Drawings indicate tape shall be buried greater than 30-inches.)

1. Red: Electric
2. Yellow: oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

2.4 COMPACTION

A. Utilize the proper compaction methods and equipment to suit the soils and conditions encountered. Mechanical, vibratory, pneumatic tampers or other method as approved by the Architect/Engineer shall be required.

B. Provide water in sufficient quantity as needed to assure compaction.

2.5 DEWATERING, DUST AND NOISE CONTROL

A. Provide all equipment and materials necessary to perform dewatering and dust control operations in a safe and satisfactory manner. Conform to the New York State Standards and Specifications for Erosion and Sediment Control, and Division 31 Section "Erosion and Sediment Control" for proper operations.

B. Standing water and/or saturated, unstable soil conditions will not be tolerated in areas to receive foundations, utilities, pavers, or asphalt or concrete pavements.

C. Provide noise suppression enclosures, if required and as determined by the Architect/Engineer. Enclosures, if required shall meet minimum requirements of 3/8-inch plywood enclosure lined with 2-inch rigid insulation.

2.6 CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL)

A. Controlled density fill shall be lean concrete or approved equal, with a 28-day compressive strength between 50 and 300 psi. No fly ash shall be permitted.

B. The materials used in controlled density fill shall meet the requirements of the following NYSDOT Specifications Subsections:

Portland Cement, Type 1 or Type 2	701-01
Concrete Sand	703-07
Coarse Aggregate	703-02
Admixtures	711-08
Water	712-01

C. The mix proportions for controlled density fill shall be as follows:

Material	1 Cubic Yard Batch
Cement (lbs.)	225
Water (lbs.)	465
Sand % of Total Aggregate (Solid Volume)	85
Coarse Aggregate Gradation	CA1
Air Content	Minimum 4%
Water Reducing Admixtures, (Type A Normal)	15-20 z/l c.y.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain erosion and sedimentation controls during earth moving operations.

B. Before placing subsequent materials remove temporary protection installed to protect subgrades and foundation soils from freezing temperatures and frost.

C. Prior to start of work, the Contractor's surveyor shall verify that all boundaries of temporary and permanent easements and property lines are clearly marked in the field so that the work will not violate these boundaries.

D. The Contractor and his surveyor shall verify the locations and character of structures, underground lines, and subsurface conditions and verify that the described work will not adversely affect them.

E. The Contractor's Surveyor shall verify that grade stakes have been properly and accurately set.

F. The Contractor shall be responsible for providing all necessary fill materials.

G. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations

3.2 METHODS OF CONTROL FOR EXCAVATIONS AND GRADING

A. The Contractor shall employ at the site a licensed surveyor responsible for the proper layout of utilities, structures, and drainage. He shall maintain adequate stakeout control for inspection of the work and to accurately complete construction.

B. The alignment and depth of subgrades of all pipe trenches shall be determined by overhead grade lines or laser at Contractor's option, installed and maintained by his surveyor.

C. In the event that rock is encountered, the Contractor will take cross sections of the rock uncovered. No removal shall begin until adequate time has been given the Owner's Designated Representative or Architect/Engineer for inspection and to verify the measurement of rock material. *(No measurement or additional payment will be made for rock excavation for the associated structures and piping. Price shall be included in bid.)*

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EARTH MOVING, GENERAL

A. The work shall be performed by methods acceptable to the Owner's Designated Representative or Architect/Engineer.

B. Excavation shall include the satisfactory removal and disposal of all materials encountered, regardless of the nature of the materials, or the manner in which they were excavated, except materials classified as rock excavation.

C. Excavate to subgrade elevations. Do not excavate rock until it has been classified and cross sectioned.

D. All pipe lines or existing structures encountered during the excavation operation and designated to remain shall be properly supported/protected to prevent damage.

E. Erosion and sedimentation control measures meeting the requirements of Division 31 Section "Erosion and Sediment Control" shall be used around all earthen material stockpiles.

F. Provide and maintain adequate temporary crossovers for pedestrian and vehicular traffic, including temporary gravel drives, steel plates, guardrails, lamps, flags; remove same when necessity for such protection ceases. All traffic maintenance shall be done in a manner satisfactory to the Owner's Designated Representative or Architect/Engineer.

G. Provide and maintain suitable temporary crossings over open trenches where necessary to maintain access for other Contractors, the Architect/Engineer or general public (if applicable).

H. The Contractor shall have available a supply of steel plates with minimum dimensions of 4 feet x 8 feet x 1 inch, or thicker, as required by jurisdictional authorities and to maintain emergency access and egress to the site. The plates shall be used to bridge open trenches crossing roadways, or driveways as directed by the Architect/Engineer. When used, they shall be secured against the possibility of shifting or dropping into the excavation. During winter months, these plates shall not be left in the roadway or driveway overnight unless specifically required by the Architect/Engineer.

I. When excavating in or adjacent to the traveled portion of highways, driveways, or parking areas take whatever measures are necessary to protect the road/drive/parking surfaces from becoming undermined.

J. Protect trees indicated to remain in accordance with Division 31 Section "Site Clearing".

K. All traffic maintenance shall be done in a manner satisfactory to the Architect/Engineer.

3.5 SOIL STABILIZATION

A. Sloped sides of excavations shall comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling and/or filling.

B. Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers, and cross braces, etc. in good serviceable condition. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Extend shoring and bracing as excavation progresses.

C. Daily inspections of excavations shall be made by an authorized competent representative of the Contractor performing the excavation work.

3.6 DRAINAGE/DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

1. Surface and ground water shall be intercepted and removed before entering excavations. All necessary measures shall be taken. Earth dikes, ditches or other devices, if required, shall be constructed to prevent such flows.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

2. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations.

3. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

C. The Contractor shall at all times provide and maintain proper and satisfactory means and devices (i.e. ditches, temporary pipes, pumps, and/or other temporary construction) for the removal of all water entering the excavations. Water shall be removed as fast as it may collect, in such manner that shall not interfere with the execution of the work or in the proper placing of pipe, structures or other work.

D. The Contractor shall make his own determination as to required dewatering operations necessary to complete the work. Contractor shall have available at all times sufficient equipment, machinery, piping, and appurtenances for pumping water to keep excavations free from water during construction.

E. Where the presence of fine grained subsurface materials and high groundwater table may cause the upward flow of water into the excavation with a resulting quick or unstable condition, the Contractor shall install and operate a well point system to prevent the upward flow of water during construction.

F. All water removed from the trenches or excavations by pumping, bailing, siphoning, well-points, or other means shall be disposed of in such a manner so as to avoid damage to the work, work of other Contractors, surface and ground water, persons or property. Unless otherwise permitted by the Architect/Engineer, groundwater encountered within the limits of

excavation shall be depressed to an elevation not less than 12 inches below the bottom thereof before pipe laying, concreting or masonry is started, and shall be so maintained until concrete and joint material have attained adequate strength.

G. Do not discharge water from dewatering operations directly into any line or intermittent stream, channel, wetlands or surface water. The Contractor shall not discharge water from dewatering operations directly into the storm or sanitary sewer system without prior approval of the Architect/Engineer. If the quality of the trench water is not better than or equal to that of the receiving stream, the Contractor shall perform all work necessary to improve the quality of the removed water in accordance with all requirements of the agencies having jurisdiction. This work shall include, but not be limited to, filtration, settling, and screenings meeting the requirements of the New York State Standards and Specifications for Erosion and Sediment Control to reduce the amount of sediment contained in the water to allowable levels, as acceptable to the Architect/Engineer, prior to disposal.

H. All costs to ensure proper drainage, dewatering and discharge from dewatering operations shall be at the Contractor's expense.

I. The Contractor shall be responsible for repairing, at his own expense, any ruts, gullies, sloughage, slides, and cleaning or repairing any catch basins or storm drainage lines which display signs of silt build-up during the course of construction until the contract is complete.

J. Provide adequate protection from the effects of possible uplift due to storm or groundwater where buoyancy might lift installed work or cause joint or structure failure during construction.

K. Protect the interior of installed work from the entering and accumulation of liquids, ice, and snow. Immediately remove and dispose any accumulation, which may occur.

L. Adjust, repair, replace, or clean all work, surfaces, and property, which may have been damaged as a result of any dewatering operation.

3.7 EARTH FILL

A. Unless otherwise specified, shown on the Contract Drawings, or directed by the Owner's Designated Representative or Architect/Engineer, trench and utility backfill material and earth fill located 5 feet outside pavement, building or structure limits shall be Common Earth while, earth fill to subgrade (where earth fill is permitted) located under or within 5 feet of buildings, structures or pavements shall be Select Earth.

B. To the extent it is available, Common Earth and Select Earth fill material shall consist of approved on-site materials excavated and removed to accommodate new construction. On-site soils modifications including screening and soils conditioning to meet gradation and compaction requirements will be required. When there are insufficient approved suitable materials on-site, import additional material from off-site at no additional cost to the Owner. The Contractor shall obtain all permits necessary to furnish off-site borrow.

C. The excavated material to be used for trench or structure backfilling or earth fill shall be stored and properly protected by the Contractor so that it will remain suitable for the intended reuse. Excavated materials, which become unsuitable as a direct result of the

Contractor's work or lack of protections shall result in rejection of the unsuitable material by the Architect/Engineer.

D. No payment will be made for stockpiling, rehandling, transporting, removing, or disposing of any materials, which become contaminated or unsuitable and are subsequently rejected by the Architect/Engineer. No payment will be made for additional imported materials required to make up the deficiency in backfill or fill resulting from these rejected materials.

E. No extra payment shall be made for any excavating, stockpiling, rehandling, transporting, or disposing of any unsuitable material, the cost shall be included in the price bid. Any deficiency in backfill or fill shall be made up in spoil, if suitable and appropriate for application or by imported material acceptable to the Owner's Designated Representative or Architect/Engineer. No payment shall be made for making up any deficiency; the cost of such shall be included in the price bid.

3.8 SOIL CONDITIONING

A. Provide all wetting, drying, mixing and screening equipment and materials necessary to condition on-site soils to optimum moisture for compaction and required gradation.

B. Allow time to rework, screen and moisture condition on-site soils for placement.

C. If in the opinion of the Owner's Designated Representative or Architect/Engineer, the Contractor does not take reasonable care to protect and prepare suitable on-site soils for project use, the Contractor shall provide suitable imported materials at no additional cost to the Owner. Suitable imported materials shall include granular materials meeting NYSDOT Item 304.14 in areas under and within 5 feet of structures or buildings; granular materials meeting NYSDOT Item 304.12 in areas under and within 5 feet of pavements and utility structures; and, Select Earth in all other areas. Excess unsuitable materials replaced by imported materials shall be removed at no additional cost to the Owner.

D. Moisture Control: Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

1. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.

E. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to permit compaction to specified density.

F. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value.

3.9 MANNER OF EXECUTION

A. Materials for reuse on the project shall be stockpiled in an approved designated area adjacent to the work site. Suitable excavated material to be used for trench backfill or earthen fill shall be properly segregated by the Contractor to avoid mixture with topsoil or other unsuitable materials. Contamination of the excavated material as a direct result of the Contractor's work shall result in rejection of the contaminated material by the Owner's Designated Representative or Architect/Engineer.

B. The excavated material to be used for trench backfill or earthen fill shall be stored so that it will cause a minimum of inconvenience to public travel, active facility, adjacent owners or tenants and other contractors or subcontractors. Excavated material shall not be stored in the roadway, parking areas or sidewalks at any time.

C. Conduct operations in a manner, which will keep the work free of standing and flowing water and dispose the water so as not to damage or create a nuisance to the work, the public, surface, groundwater, and adjacent properties.

D. The accumulation of liquids, ice and snow in excavation, trenches, areas to be graded, and adjacent areas during construction is not permitted.

E. Keep graded surfaces well drained, but avoid erosion. Do not place earth or granular fill on wet grade, in water, or over frost, ice or snow. Excavations shall be maintained free of water.

F. Pipe trenching, building foundations, and structural undercuts: Under normal conditions, the excavation shall be vertical open cut from the ground surface. Tunneling beneath trees and certain surface structures may be required.

G. Bottom of excavations shall be finish graded by hand methods to receive bedding. The stone bedding shall be placed, compacted, and trimmed by hand to ensure the grade as necessary or as detailed.

H. Trench sheeting and bracing shall be placed as required to meet local, state and federal safety regulations.

I. The Architect/Engineer reserves the right to order sheathing and bracing left in place where removal may create damage or impair integrity of the work.

The right of the Architect/Engineer to order sheathing and bracing left in place shall not be construed as creating any obligation on his part to issue such orders. His failure to exercise his right to do so shall not relieve the Contractor of any liability for damages to persons or property occurring from or upon the work of constructing the sewer, water main, or appurtenances occasioned by negligence or otherwise, growing out of a failure on the part of the Contractor to leave in place in the trench sufficient sheathing and bracing to prevent the caving or moving of the ground, or disturbance of the completed work or any of the subsurface structures.

J. As required, the Contractor may add sufficient water during compaction to assure a complete consolidation of the material. This work shall be at no additional cost to the Owner. Where, in the opinion of the Owner's Designated Representative or Architect/Engineer, adequate consolidation is not being obtained, additional density tests may be ordered at the expense of the Contractor.

K. The Contractor shall make up any settlement of trenches or embankments with suitable material and stabilize at no additional cost to the Owner. This work shall be performed promptly and as directed by the Owner's Designated Representative

3.10 GRADING

A. General: Excavate, transport, place, compact and uniformly grade areas within the project limit (including excavated and filled sections and adjacent transition areas) to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.

2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

3. The degree of finish shall be that is ordinarily obtainable from either a blade, grader or scraper operations.

4. Subgrade surfaces shall drain, be compacted, and well graded.

B. Temporary Ditches, Swales: Install temporary or permanent diversion ditches and/or temporary pumps and take other steps as may be required to effectively eliminate potential water damage in accordance with the Division 31 Section "Erosion and Sediment Control" or instructions received from the Architect/Engineer.

C. The Contractor is responsible to subtract from finished grades shown on the plans the depths indicated on the Contract Drawings to ensure that the proper subgrade elevations are established. Any questions regarding subgrade elevations shall be answered by the Architect/Engineer. The Architect/Engineer's decision shall mandate.

D. Site Rough Grading:

1. Unauthorized Excavation: Do not perform excavation work for any purposes other than those indicated on the Contract Drawings, unless so directed by the Architect/Engineer.

2. Slope grades to direct water away from buildings and to prevent ponding.

3. Finish subgrades to required elevations within the following tolerances:

a. Turf, Planted Areas or Unpaved Areas: Plus or minus 1 inch.

b. Walks: Plus or minus 1 inch.

c. Pavements and slabs: Plus or minus 1/2 inch.

E. Grading under and within 10 feet of Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

F. Slopes: All swales shall be finished to drain readily. Unless otherwise indicated on the Contract Drawings, the surface of the subgrade in areas to receive lawns shall have a

minimum slope of 2% unless otherwise agreed upon by the Architect/Engineer. All areas shall have positive drainage.

Round tops and bottoms of all slopes and drainage swales. Adjust slopes at intersections of cuts and fills and warp to flow into each other or into the natural ground surface without noticeable break. Establish earth at tops and bottoms of rock ledges in accordance with instructions received from the Architect/Engineers and in a manner that will prevent erosion.

G. Following stripping, compact the subgrade sufficiently to develop required compaction to a depth of at least 12 inches. Within building, pavement and retaining wall limits, no fill shall be placed until the subgrade has been proofrolled and approved by the Architect/Engineer. If subgrade ruts, waves or quakes during proofrolling, recompact or replace the unacceptable areas and proofroll again. Repeat process until satisfactory results are obtained as approved by the Architect/Engineer.

H. The Contractor shall dispose of excess excavated material in accordance with Part 3-Disposal.

3.11 EXCAVATIONS BELOW SUBGRADE

A. In case earth materials encountered at subgrades are unsuitable, the Contractor shall immediately notify the Architect/Engineer and shall excavate from the limiting subgrades shown or specified, to such new lines and grades, as will be ordered. Excavation below subgrade shall be done only upon express orders of the Owner's Designated Representative or Architect/Engineer.

B. At subgrade in pavement areas any loose, soft, wet, frozen, organic, or otherwise unsuitable material shall be removed.

C. Whenever excavations are carried beyond or below the lines and grade shown on the Plans, or as given or directed by the Owner's Designated Representative or Architect/Engineer, all such over-excavation shall be backfilled with special backfill such as: engineered fill; concrete or other materials as directed by the Owner's Designated Representative or Architect/Engineer.

1. Fill over-excavations under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Whether over-excavation was directed by the Owner's Designated Representative or Architect/Engineer or unauthorized, backfill shall be 2,500 psi concrete.

2. Fill authorized or unauthorized over-excavations below other construction, pipe, or conduit as directed by Owner's Designated Representative.

3. In pavement areas fill over-excavations with Engineered Fill.

D. Special backfill materials ordered by the Architect/Engineer as a result of unauthorized over-excavation by the Contractor without prior approval shall be provided by the Contractor at no additional cost to the Owner.

E. Payment for authorized over-excavation and subsequent backfill materials shall be on a unit price basis agreed between the Owner and the Contractor prior to the required work.

F. All material which slides, fails, or caves into the established limits of excavations due to any cause whatsoever, shall be removed and disposed of at the Contractor's own expense and no extra compensation shall be paid the Contractor for any materials ordered for backfilling the void areas left by the slide, fall, or cave-in. It is the Contractor's responsibility to make all excavations safe for ongoing construction.

3.12 UNSTABLE SOILS REMOVAL METHODS (if required)

A. Methods of Removal: Prior to the start of excavation operations, divert water away from work area and create dry conditions. Through the use of dragline, clamshell, or other necessary equipment, excavate and legally dispose of all unacceptable material.

B. Precautionary Measures: Divert the run-off of mud and water during the course of removal of wet and unstable material to avoid adversely effecting adjacent construction or site improvement operations. Barricade, rope off, or otherwise protect workmen, active facility, and the public from open excavations, waterholes, and other hazards resulting from the work of this operation.

C. Damage: The Contractor shall correct any damage to structures, foundations, site improvement work or adjacent property resulting from the work of this operation.

D. Degree of Removal Required: Remove all unstable material to the point of sound stable earth or as directed by the Architect/Engineer.

3.13 ROCK EXCAVATION (if required)

A. Excavations into the bedrock will likely require very high capacity, ripper mounted excavating equipment, possibly in conjunction with use of pneumatic breakers to loosen the stronger, more competent bedrock. Ripping methods may likely be employed in the upper 1 to 2 feet, where the bedrock appears highly weathered, weak, fractured, and with multiple joint sets.

B. Degree of Removal required: Rock, if encountered shall be removed to depths as follows:

1. In Building Areas

    a. 2-foot outside of concrete work for which forms are required, except footings.

    b. 1-foot outside perimeter or concrete forms of footings.

    c. Outside dimensions of concrete work where no forms or exterior waterproofing treatments are required.

    d. Under slabs on grade: to subgrade or 8-inches below bottom of concrete slab whichever is greater.

2. Under Areas to Receive Pavement - To the surface of the respective subgrade for such areas. Boulders or isolated pockets of rock shall be removed to 12-inches below the pavement subgrade and the resultant excavation backfilled with pavement subbase-course material.

3. Under Lawn and Planted Areas - To 24-inches below finished grade. Boulders or protruding rock outcropping where in the manner determined by the Architect/Engineer may be

left undisturbed, provided a directive to this effect is transmitted to the Contractor.

4. In pipe trenches for pipes 18-inch diameter and smaller: 6-inches below bottom of pipe and 2-feet wider than outside diameter of pipe, one (1) foot each side of pipe, but not less than 3-foot minimum trench width.

5. In pipe trenches for pipes larger than 18-inch diameter refer to Contract Drawing details for additional rock removal requirements.

6. In all other cases to 6-inches below subgrade.

C. No blasting is allowed.

D. The Contractor is responsible for measurement of rock material in place. (Also refer to Part 3 – Methods of Control of Excavation and Grading.)

E. No additional payment will be made for rock removal.

3.14 EXCAVATION FOR STRUCTURES

A. Excavations for structures and facilities shall be of sufficient size to give suitable room for proper construction procedures and no larger, or as shown on the Contract Drawings.

B. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections. Provide clearance sufficient for formwork. Banks and sides shall be at angle of repose of recline or sheathed, sheeted, shored and braced as required for safety, and conforming to all applicable laws, rules, regulations and codes. Remove shoring prior to backfilling.

1. If unsuitable bearing soil is encountered at depth indicated on Contract Drawings for foundation, the Contractor shall notify the Architect/Engineer and shall not proceed further until direction is given.

2. Pile Foundations: Stop excavations 12 inches above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.

3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

C. Excavations at Edges of Tree- and Plant-Protection Zones:

1. Excavate by hand or air spade to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks or air spade to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots. Certified arborist to cleanly cut roots as close to excavation as possible.

2. Cut and protect roots according to requirements in Division 31 Section "Site Clearing", Part 3 -Tree and Plant Protection.

D. Ensure that movement of equipment in excavation does not cause working or pumping of underlying soil, which is not to be excavated. Should equipment cause the soil to work or pump, use other methods of excavation to maintain the design bearing capacity of the soil.

3.15 EXCAVATION FOR UTILITY TRENCHES

1. Trenches shall be excavated as shown on the Contract Drawings.

2. Before any trenching operation starts, the line of work shall be cleared and all existing underground pipe lines and structures located. Test pits shall be opened where necessary to properly establish the location.

3. When trenches crossing other pipe lines occur, machine excavation shall stop at least 2 feet away from the location of any pipe. The pipe line shall than be uncovered by manual excavation before proceeding with machine work.

4. Trenches shall be kept free of water by pumping or providing well points.

5. Trench sheeting and bracing shall be placed as required to meet local, state and federal safety regulations.

6. All pipe lines encountered during the trenching operation shall be properly supported to prevent damage.

B. Excavate trenches to indicated gradients, lines, depths, and elevations.

C. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches minimum each side of pipe or conduit or as otherwise indicated on the various utility trenching and bedding details on the Contract Drawings.

D. **Trench Bottoms**: (Where bedding course is required)

1. For pipes and conduits 18-inches or smaller in nominal diameter, excavate trenches minimum of 6-inches deeper, than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.

2. For pipes 21- to 36-inches in nominal diameter excavate trenches minimum of 9-inches deeper, than bottom of pipe and conduit elevations to allow for bedding course.

3. Excavate trenches in rock or other unyielding bearing material to depths indicated above depending on pipe or conduit size to allow for bedding course. Refer to Part 3 – Rock Excavation.

E. **Trenches in Tree- and Plant-Protection Zones:**

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

3. Cut and protect roots according to requirements in Division 31 Section "Site Clearing", Part 3-Tree and Plant Protection.

3.16 SUBGRADE INSPECTION

A. Notify Owner's Designated Representative when excavations have reached required subgrade.

B. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 20 tons to identify soft pockets and areas of excess yielding. Rollers or low ground pressure construction equipment shall not be used for proof-rolling. Do not proof-roll wet or saturated subgrades.

1. Proof-rolling shall be witnessed by the Architect/Engineer or his designated representative.

2. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.

3. Excavate any loose, wet, frozen, or soft spots; unsatisfactory soils; and areas of excessive pumping or rutting, as determined by Architect/Engineer and replace with compacted backfill or fill as directed. Refer to Part 3- Excavations Below Subgrade.

4. If subgrade ruts, waves or quakes during proof rolling, recompact or replace unacceptable area and proof roll again.

5. Repeat process until suitable results are obtained as approved by the Architect/Engineer or his designated representative

C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect/Engineer and/or Owner's Designated Representative, without additional compensation.

3.17 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust. All stockpiled materials shall be stored in locations so as not to endanger the work, and so that easy access may be had at all times to all parts of the excavation. Stored materials shall be

kept neatly piled and trimmed, so as to cause as little inconvenience as possible to other Contractors on site, to adjoining property owners and to the active facility.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

B. Topsoil suitable for final grading shall be removed and stored on-site separately from other excavated material.

C. Place, grade and shape stockpiles for proper drainage. Provide proper erosion control measures around stockpiles.

3.18 BACKFILL

A. All excavations shall be backfilled to the original surface of the ground or to the lines and grades as shown on the Contract Drawings or as otherwise specified, or directed. Backfilling shall be done with suitable excavated materials as shown on the Contract Drawings or approved by the Architect/Engineer, and satisfactorily compacted.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

C. Place and compact backfill in excavations promptly, as work permits but not before completing the following:

1. Acceptance of construction below finish grade.

2. Inspection, testing, approval, and recording of locations and inverts for underground utilities has been performed and documented.

3. Removal of temporary shoring and bracing, and sheeting and backfilling of voids with satisfactory materials.

4. Removal of trash and debris from excavation.

5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

D. Excavated material considered by the Owner's Designated Representative or Architect/Engineer to be unsuitable for backfilling shall not be used, and shall be disposed in accordance with Part 3- Disposal of Excess and Waste Materials.

3.19 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Trenches under Footings: Backfill and compact trenches excavated under footings and within 18- inches of bottom of footings with 1000 psi CLSM to elevation of bottom of footings plus 3 inches.

1. Backfill trenches with 1000 psi CLSM where trench excavations pass horizontally within 18-inches of column or wall footings and that are carried below bottom of such footings or that pass under wall footings. Place CLSM to level of bottom of adjacent footing plus 3 inches.

D. Trenches where Concrete Encasement shown: Provide 4-inch thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Division 03 Section "Cast-in-Place Concrete". Backfill voids with satisfactory soil/granular fill while removing shoring and bracing.

E. Place and compact initial backfill as shown on details.

1. For soil and granular initial backfill: Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

F. Place and compact final backfill to final subgrade elevation.

G. Install warning tape/detectable warning tape at elevations as shown on the Contract Drawings. Where not shown on the Contract Drawings install warning tape, centered and 12 inches above utility.

H. All pipes shall be protected from lateral displacement and possible damage resulting from backfill operations through, impact or unbalanced loading, by maintaining the pipe adequately embedded as detailed on the Plans. Except where detailed or due to subsoil conditions that require the use of concrete cradle encasement, all pipe embedment shall be placed so as to insure adequate lateral and vertical stability of the installed pipe during pipe jointing and backfill operations. A sufficient amount of the specified pipe backfill material to hold the pipe in rigid alignment shall be uniformly deposited and thoroughly compacted below, on each side, as well as above each pipe laid in accordance with the limits as shown on the Contract Drawings.

I. Pipe initial backfill shall be granular material or as indicated on the Contract Drawings. Pipe initial backfill materials placed any point below an elevation of 12 inches above the top of the pipe barrel shall be placed and compacted in layers not to exceed 6 inch lifts and shall be done simultaneously and uniformly on both sides of the pipe to the limits as shown on the Contract Drawings. All such materials shall be graded in the trench with hand tools in such a manner that they will be placed uniformly alongside the pipe. Each layer shall be thoroughly compacted to prevent settlement.

J. Trench final backfill when placed under pavements, utilities, and other structures shall be Engineered Fill, Subbase Material or as indicated on the Contract Drawings and shall extend from the top of pipe initial backfill material to the bottom of the subbase. These materials shall be compacted in layers not to exceed 6 inch lifts. Each layer shall be thoroughly compacted to prevent settlement.

K. Trench final backfill outside of pavements, utilities, buildings, and other structures shall consist of common earth backfill or as otherwise shown on the Contract Drawings and shall extend from the top of pipe initial backfill material to the bottom of the topsoil. These backfill

materials shall be compacted in layers not to exceed 12-inch lifts after compaction. Each layer shall be thoroughly compacted to prevent settlement.

L. Where trenches are constructed in, near, or across roadway ditches or other watercourses, the backfill shall be protected from surface erosion.

M. Trucks or other heavy equipment shall not be operated over pipelines until a minimum of 24 inches of backfill above the crown of the pipe has been placed and properly compacted.

N. Where pedestrian, bicycle or vehicle traffic is impacted; all trenches within paved areas shall be immediately restored to existing grade with temporary subbase material to allow traffic flow to continue until final restoration is complete.

O. Trench backfill for waterway crossings, if any, shall include 18 inches of medium stone fill rock lining meeting the requirements of this Section.

P. Do not backfill trenches until tests and inspections have been made and backfilling is authorized by the Architect/Engineer. Use care in backfilling to avoid damage or displacement of pipe systems.

3.20 EMBANKMENT CONSTRUCTION

A. Prior to the placement of materials in fill sections, remove all debris and other deleterious material and stabilize all existing surfaces.

B. Ground surfaces sloped steeper than 1 vertical on 4 horizontal shall be plowed, scarified, stepped, or broken up to permit bonding of the embankment with the existing surface.

C. Prior to placement of fill, the embankment foundation shall be thoroughly inspected by the Architect/Engineer. The embankment foundation shall be proof rolled by a roller or loaded ten wheeler (not less than 10-tons) to the satisfaction of the Architect/Engineer. Proofrolling shall be witnessed by the Architect/Engineer or his designated representative. Any loose, soft, wet, frozen, organic, or otherwise unsuitable material shall be removed and replaced with Engineered Fill. If embankment foundation ruts, waves or quakes during proof rolling, recompact or replace unacceptable area and proof roll again. Repeat process until suitable results are obtained as approved by the Architect/Engineer or his designated representative.

D. Uniformly place and spread fill in successive horizontal layers not more than 8-inches in compacted depth for material compacted by heavy compaction equipment, and not more than 4-inches in loose depth for materials compacted by hand operated tampers. Complete compaction to proper density and complete compaction testing prior to placing additional backfill material.

E. The embankment shall be constructed with suitable on-site materials if available and amended as needed to meet application. When on-site material supplies are exhausted, additional suitable imported material shall be used to complete the embankment. The Architect/Engineer shall be the sole judge of what constitutes suitable and unsuitable material.

3.21 PREPARATION OF PAVEMENT SUBGRADES

A. Shape the entire subgrade to the required line, grade, and cross slope. Remove any protruding stones larger in diameter than 5 inches and fill the resulting depressions with Subbase Material.

B. Proof-roll the subgrade in accordance with Part 3 Subgrade Inspection. Proofrolling shall be witnessed by the Architect/Engineer or his designated representative. Any loose, soft, wet, frozen, organic, or otherwise unsuitable material shall be removed and replaced with Engineered Fill. If subgrade surface ruts, waves or quakes during proof rolling, recompact or replace unacceptable area and proof roll again. Repeat process until suitable results are obtained as approved by the Architect/Engineer or his designated representative.

C. Roll the subgrade surface with a roller weighing not less than 10 tons and achieve the required compaction densities. If during construction, the Contractor allows the subgrade to become wet and rutted, Contractor shall re-shape, aerate, and recompact subgrade, as required. Compact the entire width of the area to receive pavement and shoulders. Where subgrade failures occur due to rolling, thoroughly roll and compact these areas until no further consolidation is apparent.

D. When pavements cannot be placed immediately after the preparation of the subgrade, the entire, subgrade area shall be restricted to construction traffic until subbase materials can be placed.

E. After rolling, the finished subgrade shall not vary from the established grade and cross slope by more than the tolerance indicated in Part 3-Grading.

F. Do not disturb the finished subgrade by traffic or other operations and protect and maintain in a satisfactory condition until the overlaying granular materials are placed.

G. Any deteriorated subgrade areas that occur during construction are to be removed and repaired by Contractor prior to placement of subbase at no additional cost to Owner.

3.22 STABILIZATION FABRIC

A. Place stabilization fabric over subgrade after the subgrade has been reviewed and limits for fabric established by the Architect/Engineer.

B. Provide a 24-inch overlap at fabric ends and an 18-inch overlap on sides. Pull fabric tight prior to placement of subbase materials leaving no waves in the fabric.

C. Subbase materials shall be placed on the fabric in such a manner the fabric remains in tension and no damage to the filter cloth from equipment or subbase materials occurs. All fabric placed shall be covered with fill the same day. Remove fabric, which becomes damaged prior to covering, over its full width and replaced with new fabric, overlapping as stated above.

D. Maintain a minimum of 8 inches loose thickness of aggregate above stabilization fabric subject to traffic.

3.23 SUBBASE COURSES UNDER PAVEMENTS AND WALKS

A. Notify the Architect/Engineer at least three days before any subbase material is scheduled to be placed.

B. Place subbase course on subgrades free of mud, frost, snow, or ice.

C. On prepared subgrade, place subbase course under pavements and walks as follows:

1. Install separation or stabilization geotextile (where required) on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.

2. Shape subbase course to required crown elevations and cross-slope grades.

3. Place subbase course 6 inches or less in compacted thickness in a single layer.

4. Place subbase course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
5. Each course shall be compacted with a vibratory compactor capable of producing a minimum dynamic vibration force of 27,000 pounds.

6. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness. Meet compaction requirements in accordance with this specification.

D. Compaction for driveways or roadways shall proceed in the longitudinal direction to traffic flow and be performed in accordance with NYSS Section 304. Compaction for parking areas shall commence on one side of an area and gradually proceed to the opposite side. When rolling has been completed in one direction, the rolling shall commence in a direction 90 degrees from the first rolling. Bus loops, if any shall be considered as a driveway and shall only be rolled longitudinally.

E. After completion of rolling, no traffic shall be permitted over the compacted course and no hauling other than necessary for bringing material for next course will be allowed. Each compacted course shall be tested with a straight edge 16 feet in length and any depressions greater than 1/4 inch in depth shall be re-graded until the depressions are corrected. The finished surface shall be smooth compact and dry.

F. All voids in the top subbase course shall be removed by re-grading and compacting to the satisfaction of the Architect/Engineer.

G. Thickness tests and compaction tests shall be conducted on the subbase courses. The Contractor shall hand dig holes, not less than 3" in diameter through the subbase, at locations designated by the Architect/Engineer. The Architect/Engineer shall measure the thickness and if any deficiencies are found, they shall be corrected. These tests may be conducted on an average of one test every 200 feet.

3.24 COMPACTION OF SOIL (EARTH & GRANULAR) BACKFILLS AND FILLS

A. Performance:

1. Compaction densities shown are percentages of the maximum density obtainable at optimum moisture content as determined by ASTM D1557, Method C.

2. Uniformly spread each layer. Moisten or dry each layer of material to achieve optimum moisture content. Unless otherwise specified or directed by Architect/Engineer, compact each layer of material to the following required densities:

Location	Percentage of Modified Proctor Test Density
Backfill at Structures	95%
Undercut Backfill	95%
General Fill adjacent to and outside of Buildings	93%
Structural Engineered Fill at Bldgs	95%
Embankments	95%
Pavement Areas (asphalt and concrete and brick)	95%
Impervious Barriers	95%
Trench Backfill Under Traffic Areas (Including sidewalks) Non-Traffic areas	 95% 90%
Other Landscaped Areas	90%

B. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

C. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

3.25 FIELD QUALITY CONTROL AND TESTING

A. Provide free access to Work and assistance and cooperation with appointed testing firm during testing. Coordinate operations to allow ample time for the required sampling and testing.

B. Soil density and optimum moisture content tests for each source of imported material shall be conducted by the Contractor's independent, Architect/Engineer approved laboratory and shall be re-tested upon each significant change of material. Costs shall be included in the price bid.

C. Samples from each source of material shall be made available to the Architect/Engineer for approval and testing purposes one week prior to its use.

D. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

E. Testing Agency: Owner may engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during soils and granular material placement. Field density and moisture testing shall conform to the requirements of ASTM D1556 (sand core) or D2922 and ASTM D3017 (nuclear density). Soils shall be described in accordance with ASTM D2488, Visual-Manual Procedure.

F. The following tests **will** be performed:

1. Perform a laboratory maximum density test for each type of **on-site** soil proposed for use or encountered in the work. Determine optimum moisture content in accordance with ASTM D1557, Method C.

G. The following tests **may** be performed:

1. Perform a laboratory maximum density test for each type of Contractor imported soil or granular material proposed for use to verify Contractor submitted information. Determine optimum moisture content in accordance with ASTM D1557, Method C.

H. Architect/Engineer will designate the time, date, and exact location of all field compaction density tests. Field density tests may be ordered by the Architect/Engineer at his discretion and at a minimum in accordance with the following average frequencies per lift:

1. General: One test for each type of fill and at each change in material or supplier.

2. Backfill for Foundations, Retaining Walls and Utility Trenches: At least one test for each layer of compacted fill and base material at intervals of approximately 50 feet along structure walls (foundation or retaining) and utility trench backfill on alternating lifts.

3. Embankments, Pavement Areas (asphalt, concrete, brick): At least one test on each 2,000 sq. ft. or less of mass fill placed under roadways, pavements (asphalt, stone or concrete) and sidewalks but not less than three tests for each partial lift.

4. Landscaped Areas: One test per 300 cubic yards of compacted fill or backfill but not less than two per lift.

I. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; re-compact and retest until specified compaction is obtained.

J. Compacted soils not meeting compaction densities shall be re-excavated, re-compacted, and re-tested until all requirements are met. All costs of re-testing shall be borne by the Contractor.

K. Remove materials not meeting gradation requirements from the project site and replace with appropriate materials. All costs of re-testing shall be borne by the Contractor.

3.26 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Remove waste materials, including unacceptable/unsuitable excavated material, trash, and debris, and legally dispose off-site.

B. Remove excess excavated material and other materials not specified to be stored, or reused. Dispose off-site at a disposal site approved for the materials.

C. Burning or burial of excess or waste materials at the site is not permitted. Such materials shall be disposed of off-site in conformance with applicable local, state and federal legal requirements.

D. Excess excavated materials may temporarily be stockpiled on-site at a location approved by the Architect/Engineer or Owner's Designated Representative.

E. All costs related to stockpiling, re-handling, transporting, removing and disposal of excess (including suitable and unsuitable) and waste materials shall be paid by the Contractor. Costs shall be included in the price bid.

3.27 MAINTENANCE AND PROTECTION OF WORK

A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Protect subgrades and foundation soils from freezing temperatures and frosts when atmospheric temperature is lower than 35 degrees F.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by Owner's Designated Representative; reshape and recompact.

C. Settling: Where settling is measurable or observable at excavated areas during construction, remove finished surface (pavement, lawn, or other finish areas), add backfill material, compact, and replace/reconstruct surface treatment.

1. Restore appearance, quality, and condition of finished surface to match adjacent work, and eliminate evidence of restoration to greatest extent possible, at the Contractor's expense.

D. Any backfill or fill materials that settle and/or erode during the general project warranty period shall be repaired by the Contractor upon receipt of written notice from the Owner's Designated Representative, at no expense to the Owner.

1. Remove finished surface (pavement, lawn, or other finish areas), add backfill material, compact, and replace/reconstruct surface treatment.

2. Restore appearance, quality, and condition of finished surface to match adjacent work, and eliminate evidence of restoration to greatest extent possible, at the Contractor's expense.

E. Replace or repair any pipe, structure, or other work, which has been displaced or damaged during construction and general project warranty period at no expense to Owner.

END OF SECTION

SECTION 31 25 00
EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Work covered in this section includes the control of erosion, siltation, and sedimentation.

B. The Contractor must comply with the New York State Standards and Specifications for Erosion and Sediment Control.

C. This work consists of temporary and permanent control measures as shown on the plans or as ordered by the Architect/Engineer and/or Owner's Representative during the life of the contract to control soil erosion, siltation, sedimentation and prevent water pollution through use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains and other erosion control devices or methods.

D. Plans show the suggested minimum measures required. Areas of erosion and sedimentation control measures defined on the plans are not all-inclusive. The Contractor is responsible for using erosion and sedimentation control techniques in all areas of construction where disturbance to existing conditions is required.

E. All appropriate erosion and sediment control measures must be in place and functional a minimum of five (5) business days before commencement of construction of any segment of the project that requires such measures.

F. Complete installation and repair of erosion control measures as necessary.

G. Protect all storm and sanitary sewers, ditches, swales, etc and the Storm Water Treatment Facility from siltation and sedimentation resulting from work completed under this contract.

1.3 SUBMITTALS

A. Submit erosion and sediment control sequence schedule based on intended sequencing for review and approval by Architect/Engineer prior to start of construction.

B. Submit actual erosion control measures and excavation dewatering discharge plan based on Contractor intended sequencing for review and approval by Architect/Engineer prior to start of construction. This plan shall also define the maximum disturbed areas per project phase and show required cuts and fills. Refer to Part 3 - Schedule of Work for additional data to be submitted.

C. Provide record plans of the storm water management facility, and all storm piping. Include as a minimum: elevations of all rims and inverts; pipe and structure size and materials of construction; and, elevations and limits of stone at dry wells and infiltration trenches.

1.4 QUALITY ASSURANCE

A. Completed work in accordance with New York State Standards and Specifications for Erosion and Sediment Control.

B. Provide at least one person who will be present at all times during erosion control operations and who is thoroughly familiar with the types of materials being installed and the best methods for their installation and who will direct all work performed under this section.

C. Use reputable material manufacturers and vendors, qualified firms regularly engaged in producing the required types of materials.

D. Use construction methods/techniques, which will limit exposed earthen areas and minimize the effect of earth disturbance activities on soil erosion. No more than five (5) acres of soil may be disturbed at any one time without prior written approval from the NYSDEC.

E. Direct all sediment-laden water to an appropriate sediment control device prior to off-site discharge.

F. Maintain all erosion and sediment control measures in good working condition and in accordance with the Contract Documents. Inspect the erosion and sediment control measures, weekly and after each runoff event, to maintain their effectiveness.

1.5 AUTHORITY OF WORK

A. The Architect/Engineer and/or Owner's Designated Representative may limit the area of clearing and grubbing, excavation, borrow, embankment and/or utility operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent or temporary control measures current in accordance with the accepted schedule.

B. The Architect/Engineer and/or Owner's Designated Representative has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, the surface area of erodible earth material exposed by excavation, borrow, and fill operations, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize damage to adjacent property and to minimize contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.

C. In addition, other agencies having jurisdiction over waterway crossings or site erosion control, such as the Corps of Engineers and the NYSDEC, have the authority to make observations at the site to evaluate the construction practices with regard to the approved permits. Any deviation from the requirements of the approved permits will require the approval of the Architect/Engineer, as well as any agencies having jurisdiction.

1.6 PROJECT REQUIREMENTS

A. Utility Locator Service: Notify UDig NY at **811** for area where Project is located before site clearing.

B. Prior to performing any topsoil stripping or other earthwork activities on the site, mark out with surveyor's flagging the limits of all areas to be disturbed and install all required temporary erosion and sediment control measures.

1. Adhere to all erosion and sediment control policies of the agencies of government having jurisdiction.

C. Discrepancies: Prior to the start of any construction work, immediately report to the Owner's Representative any discrepancies found on the site between actual conditions and those indicated on the Contract Drawings, and confirm in writing. Where applicable, provide field information specific to the discrepancy in order to expedite resolution.

D. Take every reasonable precaution and do whatever is necessary to avoid any erosion and to prevent silting of rivers, streams, ponds, impoundments, drainage ditches, and swales.

E. Protect and maintain all areas disturbed by the work, such that erosion is adequately controlled and silt and sediments are not allowed to flow into or onto: any watercourse; adjacent properties; adjacent campus facilities; roadways, parking areas, walkways or other pavements; or, storm or sanitary sewers.

F. Work shall be scheduled to sequence work in such a manner so that the exposed, unprotected surface area of any earth material that is subject to erosion by wind or water will be kept at a minimum.

G. The exposure of uncompleted cut slopes, embankments, trench excavations, and site graded areas shall be kept as short as possible. Initiate seeding and other erosion control measures on each segment as soon as reasonably possible. Temporary and/or permanent stabilization measures shall be implemented within seven days in areas where soil disturbance activities have ceased.

H. Should it become necessary to suspend construction for any length of time, shape all excavated and graded areas in such a manner that runoff will be intercepted and diverted to points where minimal erosion will occur. Provide and maintain temporary erosion and sediment control measures, such as berms, dikes, slope drains, silt stops, and sedimentation basins, until permanent drainage facilities and erosion control features have been completed and are operative.

I. Fine material placed or exposed during the work shall be so handled and treated as to minimize the possibility of its reaching any surface waters. Use diversion channels, dikes, sediment traps, or any other effective control measures.

J. Provide silt stops wherever erosion control measures may not be totally capable of controlling erosion, such as in drainage channels and where slopes may exist.

K. Before water is allowed to flow in any ditch, swale, or channel, install the permanent erosion control measures in the waterway so that the waterway will be safe against erosion.

L. Contractor shall devote particular attention to all (existing and new) drainage facilities, keeping them fully operational at all times. Contractor shall at a minimum inspect and repair siltation controls. Provide inlet protection at existing and new drainage structures.

M. Take special precautions in the use of construction equipment to minimize erosion. Do not leave wheel tracks where erosion might begin. Prevent direct discharge from dewatering pumps and surface runoff from the construction sites to storm sewers, culverts, streams or ditches. Intercept and conduct surface runoff and discharge from dewatering pumps to siltation ponds before discharging to natural drainage channels.

N. Siltation deposits in storm sewers, surface waters, streams or wetlands resulting from the discharge of water from the project site shall be removed to restore profiles and conditions to that existing prior to the commencement of the work.

O. The Contractor shall keep access routes and parking areas used for the work clean of debris and other obstructions resulting from the work.

P. The Contractor shall keep traveled ways free of foreign objects such as spilled earth, rock, timber, and other items that may fall from transporting vehicles. Materials spilled by or dropped from the undercarriage of any carrying vehicle used in the Contractor's hauling operations along or across any public or private traveled way shall be removed immediately.

Q. Disturbance of lands and waters outside the limits of construction is prohibited, except as may be found necessary and approved by the Architect/Engineer.

R. The requirements of this section also apply to project-related construction activities away from the project site, such as at borrow pits, off-site storage areas, and haul and work roads.

S. Mulching shall follow the seeding operation by not more than 24 hours.

T. Should any protective measures employed indicate any deficiencies or erosion taking place, immediately provide additional materials or employ different techniques to correct the situation and to prevent subsequent erosion.

U. Continue erosion control measures until the permanent measures have been sufficiently established and are capable of controlling erosion on their own.

V. Comply with all federal, state, and local laws, ordinances, rules, and regulations.

PART 2 - PRODUCTS AND MATERIALS

2.1 GENERAL

A. Materials shall conform to the design plans or specifications outlined in the New York State Standards and Specifications for Erosion and Sediment Control.

B. All materials shall be subject to the approval of the Architect/Engineer and be reasonably clean and free of noxious weeds and deleterious materials.

C. Grass shall be a quick growing species suitable to the geographical area as specified in the Contract Documents.

D. Fertilizer and soil conditioners shall be standard commercial grade acceptable to the Architect/Engineer.

E. Trench plug materials shall consist of native soil installed within "sandbags."

2.2 HAY AND STRAW MULCH

A. General: Hay and straw mulches shall be reasonably free from swamp grass, weeds, twigs, debris, and other deleterious material, and free from rot, mold, primary noxious weed seeds, and rough or woody materials. Mulches containing mature seed of species which would volunteer and be detrimental to the permanent seeding, or would result in overseeding, or would produce growth which is aesthetically unpleasing, is not permitted.

B. Hay Mulch: Properly aired native hay, Sudan grass hay, broomsedge hay, legume hay, or similar hay or grass mowings. When air-dried in the loose state, the contents of the representative bale shall lose not more than fifteen (15) percent of the resulting air-dry weight of the bale. Apply at the rate of 2 to 3 tons/acre, or at 1.5 tons/acre when a net or a mulch stabilizer is used with the mulch.

C. Straw Mulch: Threshed plant residue of oats, wheat, barley, rye, or rice from which grain has been removed. Apply at the rate of 2 to 3 tons/acre or at 1.5 tons/acre when a net or a mulch stabilizer is used with the mulch.

D. Mulch Stabilizers: "Curasol" applied at the rate of 40 gallons/acre, Dow "Mulch Binder" applied at the rate of 45 gallons/acre, or asphalt binder, AASHTO M140, Type SS-1 or RS-1 as applicable, applied at the rate of 400 gallons/acre.

E. Temporary Type Mulch Nets: Paper yard, approximately 0.05" in diameter, woven in to a net with approximate openings of 7/8" by 1/2" and weighing about 0.20 lbs./sy.

F. Permanent Type Mulch Nets: "Vexar" or Erosion-Net" plastic or nylon mesh netting with approximate openings of 3/8" by ¾".

2.3 MATTING/BLANKETS

A. Nomenclature: The various materials under this paragraph are sometimes referred to as "matting" and "blankets". These words are interchangeably used throughout this section, but the meanings shall be the same.

B. Jute Matting: Undyed and unbleached jute yarn woven into a uniform open, plain weave mesh, furnished in rolled strips conforming to the following physical requirements:

Width : 48", +/-1"
:78 warp ends per width of cloth
:41 weft ends per yard
Weight: 1.22-1.80 lbs./LY, +/-5%

C. Excelsior Matting: Uniform web of interlocking wood excelsior fibers with a backing of mulchnet fabric on one side only. The mulchnet shall be woven of either twisted paper chord or cotton cord. Excelsior matting shall be furnished in rolled strips and shall conform to the following physical requirements:

Width : 36", +/-1"
Weight: 0.80 lbs./SY, +/-5%

D. Erosion Control Mulching Blanket: "Futerra EnviroNet" by Profile Products LLC or approved equal.

E. Staples: No. 11 (or heavier) plain iron wire made from at least 12" lengths of wire bent to form "U" of 1" to 2" width. Use longer staples for loose soils or where otherwise required.

2.4 HYDROMULCHES (if required)

A. Hydromulches are not permitted where the slope of the ground surface exceeds 10 percent.

B. Wood fiber mulch with tackifier shall meet NYSDOT material designations 713-11 and 713-12. Materials shall be equal to "Genaqua 743" or "Terra Tack III". Apply wood fibers at the rate of 500 lbs./acre and tackifier at the rate of 40-45 gallons/acre and in accordance with manufacturers recommendations.

C. Paper mulch equal to "Spra-mulch" by Rumose Products Co., applied at the rate of 1,200 lbs./acre.

2.5 SEED AND SOD FOR EROSION CONTROL

A. Seed for temporary control: Blend - Mix Type 'A' Rate: 5 to 6 pounds per 1,000 SF

Common Names	Parts	Purity	Germination
Adelphi Kentucky Bluegrass	30%	90%	87%
Baron Kentucky Bluegrass	30%	90%	87%
Pennlawn Fescue	30%	90%	82%
Pleasure Perennial Ryegrass	10%	90%	90%

B. For permanent control: See Division 32 Section "Turf and Grasses"

2.6 TEMPORARY FILTER FABRIC

A. Non-woven, continuous-filament fibers of polypropylene with apparent opening size meeting ASTM D4751; Mirafi 140N as manufactured by TenCate Geosynthetics of Pendergrass, GA, Material shall have a needle-punched non-woven structure, appear on the current NYSDOT Approved List, Geosynthetics for Highway Construction, and be approved for drainage, separation and turbidity curtain applications.

2.7 SILT FENCES

A. Filter cloth shall be as manufactured by Mirafi 100X, Stabilenka T104N, Indian Valley 3611 Construction Grade or approved equal and shall meet the following requirements:

1. Silt Fence Fabric:

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (lbs)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D3786
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Size	40-80	US Std. Sieve SW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

B. Other materials shall be as defined on the silt fence detail shown on the Contract Documents.

C. Pre-assembled silt fence, which is complete with U.V., stabilized filter fabric high-strength polypropylene netting and pre-attached hardwood stakes may also be used. The preassembled reinforced silt fence shall be Silt-LOK 36-100RX as manufactured by JDR Enterprises, Inc., Mirafi Envirofence, Belton Industries or approved equal.

2.8 INLET PROTECTION

A. Provide masonry or concrete block and clean granular materials, as shown on the contract details.

2.9 COMPOST FILTER SOCK

A. Filter sock must comply with New York State Standards and Specification for Erosion and Sediment Control.

B. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of manmade foreign matter.

C. Filter sock must be Biodegradable 5 mil HDPE (photodegradable is not acceptable).

D. Mesh opening: 3/8"

E. Tensile strength: 26 psi (min.)

F. Minimum functional longevity: 6 Months

G. Compost Standards

1. Organic Matter Content: 25% - 100% (dry weight)
2. Organic Portion: Fibrous and Elongated
3. pH: 6.0 – 8.0
4. Soluble salt concentration: 5.0 dS/m maximum
5. Particle Size:
   a. 1" screen – 100% passing
   b. 3/8" screen – 10% to 50% passing

2.10 DUST CONTROL

A. Non-Driving Areas

1. Vegetative cover see Division 32 section "TURF AND GRASSES"
2. Mulch
   a. Wood mulch, see Division 32 section "PLANTS"
   b. Gravel mulch, Clean 2" crushed stone, meeting NYSDOT 703-0201, #2 stone
3. Spray Adhesives
   a. Earthbind™ 100, manufactured by Enviroad or equal.

B. Driving Areas

1. Water
2. Polymer additives.
   a. Earthbind™, Stabilizer, manufactured by Enviroad or equal.
3. Barriers
   a. Woven geotextiles see Temporary stabilized construction area in this section.
   b. Stone see Temporary stabilized construction area in this section.

PART 3 - EXECUTION

3.1 GENERAL

A. In the event of conflict between these specification requirements and pollution control laws, rules or regulations of other Federal, State, or local agencies, the more restrictive laws, rules or regulations shall apply.

B. All appropriate erosion and sedimentation control measures including silt fences and temporary sediment traps shall be in place prior to the excavation of ground vegetation of any segment of the project that requires such measures. All measures shall be maintained throughout the period of construction until vegetation is established to the satisfaction of the Owner's Designated Representative.

C. Maintenance of said measures shall include periodic removal and disposal of sediment, inspection and repair of damaged facilities, and replacement of any materials required to facilitate revegetation of disturbed areas.

D. Any areas of temporary storage for spoil materials shall be protected by silt fences as directed by the Architect/Engineer and/or Owner's Designated Representative.

E. Temporary measures such as silt fences and sediment traps shall be removed at the end of construction when vegetation is established to the satisfaction of the Owner's Designated Representative. Removal of any erosion and sedimentation control measures shall not begin without approval of the Architect/Engineer.

3.2 HAY AND STRAW MULCHING

A. Install hay or straw mulch immediately after each area has been properly prepared. When permanent seed or seed for erosion control is sown prior to placing the mulch, place mulch on seeded areas within 24 hours after seeding. Architect/Engineer may authorize the blowing of chopped mulch provided that 95 percent of the mulch fibers will be 6" or more in length and that it can be applied in such a manner that there will be a minimum amount of matting that would retard the growth of plants. Hay mulch should cover the ground enough to shade it, but the mulch should not be so thick that a person standing cannot see the ground through the mulch. Remove matted mulch or branches.

B. Where mild winds may blow the mulch, or when ground slopes exceed 15 percent, or when otherwise required to maintain the mulch firmly in place, apply a system of pegs and strings, a chemical stabilizer, or temporary type netting to the mulch. Unless otherwise directed, remove the strings and netting prior to the acceptance of the work.

C. Where high winds exist, or heavy rainstorms are likely, or where ground surfaces are steep, or where other conditions require, apply temporary type netting over the mulch and take whatever measures are necessary to maintain the mulch firmly in place.

D. Unless otherwise specified, the use of permanent type netting is not permitted without the prior approval of the Architect/Engineer.

3.3 MATTING/BLANKETS - GENERAL

A. The use of mulch with matting is not permitted, however, a 4" to 6" overlap of mulch over the edge of matting is permissible.

B. Prepare surfaces of ditches and slopes to conform to the grades, contours and cross sections shown on the Drawings and finish to a smooth and even condition with all debris, roots, stone, and lumps raked out and removed. Loosen the soil surface to permit bedding of the matting. Unless otherwise noted, seed prior to the placement of the matting.

C. Unroll matting parallel to the direction of flow of water and loosely drape, without folds or stretching, so that continuous ground contact is maintained.

D. The ditches and swales, and on slopes, each upslope and each downslope end of each piece of matting shall be placed in a 6" trench, stapled at 12" on center, backfilled, and tamped. Similarly, bury edges of matting along the edges of catch basins and other structures. Architect/Engineer may require that any other edge, exposed to more than normal flow of water, be buried in a similar fashion.

E. Tightly secure matting to the soil by staples driven approximately vertically into the ground, flush with the surface of the matting. In driving the staples, take care not to form depressions or bulges in the surface of the matting.

F. Decrease the specified spacing of staples when varying factors, such as the season of the year or the amount of water encountered or anticipated, requires additional anchoring.

G. Refer to the following paragraphs for additional requirements on the placement and stapling of matting.

3.4 JUTE MATTING

A. Where strips are laid parallel or meet, as in a tee, they shall be overlapped at least 4". Overlap ends at least 6" shingle fashion.

B. Space check slots, built at right angles to the direction of flow of water, so that one check slot or one end occurs within each 50 feet of length of slope. Construct check slots by placing a tight fold of matting at least six (6) inches vertically into the ground. Tamp the same as the upslope ends.

C. Press jute matting onto the ground with a light lawn roller or other satisfactory means.

D. On slopes flatter than 1:4, place staples not more than 3 feet apart in three rows, for each strip, with one row along each edge and one row alternately spaced down the center. On grades 1:4 or steeper, place staples in the same three rows, but spaced 2 feet. On lapping edges, double the number of staples, with the spacing halved. Ends of matting and all required check slots shall have staples placed every foot. Staple matting placed adjacent to boulders or other obstructions with no spaces between the staples.

E. Spread additional seed over jute matting, particularly those locations disturbed by the building

of slots.

3.5 EXCELSIOR MATTING

A. Where strips of excelsior matting are laid end to end, butt the adjoining ends.

B. When adjoining rolls of excelsior matting are laid parallel to one another, butt the matting snugly.

C. On slopes flatter than 1:4, place staples not more than 3 feet apart in three rows, for each strip, with one row along each edge and one row alternately spaced down the center. On grades 1:4 or steeper, place staples in the same three rows, but spaced 2 feet apart. Ends of matting shall have staples placed every foot. Matting placed adjacent to boulders or other obstructions shall be stapled with no spaces between the staples.

3.6 EROSION CONTROL MULCHING BLANKET

A. Where one roll ends and a second roll begins, the upslope piece shall be brought over the end of the downslope roll so that there is a 12-inch overlap, placed in a 4-inch deep trench, stapled at 12 inches on center, backfilled, and tamped.

B. On slopes where two or more widths of blanket are applied, the two edges shall be overlapped 4 inches and stapled at 12-inch intervals along the exposed edge of the lap joint.

C. Staple the body of the blanket in a grid pattern with staples 3 feet on center, each way.

3.7 SEED FOR EROSION CONTROL

A. Sow seed when soils are moderately dry and when wind does not exceed five miles per hour or as directed by the Architect/Engineer.

B. Areas, which will be re-graded or otherwise disturbed later during construction, may be ordered to be seeded with rye grass to obtain temporary control. The seed shall be sown at the rate of approximately one pound per 1,000 square feet, on the pure live seed basis.

3.8 SILT FENCES

A. Provide silt fences, as required, for the temporary control of erosion and to stop silt and sediment from reaching surface waters, adjacent properties, or entering catch basins, or damaging the work.

B. Erect silt fences and bury bottom edge in accordance with the manufacturer's recommended installation instructions. Provide a sufficient length of fence to accommodate runoff without causing any flooding and to adequately store any silt, sediment, and debris reaching it.

C. Maintain and leave silt fences in place until permanent erosion control measures have stopped all erosion and siltation.

D. Along sloped areas, place silt fences at spacing not to exceed slope length shown below.

Slope Steepness	Maximum Slope Length, Ft.
2H : 1V	25
3H : 1V	50
4H : 1V	75
5H : 1V or flatter	100

E. Place silt fence along property boundaries where the grade is such that runoff may occur to adjacent property owners.

3.9 TEMPORARY SEDIMENT TRAP

A. Sediment traps shall be maintained throughout the duration or until the drainage area has been properly stabilized as approved by the Architect/Engineer and/or Owner's Designated Representative.

B. Sediment shall be removed and trap restored to it original dimensions when sediment has accumulated to the 1/2 the design depth of the trap.

C. Removed sediment shall be properly disposed of and in a manner not to erode.

D. Inspect the sediment trap after each runoff event. Correct all damage immediately.

3.10 SCHEDULE OF WORK

A. Included with the proposed construction schedule, submit for acceptance, schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing and grubbing; grading; installation of utilities, storm water management facilities, ramps and pavements; and, restoration. In addition, submit for acceptance at the same time, his proposed plan for disposal of surplus excavated materials. Do not begin work until the erosion control schedules and methods of operations have been accepted by the Architect/Engineer. If climactic changes occur during construction, the Contractor may be required to submit a revised schedule for acceptance as directed by the Architect/Engineer.

B. Where conditions warrant, perform and schedule clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately thereafter as the project conditions permit; otherwise temporary erosion control measures may be required between successive construction stages.

3.11 COMPOST FILTER SOCK

A. Vehicular and construction traffic is not be permitted to cross filter socks.

B. Remove and dispose of accumulated sediment when it reaches half the above ground height of the sock.

C. Inspect socks weekly and after each runoff event. Replace damaged socks.

D. Replace biodegradable filter socks after 6 months.

E. Upon stabilization of the area contributory to the sock, remove stacks. Then cut the mesh material and spread the compost as an additional mulch to act as a soil supplement. If directed by the owners representative, complete remove and dispose of the sock off-site.

3.12 MAINTENANCE

A. If any staples become loosened or raised, or if any matting becomes loose, torn, or undermined, or if any temporary erosion and sediment control measures are disturbed, repair them immediately.

B. If the seed is washed out before germination, repair any damage, refertilize, and reseed.

C. Maintain mulched and matted areas, silt stops, and other temporary control measures until the permanent control measures are established and no further erosion is likely.

D. Remove all sediment spilled, dropped, or washed onto the driveways, roadways, parking areas, walkways or public rights-of-way.

E. Maintain ditches and swales at all times so that they effectively drain. Refill, reshape, and re-compact where ruts or erosion occurs.

F. Maintain filter fabric placed at inlet grates. Clean and replace as necessary to protect the storm sewers from siltation and sediments.

G. Maintain areas temporarily seeded including repair of all damages, re-seeding, and re-fertilizing.

H. Flush and clean all storm sewers, structures and sumps. Capture and remove sediments prior to release into other downstream systems.

END OF SECTION

SECTION 31 50 00
EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes temporary excavation support and protection systems.

B. Related Requirements:

1. Section 31 20 00 "Earth Moving" for excavating, backfilling, dewatering, and for controlling surface-water runoff and ponding.

1.3 PERFORMANCE REQUIREMENTS

A. Design, furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads. Systems shall be designed to prevent movement of or settlement of and damage to permanent structures including adjacent buildings, structures, utilities, or other facilities during the various stages of construction.

1. Delegated Design: Design excavation support and protection system, including comprehensive engineering analysis by a qualified professional engineer licensed by New York State, using performance requirements and design criteria indicated.

2. Prevent surface water from entering excavations by grading, dikes, or other means.

3. Install excavation support and protection systems without damaging existing buildings, structures, and site improvements adjacent to excavation.

4. Continuously monitor vibrations, settlements, and movements to ensure stability of excavations and constructed slopes and to ensure that damage to permanent structures is prevented.

5. Perform pre and post installation inspections of all nearby buildings, utilities and structures.

1.4 ACTION SUBMITTALS

A. Delegated-Design Submittal: For excavation support and protection system indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer licensed by New York State responsible for their preparation.

B. Product Data: For each type of product.

1. Include construction details, material descriptions, performance properties, and dimensions of individual components and profiles, and calculations for excavation support and protection system.

A. Shop Drawings: For excavation support and protection system, prepared by, or under the supervision of, and signed and sealed by a qualified professional engineer licensed by New York State.

1. Include plans, elevations, sections, and details.

2. Show arrangement, locations, and details of soldier piles, piling, lagging, tiebacks, bracing, and other components of excavation support and protection system according to engineering design.

3. Indicate type and location of waterproofing.

4. Dewatering methods and operation.

5. Include a written plan for excavation support and protection, including sequence of construction of support and protection coordinated with progress of excavation.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer.

B. Contractor Calculations: For excavation support and protection system. Include analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

A. Existing Conditions: Using photographs, maps, plans, written descriptions, and surveyed foundation levels, fully document existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by inadequate performance of excavation support and protection systems. Submit before Work begins.

B. Record Drawings: Identify locations and depths of capped utilities, abandoned-in-place support and protection systems, and other subsurface structural, electrical, or mechanical conditions.

1.6 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify Architect and Owner no fewer than two days in advance of proposed interruption of utility.

2. Do not proceed with interruption of utility without Architect's and Owner's written permission.

B. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from the data.

1. Advance additional test borings and conduct other exploratory operations necessary for excavation support and protection according to the performance requirements.

2. The geotechnical report is referenced elsewhere in Project Manual.

C. Survey Work: Engage a qualified land surveyor to survey adjacent existing buildings, structures (for each parcel), and site improvements; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1. Submit survey work data to the Engineer / Owner prior to the start of earth moving, trenching, or excavation activities.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.

1. Shore, support, and protect utilities encountered.

B. Install excavation support and protection systems to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Locate excavation support and protection systems clear of permanent construction so that construction and finishing of other work is not impeded.

3.2 SUPPORT SYSTEMS WITH BRACING

A. Requirements: Provide walers, struts, rakers, shores, and tie-backs as necessary to support excavation faces retained by posts, soldier piles, or walls.

B. Bracing: Locate bracing as indicated on approved Shop Drawings. If necessary to move brace, install new bracing before removing original brace.

1. Provide walers horizontally at location indicated on approved Shop Drawings and secure to braces. Wedge, drypack, and otherwise provide tight bearing between walers and wall with ample bearing areas to provide uniform transfer of loads.

2. Provide struts with intermediate bracing as needed to enable struts to carry the design load without distortion or buckling.

3. Provide diagonal bracing as needed for stability of the system.

4. Include web stiffeners, plates, angles, or bracing as needed to prevent rotation, crippling, or buckling of connections and points of bearing between structural members. Allow for eccentricities caused by field fabrication and assembly.

5. Maintain bracing until excavation and backfill work are complete.

3.3 FIELD QUALITY CONTROL

A. Survey-Work Benchmarks: Resurvey benchmarks regularly during installation of excavation support and protection systems, excavation progress, and for as long as excavation remains open. Maintain an accurate log of surveyed elevations and positions for comparison with original elevations and positions. Promptly notify Architect if changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.

B. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct detected bulges, breakage, or other evidence of movement to ensure that excavation support and protection system remains stable.

C. Promptly repair damages to adjacent facilities caused by installation or faulty performance of excavation support and protection systems.

3.4 REMOVAL AND REPAIRS

A. Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and earth and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils and rock or damaging structures, pavements, facilities, and utilities.

1. Remove excavation support and protection systems to a minimum depth of 48 inches below overlying construction and abandon remainder unless indicated otherwise on Drawings.

2. Fill voids immediately with approved backfill compacted to density specified in Section 31 20 00 "Earth Moving."

3. Repair or replace, as approved by Architect/Engineer, adjacent work damaged or displaced by removing excavation support and protection systems.

END OF SECTION

SECTION 32 01 05
MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This work consists of safely delineating and containing the project work area, maintaining traffic and access as required, including maintaining and protecting the public from damage to person and property within the limits of and for the duration of the contract.

B. Provide temporary fencing and gates for the work zones and staging areas.

C. Include the cost to provide, install, relocate, maintain, cover and remove all construction traffic control measures and devices including personnel necessary to regulate and protect traffic for the duration of the contract in the price bid. Include the costs to repair the existing pavements utilized as detour routes, in the price bid.

D. Include the costs to provide, install, relocate, maintain, and remove temporary fencing for the duration of the contract in the price bid.

1.3 QUALITY ASSURANCE

A. Work of this section shall be performed in accordance with the requirements of the New York State Department of Transportation (NYSDOT) Standard Specifications Section 619 and the NYSDOT Manual of Uniform Traffic Control Devices (MUTCD). All flaggers shall be certified in accordance with NYSDOT requirements.

B. Provide necessary traffic control measures and devices as required to meet the conditions and requirements of the Contract Documents and the requirements of any authorities having jurisdiction.

C. Way finding signs shall be completed by a single firm specializing in directory signage. Supplier shall work with the Owner to select actual text verbiage, style, size and color, as well as color and size of panel, and border and margin sizes.

D. Chain Link Fence Manufacturer: company specializing in commercial quality chain link fencing with five (5) years experience. Submit evidence of these projects in writing to the Owner's Designated Representative, including name and telephone number of person for each reference.

E. Chain Link Fence Installer's Qualification: Firms with a minimum of five (5) years experience installing similar fencing.

F. Layout Personnel: Layout of fence line shall be performed by qualified surveyors or representatives of the fence supplier.

G. All fence and gate materials and installation shall be furnished and installed by a single firm.

1.4 SUBMITTALS

A. Shop drawings for the material, hardware, and manner of installation shall be submitted for each sign.

B. Submit plan for proposed detouring and closure plans for approval.

C. Submit manufacturer's certification that signs conform to MUTCD as required.

D. Submit text layout and color options for way finding signs.

E. Submit product data in the form of manufacturer's technical data, and specifications for each fence system and each gate system including, fence and gate layout, grid, spacing of components, fence posts, gate posts, fabric, gates, hardware, fittings, anchorage and other accessories.

F. Submit shop drawings showing location of fence, gates, each post, and details of post installation, hardware, and accessories.

G. Submit manufacturer's installation instructions and procedures, including standard details of fence installation.

H. Submit warranty information for staging fence.

1.5 JOB CONDITIONS

A. Maintenance and protection of traffic over or around a roadway, drive, sidewalk, parking area, etc., during construction is considered as important as the construction itself. Therefore, at all times, conduct operations in a manner to insure the convenience of all travelers, facility operations and the abutting property owners and their safety.

B. The Architect/Engineer has the authority to suspend all work until all requirements are met.

C. Coordinate with the Architect/Engineer and Owner's Designated Representative to schedule lane closures, road and/or drive closures, sidewalk closures, parking space closures, detour route installations and any other vehicular traffic, pedestrian, and/or parking related impacts.

D. Provide and maintain, at all times, safe and adequate ingress and egress to active fire hydrants.

E. Provide and maintain temporary lighting facilities as necessary to insure safe, continuous, temporary pedestrian routes when activities affect an existing pedestrian route.

F. Maintain existing pavements in repair, which are utilized for project detours.

G. Store all material so they can be easily inspected and so they will not be damaged prior to installation.

PART 2 - PRODUCTS

2.1 TRAFFIC CONTROL MEASURES AND DEVICES

A. Provide, install, move and maintain construction signs, drums, delineators, flags, barricades and lighting for barricades as shown on the plans or as directed by the Architect/Engineer. All traffic control measures and devices shall conform to the requirements of the NYSDOT Standard Specifications Section 619 and the NYSDOT Manual of Uniform Traffic Control Devices.

B. All traffic control devices must be reflectorized and conform to the NYSDOT Manual of Uniform Traffic Control Devices.

C. Flaggers: Provide the necessary traffic control equipment and flaggers for adequate traffic control on the traveled way. Sign paddles, in lieu of flags, may be required by the Architect/Engineer. Flagger must be certified.

2.2 TEMPORARY FENCING

A. Post Driven Fence - Provide temporary galvanized steel, chain-link fabric fence around staging area. Height of fence as shown on the plans. As a minimum, fence shall include:

1. Line Posts: 2.38" O.D. steel pipe, spaced at 10' maximum on center. Posts shall have safety caps.

2. Corner, terminal and gate posts: 2.88" O.D. steel pipe.

3. Top rail: 1.63" O.D. steel pipe

4. Bottom rail, brace rail, and gate bracing: 1.66" O.D. plain end, sleeve coupled steel pipe.

5. Swing Gate frame: 2" O.D. steel pipe for fittings and truss rod fabrication.

6. Fabric: 2 inch diamond mesh steel wire, interwoven, 9 gauge, top and bottom knuckled salvage.

7. Caps: Cast steel or malleable iron, galvanized, sized to post dimension, set screw retained.

8. Fittings: Sleeves, bands, slips, rings, rail ends, tension bars, fasteners and fittings: steel, galvanized.

9. Swing Gate hardware: Minimum two 180-degree gate hinges per leaf and lockable hardware for padlock. Provide padlock and two sets of keys to Owner's Designated Representative for each gate.

B. Moveable Panelized Fence with portable bases – Provide 8 foot high (unless noted otherwise on the plans) temporary galvanized steel, chain-link fabric fence where shown on plans. As a minimum, fence shall include:

1. Framework including posts; top, bottom and horizontal/vertical mid rails: 1.38" O.D. steel pipe. All framework to be galvanized. Panel overall widths 10' maximum.

2. Fabric: 2 inch diamond mesh steel wire, interwoven, 11.5 gauge, top and bottom knuckled salvage.

3. Portable bases: 1.38" O.D. galvanized steel pipe with minimum 6-inch uprights. Minimum plan size 18"x24" for 6-H and minimum 18"x36" for 8-H fence. Bases shall be substantial enough to support the fence and gate systems in a stable, upright and plumb position.

4. Fittings: Sleeves, bands, slips, clamps, fasteners and fittings: steel, galvanized.

5. Sand bags: Minimum 2-50 pound bags at each base plate.

6. Swing Gate hardware: Minimum two 180-degree gate hinges per leaf and lockable hardware for padlock. Provide padlock and two sets of keys to Owner's Designated Representative for each gate.

2.3 PERMANENT TRAFFIC SIGNS

A. Signs shall be aluminum sign panels as defined in the MUTCD and in conformance with Section 730-01 of NYSS.

B. Size, number of signs, MUTCD/Order No., and mounting location shall be as shown on the Contract Drawings.

C. Provide breakaway galvanized steel posts as shown on the plans, except where decorative posts or light pole mounting is shown on the plans. Provide sufficient number of posts per sign panel.

D. Provide post heights as required to mount the number and size of sign(s) for each location.

E. Refer to separate part of this specification for decorative posts.

PART 3 - EXECUTION

3.1 MAINTAIN TRAFFIC - GENERAL

A. Maintain traffic on all adjacent public streets and drives at all times and install and maintain barricades, signs, flags, and lights as required by law, or directed by local officials, or by the Architect/Engineer or Owner's Designated Representative.

B. Minimize interference with adjoining roads, streets, walks, parking areas, and other adjacent occupied or used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without written permission from Owner's Designated Representative and authorities having jurisdiction.

2. Provide alternate routes around closed or obstructed traffic ways as required by Owner's Designated Representative or authorities having jurisdiction.

3. Coordinate with the Owner's Designated Representative and Facility Owner to minimize disruption to the normal operation of the active facility.

4. Maintain ingress/egress for emergency vehicles at all times.

5. Flagmen, guards, barricades, lights, services, and other items needed for the protection of persons and property shall be furnished and maintained by the Contractor. Costs for these items shall be included in the prices bid for the Contract.

6. Contractor shall obtain written approval from the local highway superintendent and pay all fees for work required in the public right-of-way.

C. Relocation of Signs: Within the public right-of-way, private roads, parking areas or project limits; signs designated for relocation shall be removed and relocated in conformance with the requirements of NYSDOT Section 647, latest edition. Care shall be taken in removing sign panels to prevent damage. Any damage shall be repaired or replaced to the satisfaction of the Owner's Designated Representative, Architect/Engineer at the Contractor's expense. Existing signs shall be mounted on new posts or bollards at the location shown on the drawing, or as otherwise directed by the Owner's Designated Representative or Architect/Engineer. Mounting of signs shall be in conformance with NYSDOT Section 645-3.

3.2 IMPLEMENTATION OF TEMPORARY TRAFFIC CONTROL

A. The existing roadways, drives and parking lots shall be kept free of foreign objects such as spilled earth, rock, timber and other items that may fall from transporting vehicles both within and outside the project limits.

B. Whenever it becomes necessary to maintain traffic on one lane, or provide alternating one-way traffic, provide adequate traffic controls on the section of roadway on which vehicle operation is maintained. Employ a sufficient number of flaggers to control one lane traffic continuously. In the event the length of the one lane operation is extremely short and conditions are favorable for safe operation, the Architect/Engineer may, in writing, authorize the Contractor to dispense with flaggers. Provide a sufficient number of flaggers in areas where construction equipment is operating in potential conflict with public traffic, regardless of the volume of traffic or the sight distance. Wear orange caps or hats and vests, and direct traffic in conformance with the NYS MUTCD. Sign paddles, in lieu of flags, may be required by the Architect/Engineer.

C. Keep all signs clean and mounted at the required height on adequate supports and placed in proper position and alignment so as to give maximum visibility both night and day.

D. Move, remove, relocate or change immediately any signs that do not indicate actual conditions.

E. Drop-offs greater than 3-1/2 inches will not be allowed overnight. Provide temporary fill with 1 on 4 or flatter cross slope.

F. Backfill or steel plate all excavations overnight to protect motorists from the excavations.

G. Remove temporary equipment and facilities when no longer required, and restore area to original or specified conditions upon removal.

H. Haul Routes - The Contract shall consult with governing authorities and establish thoroughfares, which shall be used as haul routes and site access. The Contractor shall confine construction traffic to designated haul routes. The Contractor will be required to provide traffic control at critical points of haul routes to expedite traffic flow and minimize interference with normal public traffic. Where required by governing authorities, the Contractor shall prepare and submit traffic control plans for approval by both the Architect/Engineer and the governing authority prior to commencement of the work.

3.3 TEMPORARY FENCING

A. Install framework, fabric, accessories, and gates in accordance with ANSI/ASTM F567 and manufacture's recommendations.

B. Install, relocate, and maintain temporary fencing for the duration of the contract.

C. Fence and gates shall be kept plumb and good condition throughout the contract duration.

D. Remove temporary equipment and facilities when no longer required, and restore area to original or specified conditions upon removal.

3.4 TEMPORARY STAGING FENCING

A. Install fencing and gates complete as shown on the plans.

B. Install framework, fabric, accessories, and gates in accordance with ANSI/ASTM F567 and manufacture's recommendations.

C. Space line posts at intervals not exceeding 10'. Set or drive posts into ground a minimum of one-third the total height or as otherwise shown on the drawings without concrete footings. Where a post is located on existing pavement or concrete to remain, provide appropriate means of post support acceptable to Owner's Designated Representative.

D. Locate terminal posts at the beginning and end of each continuous length of fence, at abrupt changes in line or grade, and additionally at intervals not to exceed 500 feet, or closer as required by the fence manufacturer. Install posts in proper alignment.

E. Set all posts plumb.

F. Provide top rail through line post tops and splice with 7" long rail sleeves.

G. Brace each gate, terminal, and corner post back to adjacent line post with horizontal center brace rail and diagonal truss rods.

1. Brace gate leaves 8' or longer in the center with a 1.66" O.D. vertical, and a 1.66" O.D. diagonal from the bottom at gate post to the upper intersection of the top rail and vertical brace. Install a second 1.66" O.D. diagonal from the intersection of the bottom rail and the vertical to the upper free corner. Weld all gate braces together and to the gate frame.

H. Stretch fabric between terminal posts or at intervals of 100' maximum, whichever is less.

I. Position bottom of fabric above finished grade as shown on the drawings.

J. Fasten fabric to top and bottom rail, line posts and braces with wire ties, maximum 18" on centers.

K. Attach fabric to terminal, corner, and gate posts with tension bars and tension bar clips.

L. Install swing gates with fabric to match fence.

M. Install gates in accordance with manufacturer's instructions, plumb, level, and secure for full opening without interference. Gates shall operate freely without binding or dragging and shall be easily operable by hand.

N. Adjust hardware for smooth operation and lubricate where necessary.

O. Confirm that latches and locks engage accurately and securely without forcing or binding. Provide padlocks and keys for each gate.

3.5 PERMANENT TRAFFIC SIGNS

A. Install signs as shown on the plans. Exact sign locations will be determined by the Architect/Engineer in the field.

B. Remove and relocate signs designated for relocation in conformance with the requirements of NYSDOT Section 647.

C. Carefully remove sign panels to prevent damage. Repair or replace any damage to the satisfaction of the Architect/Engineer at no expense to the owner.

D. Mount existing signs on new posts in conformance with NYSDOT Section 645-3.

END OF SECTION

SECTION 32 31 23
FENCE AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Split rail fences and gates.

1.2 SUBMITTALS

A. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.

B. Manufacturers or suppliers' installation instructions shall be provided along with product data.

C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).

D. Shop Drawings: Show application to project, including layout, post spacing, gate locations, and hardware details. Machine duplicated copies of Contract Drawings will not be accepted.

1.3 QUALITY CONTROL:

1. All fence and gate materials and installation shall be furnished and installed by a single firm.

2. Provide written certification that wood materials meet specified grade and preservative treatment requirements.

1.4 INSTALLER & MANUFACTURER'S QUALIFICATIONS

A. Fence installer to have a minimum of 10 years' experience installing fences of similar size and material.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver fence and gate components bundled to prevent warping and damage.

B. Store materials on level blocking, off the ground under weather resistant cover.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Wood Components:
1. Species: Western Red Cedar, White Cedar, or Pressure-treated Pine suitable for ground contact.
2. Grade: No. 2 or better, free of loose knots and structural defects.
3. Treatment: If pressure treated, use waterborne preservative meeting APWA standards for ground contact applications.

B. Fence Style:
1. Split rail type, three-rail system as indicated on drawings.
2. Rough-split or machine-shaped to fit securely into post mortises.
3. Posts: Minimum 4x4 inches square post.
4. Rails: Length typically 10 foot 4 inches center to center (or as indicated on plans).
5. Bracing: Provide diagonal wood bracing or concealed galvanized steel bracing at corners, ends and gate posts to resist movement under expected loads.
6. Fence Hardware: Galvanized stainless steel brackets and fasteners design specifically to connect fence sections to fence posts. Nails and screws shall be corrosion-resistant and compatible with wood treatment.

C. Wire Mesh Backing:
1. Material: Galvanized stainless steel wire mesh
2. Wire: minimum 0.250 inch diameter, 1.563 lbs per square foot stainless steel
3. Mesh size: 2x4 inches rectangular opening
4. Attachment: Galvanized stainless steel staples, screws, or fencing clips designed for wood installation.
5. Height: Match top of upper rail; and terminate mesh at bottom of grade as shown on construction documents

2.2 GATE AND GATE HARDWARE

A. Gate:
1. Construct gates using solid wood boards 6' in length with matching wood species and treatment to as split rail fencing.
2. Gate frame shall include galvanized steel diagonal bracing to prevent sagging.
3. Finish to match adjacent fencing.
4. Provide tension rod with anti-sag gate kit.

B. Gate Hardware: Standard hinge hardware by gate manufacturer.
1. Heavy duty galvanized stainless steel hinges, latches and fasteners.
2. Gate latch shall be manually operated with provision for padlock.
3. 180 degree inward swinging.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that line of fence has been properly identified.

B. Verify that encroaching fences, structures, or other items of neighbors within the property line of this parcel have been removed by others prior to the start of the work of this Section. Notify Owner and Architect/Engineer in writing immediately if encroaching elements of neighbors have not been removed. Removal of neighbors' encroaching property is not included in the scope of work of the General Construction Contract.

C. Verify that proper grade has been established.

D. Verify location of underground utilities and structures, whether new, existing to remain, existing to be removed, or existing to be relocated or altered.

E. Begin fence construction only after adequate clearance on both sides of fence is available.

3.2 INSTALLATION

A. Install all fence post true and plumb.

B. Install the Work of this Section in accordance with the manufacturer's printed installation instructions, and as shown on the structural design shop drawings, and details shown on the Contract Drawing.

B. Gate Installation:

1. Install gates in accordance with manufacturer's instructions, plumb, level, and secure for full opening without interference.
2. Gates shall operate freely without binding or dragging and shall be easily operable by hand.
3. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation.
4. Install gate keeper and plunger bar latch on gates; lock gates and turn over keys to Owner or fasten lock chain securely to gate.
5. Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
6. Lubricate hardware and other moving parts.

END OF SECTION

SECTION 32 92 00
TURF AND GRASSES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Restoration of lawn areas may be required as part of the work. This section describes the procedures for: Topsoil Spreading; Soil Preparation; Seeding; Mulches; Maintenance; and Warranty of lawns.

1.2 QUALITY ASSURANCE

A. Contractor shall retain for inspection the following items:

1. Receipts for all fertilizer, topsoil and grass seed.

2. Seed and fertilizer in unopened bags, bearing the analysis of the contents, and in sufficient quantities to meet the requirements of the project.

B. All work in conjunction with lawns and landscaping shall be performed under the direction of individuals experienced in the establishment of lawns and landscape plantings.

1.3 WARRANTY

A. Provide a uniform stand of grass by watering, mowing, and maintaining lawn areas until final acceptance. Reseed seeded areas, which fail to provide a uniform stand of grass, with specified materials until all affected areas are accepted by the Architect/Engineer.

PART 2 - PRODUCTS

2.1 FERTILIZER

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Commercial starter fertilizer (19-26-5) with fine particles, chemically homogeneous, having a minimum of 75% of total nitrogen (19%) derived from urea and methylene ureas and a minimum of 26% mono-ammonium phosphate.

a. Application rate: As necessary to provide 1lb. Nitrogen per 1,000 square feet of lawn area.

2. Commercial maintenance fertilizer (12-0-12) with fine particles, chemically homogenous, having a minimum of 75% total nitrogen in slow-release form.

   a. Application rate: As necessary to provide 1lb. Nitrogen per 1,000 square feet of lawn area.

2.2 LAWN SEED

A. Grade A quality, fresh and recleaned and proven to produce satisfactory growth in the locality of the project.

B. Seed Mix: Fresh, clean and from current seasons crop, delivered in original packages, unopened, bearing guaranteed analysis. Seed shall meet NYSDOT standards of germination and purity.

1. Composed of the following varieties, mixed to the specified proportions by weight, and tested to minimum percentages of purity and germination. Shall be free of: Poa Annua, bent grass, and noxious weed seed.
   Blend - Mix Type 'A' Rate: 5 to 6 pounds per 1,000 SF (Acceptable for all lawn applications).

   LAWN SEED MIX

Common Names	Parts	Purity	Germination
Common Kentucky Bluegrass	15%	85%	90%
Boreal Creeping Red Fescue	30%	97%	85%
Pennfine Perennial Ryegrass	55%	85%	80%

2.3 MULCH

A. Straw Mulch: Clean oat or wheat straw well seasoned before baling, free from mature seed bearing stalks or roots of prohibited or noxious weeds.

2.4 WATER

A. Free of substance harmful to plant growth. Hoses, pumps, sprinklers or other methods of transportation furnished by contractor.

2.5 TOPSOIL

A. General Topsoil

1. Approved topsoil, obtained from excavation and grading work or if insufficient material (either quantity and/or quality) is available, it shall be imported. All topsoil shall be depth as indicated under Spreading Topsoil of this specification.

2. Topsoil shall be natural, friable, fertile soil, characteristic of productive soil in the vicinity, reasonably free of stones, clay lumps, roots and other foreign matter.

3. Store topsoil separately from all other excavated materials on-site and preserve for reuse or replace with imported topsoil meeting the requirements of NYSDOT Section 713-01.

4. Stocked or furnished topsoil shall be tested by an approved soil testing laboratory for determination of correct lime fertilizer additives. Submit mechanical and chemical analysis of off-site topsoil to the Architect/Engineer for approval prior to delivery of topsoil to the site. If more than one source will be used, provide an analysis of each source.

2.6 SEEDING ACCESSORIES

A. Weed Killer: If necessary in the opinion of the Architect/Engineer, an application of broadleaf weed killer may be required prior to final acceptance. Ortho Weed-B-Gone or equal at a rate of 3 teaspoons/gallon of water or 3 cups (25 oz.) per 50 gallons of water shall be applied at least 48 hours before watering or anticipated rainfall.

B. Mulch Tackifier: Apply liquid tackifier uniformly at the rate of 60 gallons per acre, if needed, to keep straw mulch in place.

C. Ground Limestone: Shall be applied at a rate sufficient to adjust pH to between 6.0 and 7.0 as determined by the pH testing laboratory. (Laboratory costs paid by the Contractor.) Rate of lime application not to exceed 50 pounds per 1000 sf.

1. Calcic or dolomitic ground limestone.

2. Shall contain not less than 85% of total carbonates.

3. Magnesium oxide - 10% minimum content for dolomitic and high magnesium limes.

4. Sieve Analysis - at least 50% will pass through a No. 100 mesh sieve and 90% will pass through a No. 20 mesh sieve.

5. Coarser material may be used providing the rates of application are increased as approved by the Architect/Engineer.

D. Packaging: New, clean, sealed and properly labeled bags not exceeding 100 pounds each.

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify that all underground and above ground work has been completed to the point where topsoiling, fertilizing, seeding and mulching operations may properly commence without unnecessary disturbances at a later date.

3.2 SPREADING TOPSOIL

A. In areas to be seeded, provide topsoil to a minimum compacted thickness of 6-inches. In the event that insufficient topsoil is not available from stripping the area to be excavated, the Contractor shall import enough additional topsoil to make up the deficit at no additional cost to the Owner.

B. Loosen all ground surfaces to a minimum depth of 2" to facilitate bonding of the topsoil to the subgrade. Use discs, spike-toothed harrows or other approved means.

C. Clean surface of subgrade of all stones, sticks and rubbish larger than 2" in size and all litter and detrimental materials. Do not spread topsoil until the previously established subgrade has been approved by the Architect/Engineer. Spread topsoil evenly on the approved prepared subgrade and lightly compact.

D. Carry out spreading so that turfing operations can proceed with a minimum of soil preparation or tilling. Do not spread topsoil when the ground is frozen, excessively wet or otherwise in a condition detrimental to the work in conformance with all legal requirements and in a manner acceptable to the Architect/Engineer.

E. Finished Grades: Shall be understood to be final spot grades and contours indicated on the contract drawings. Where final spot grades or new contours are not indicated, finished grades shall be uniformly level or sloping between points for which elevations are given or contours are shown or shall be graded to the elevations which previously existed. However, final surface grades shall afford positive drainage of all areas at all times.

F. Tops and Bottoms of All Slopes: Round tops and bottoms of slopes and drainage swales. Adjust and warp slopes, at intersections of cuts and fills, to flow into each other or into the existing natural ground surface without noticeable break. Cuts and fills shall have a maximum slope of 3' horizontally to 1' vertically, unless otherwise shown on the contract drawings.

G. Fine Grading Lawn Areas: Bring the grade of areas to receive lawns to a uniform, level slope, as determined by the use of surveying instruments, by discing, harrowing and other methods approved by the Architect/Engineer.

H. When establishing finish grades, remove and dispose of all clods, hard lumps, stones and rocks, roots, litter and other foreign matter not passing through the teeth of a hand iron rake. Tractor drawn raking equipment that compacts lawn areas will not be allowed.

I. Dispose of all such materials off-site.

J. Remove all topsoil spilled on highways, shoulders, sidewalks, driveways and other surfaces for which topsoil is not specified or required.

K. Settlement: Maintain ground surfaces to the finish grades shown on the contract drawings, and deposit whatever additional topsoil that may be required to correct any settlement or erosion that occurs prior to the date of issuance of the Certificate of Final Acceptance. The surface upon which additional topsoil is to be deposited shall be raked or otherwise satisfactorily prepared to ensure a proper bond. Fill hollows that develop from settling, to the finished elevations, with approved topsoil. Finished lawn areas shall be left sufficiently high to meet all paved areas and catch basins after settlement.

3.3 PREPARATION OF TOPSOIL

A. If the following conditions exist at the time of sowing seed, placing fertilizer and lime, this paragraph may be omitted:

1. Topsoil has been spread and raked clean within the past 10 days and is shaped to the required grade.

2. Topsoil was spread more than 10 days ago but the top 3" is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter and shaped to the required grade.

B. If any of the above conditions do not exist, then prepare the topsoil in accordance with the following paragraphs.

C. Repair all eroded and damaged surfaces, cut or otherwise remove all weeds and grass and scarify or otherwise loosen topsoil to a depth of not less than 3 inches.

D. Break up large, stiff clods, and hard lumps, and rake off all stones and rocks larger than 1" in size, roots, litter, foreign matter, poisonous materials, and other materials which may be detrimental to the work. Dispose of all such materials off-site in conformance with all legal requirements and in a manner acceptable to the Architect/Engineer.

3.4 SEEDING LAWNS AREAS

A. Seeding Limits: All ground area within the indicated contract limit lines, or any additional area which has been disturbed in any way by the construction operations, shall be fine graded and planted with lawn seed mix unless otherwise indicated on the drawings to be covered with trees, shrubs, structure(s), walks, roads, or other surfaced areas.

B. Responsibility: The contractor shall utilize all such measures as may be necessary, including, but not limited to, protective fencing, sod, or erosion control netting to produce a finished continuous blanket of turf over all areas designated to receive lawns.

C. Liming (used when required to adjust pH of topsoil):

1. Apply separately at a rate sufficient to bring the pH of the topsoil between 6.0 and 7.0 as determined by the pH testing lab, prior to fertilizing, seeding and sodding. Lime may be applied dry by spreader or as an aqueous solution by spraying. Rate of lime application not to exceed 50 lbs per 1000 sf.

2. After application, work lime into the top 3" of topsoil and redress surface to a smooth finish.

D. Fertilizer (Dry)

1. Apply fertilizer to indicate lawn areas at a rate equal to 1.0 pound of actual nitrogen per 1,000 square feet (430 pounds of fertilizer per acre).

2. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated into soil to a depth of 3", by discing or other approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.

3. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed, after fine grading and prior to seeding.

E. Seeding Operations (Lawns Only)

1. Dry Seeding

a. Seed immediately after preparation of bed. Spring seeding between April 1 (or thereafter when ground becomes workable) and June 1, and Fall seeding between August 15 and October 15, or at such other times acceptable to the Architect/Engineer.

b. Seed indicated areas, within contract limits and areas adjoining contract limits, disturbed as a result of construction operations.

c. Perform seeding operations when the soil is dry and when winds do not exceed 5 miles per hour velocity.

d. Apply seed with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in two directions, at right angles to each other.

e. Sow grass seed at rate recommended by seed vendor and approved by the Architect/Engineer. The total rate of seed application shall be based upon "new lawn" requirements and shall not be less than 5 pounds per 1,000 square feet.

f. After seeding, lightly rake or drag surface of soil to incorporate seed into top 1/8" of soil. Roll with light lawn roller.

F. Fertilizing and Seeding (Wet-Hydro Seeding)

1. Contractor may apply seed and fertilizer by spraying them in the form of an aqueous mixture. Water used shall be fresh water free from injurious chemicals and other toxic substances harmful to plant life.

2. Equipment shall be of a type made specifically for this purpose and capable of maintaining a uniform mixture, even when not spraying. Use a hydromulcher (sprayer).

3. Apply mixture(s) at the following rates. Mix in accordance with manufacturer's recommendations. Protect all paving, buildings, plantings and all nonseeded areas from over spraying of hydroseed mixture. Contractor shall clean up unwanted deposits at his expense.

   LAWN SEED

   a. Grass Seed: 175 pounds/acre.

   b. Fertilizer: 430 pounds/acre.

   c. Tackifier: 60 gallons/acre.

   d. Wood Cellulose Fiber Mulch: 2,000 pounds/acre.

4. Roll seeded surfaces if mulch is not used and only after soil has dried. Roll with light lawn roller.

5. A non-harmful color additive, which colors the hydroseed mixture green, shall be added to the mixture to allow visual metering of its application. The hydroseed mixture shall be sprayed upgrade and uniformly on the surface of the soil to form an absorbent cover, allowing percolation of water to the underlying soil.

G. Mulching of Lawn Areas (Lawns Only)

1. Place straw mulch on seeded areas within 24 hours after seeding.

2. Place straw mulch uniformly, in a continuous blanket, at the rate of 2-1/2 tons per acre or two 50 pound bales per 1,000 square feet of area. A mechanical blower may be used for straw mulch application, when acceptable to the Architect/Engineer.

3. Anchor straw mulch with liquid tackifier, applied uniformly at a rate of 60 gallons per acre.

4. Protect all paving, buildings, plantings and all nonseeded areas from liquid tackifier over-spray.

5. Provide straw bales checking in ditches or problem swales at intervals required to adequately slow water velocity and impede soil loss.

3.5 LAWN MAINTENANCE

A. Maintain seeded areas for a period of at least 60 days after completion and final acceptance of seeding operations.

B. Maintain seeded areas, including watering, spot weeding, mowing, applications of herbicides, fungicides, insecticides and reseeding until a full, uniform stand of grass free of weeds, undesirable grass species, disease and insects is achieved and accepted by the Architect/Engineer.

C. Water as necessary to maintain adequate surface soil moisture for proper seed germination until acceptance.

D. Repair, rework, and reseed all areas where seed fails to germinate or where seeded areas have been damaged by wash out, erosion, people, vehicular traffic, or other causes.

E. Apply fertilizer to lawns (only) approximately 30 days after seeding, at a rate equal to 0.3 pounds of actual nitrogen per 1,000 square feet (140 pounds/acre). Apply with mechanical rotary or drop type distributor. Thoroughly water into soil.

F. Maintain seeded banks, ditches, medians and fields. Regrade and reseed washed out or eroded areas as required, until a suitable cover is established.

3.6 FINAL ACCEPTANCE

A. Inspection to determine final acceptance of seeded lawns will be made by the Architect/Engineer upon contractor's request. Provide notification at least 10 working days before requested inspection date.

1. Seeded areas will be acceptable provided all requirements, including maintenance, have been completed and a healthy, uniform, close stand of the specified grass is established, free of weeds, undesirable grass species, disease and insects.

2. In areas requested to be inspected, no individual seeded areas shall have bare spots or unacceptable cover totaling more than 2% of the individual areas.

B. Upon final acceptance of the seeding operations and completion of the maintenance period, the Owner will assume lawn maintenance.

END OF SECTION

SECTION 33 05 13
PRECAST STRUCTURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Furnishing and installing complete precast manholes and structures with frames, precast slabs, covers, steps, inverts, and testing at the locations shown on the plans or as directed by the Architect/Engineer as well as the abandonment of existing manholes.

1.2 SUBMITTALS

A. Submit manufacturer's data shop drawings for precast base, riser, and precast tops, steps, frames and cover, coatings, pipe connectors, etc.

B. Submit manufacturer's certification of compliance for precast concrete sections and castings.

C. Product Data: Prior to fabrication, submit the following to the engineer for approval:

1. Submit manufacturer's data and catalog cuts for concrete valve vault, hatch, ladder, pull-up handrail, piping, wall penetration enclosure, and all associated damp proofing.

2. Submit manufacturer's data and catalog cuts for valves and all associated appurtenances to complete the system.

3. Submit certifications from the manufacturers that equipment or materials provided meet the required specifications.

1.3 PRODUCT HANDLING

A. All material shall be delivered to the job site intact and in good condition.

B. In the event of damage, either in delivery or installation, all repairs and replacements shall be approved by the Architect/Engineer.

PART 2 - MATERIALS

2.1 PRECAST SECTIONS

A. Precast grade rings, riser bases, and risers shall be circular in cross section and precast tops shall be flat slab. The flat slab shall be reinforced to withstand AASHTO H20-44 concentrated wheel loading. An opening matching the casting frame inside base diameter shall be eccentrically located in the flat roof slab.

B. All precast sections shall conform to ASTM C-478 construction and minimum dimension criteria. Riser sections shall be of maximum practicable length to attain the specified grade elevation with the minimum number of joints and the shortest possible chimney. The minimum interior diameter shall be 48 inches.

C. Precast reinforced bases shall be integrally cast with wall riser conforming to ASTM C-478 with a minimum 4,000 psi concrete.

D. Openings in precast riser sections to receive pipes shall be accurately cast, both vertically and circumferentially. Where openings are incorrectly cast, the riser section shall be removed from the project site and replaced with a satisfactory base. Costs for replacements, whether attributed to improper manufacturing, field changes, or for any other reason shall be borne by the Contractor.

E. Provide adequate lifting anchors on each precast section. Lifting holes shall not be allowed.

F. Coat precast sections in accordance with contract plans. Install all coatings per manufacturer recommendations.

2.2 PRECAST STRUCTURE JOINTS

A. Joints shall be formed with male and female ends so that when assembled, a continuous and uniform manhole without appreciable irregularities in interior wall surfaces will be completed.

B. Butyl Rubber Sealant to conform with ASTM C-990.

1. Approved Manufactures: ConSeal SC 102 or approved equal.

C. Permissible variations are as follows:

1. Internal dimensions – not more than 1 percent

2. Wall thickness – not more that 5 percent or $\pm$ 3/16 inch, whichever is greater

3. Length of two opposite sides – not more than 5/8 inch

4. Length of section – not more than 1/2 inch in any one section

D. Seal all precast structure section joints with rubber gasket and flexible joint sealant as shown on the plans.

2.3 GRADE RINGS

A. Precast grade rings shall conform to ASTM C-478 construction and minimum dimension criteria. All concrete shall be made with Type II Portland Cement. Brick shall not be used for grade adjustments.

2.4 MORTAR

A. Mortar shall consist of one part Portland Cement to two parts sharp, clean masonry sand to which hydrated lime may be added in the proportion of 10 pounds for each bag of cement. Mortar materials shall conform to the following:

Portland Cement	ASTM C-150 Type I or II
Sand Aggregate	ASTM C-144
Hydrated Lime	ASTM C-207

2.5 HYDRAULIC CEMENT

A. Epoxy Mortar for Pipe-to-Manhole Seal: Speed Crete Red Line, by Euclid Chemical, or approved equal. .

2.6 PRECAST STRUCTURE COVERS, GRATES, AND FRAMES

A. All manhole frames, grates, and covers shall be iron castings conforming to ASTM A48, Class 30. They shall be true to pattern in form and dimensions, without unfilleted angles or corners; and shall be free from pouring faults, sponginess, cracks, blowholes, shrinkage, distortion and other defects. After casting and prior to shipping, smooth and clean all surfaces by sand blasting. Castings shall be factory coated with coal tar pitch varnish. Castings shall be thoroughly shop coated with two coats of Koppers Super Service Black or coal tar enamel or asphalt base bituminous material with a minimum dry thickness of 12 mils.

B. Frames and covers shall be accurately made and covers shall fit in any position without rocking. Horizontal and vertical fitting surfaces shall be milled to true and even surface to insure uniform bearing.

C. All frames, grates, and covers must conform to these specifications as to quality, strength, thickness of metal and finish. Covers shall be furnished with lettering on face where required and as shown on the contract drawings. All castings shall be designed to sustain AASHTO H20-44 wheel loading. The minimum thickness of metal at any point shall be 3/4 inch.

D. Fabricate all frames, grates, and covers so that covers and grates fit in any position without rocking. Mill horizontal fitting surfaces to a true and even surface to ensure uniform bearing. Units and portions of units shall be interchangeable.

2.6 FRAME AND COVER (SOLID)

Cover shall be solid, provide a non-penetrating pick hole for lifting, and have a non-skid surface. Cover shall have raised lettering of two inches or more in size (cast into the cover) with the following clearly printed: "STORM". The minimum clear opening of the frame shall be 24 inches. Frames and covers shall be manufactured by East Jordan Ironworks or Neenah Foundry Company or approved equal.

2.7 FRAME AND COVER (INLET)

Cover shall be a slotted grate with maximum openings of 1" wide x 4" long. The cover shall be H-20 loading compliant and have a minimum clear opening of frame of 24 inches. Cover

shall have raised lettering of two inces or more in size (case into the cover) with the following clearly printed: "STORM". Frames and covers shall be manufactured by East Jordan Ironworks or Neenah Foundry Company or approved equal.

2.8 SANITARY PIPE CONNECTIONS TO EXISTING STRUCTURES

E. Flexible connector consisting of a rubber gasket conforming to ASTM C-923, 11 gauge Series 304 stainless steel internal expansion sleeve, and stainless steel external compression take-up clamp. Kor-N-Seal or approved equal.

2.9 CONCRETE BENCH WALLS

A. Concrete for bench walls and inverts shall be NYSDOT Class A Concrete.

2.10 BITUMASTIC BLACK COATING

A. Manufacturer: Concrete Sealants, Inc or approved equal.

B. Material: ConSeal 55 or approved equal (unless otherwise noted on the drawings).

2.11 EPOXY COATING

A. Manufacturer: Sika USA or approved equal.

B. Material: Sikagard 62 or approved equal (unless otherwise noted on the drawings).

PART 3 - EXECUTION

3.1 GENERAL

A. It is the intent of this specification to secure soundly constructed, water tight manholes and structures constructed in accordance with the Contact Drawings.

B. Verify that excavation is in the proper location, that pipes have been installed at the correct elevations and that the subgrade has been properly prepared. Foundations shall not be placed upon frozen or muddy subgrade.

3.2 ORIENTATION OF COVERS, GRATES, AND RUNGS

A. General – The intent of this paragraph is to provide guidance in the selection of the location of the frame and cover. The location should provide for convenient ingress and egress, and minimizes adverse visual impacts. Unless otherwise specified, shown on the Drawings, or directed by the Architect/Engineer, orient the location of covers and steps by using the following criteria, with precedence given in the order presented.

B. Safety - Give primary concern to safety considerations for providing convenient access to structure interiors.

C. Covers and Pavements - To avoid future problems with snow removal or street cleaning, orient covers to lie completely outside of paved surfaces, including walks and roadways. If this cannot be accomplished, locate covers completely in pavement. Covers partially in pavement are not permitted without the prior approval of the Architect/Engineer. When covers occur in paved areas, locate entirely within a single traffic lane and as near to the edge of pavement as is possible, but no closer than 8 inches from the edge of pavement.

D. Ingress/Egress - Coupled with the above, convenient and safe access to within the structure must be evaluated. Coordinate cover location with pipe openings, structure benches and inverts, safety landings and the like. Make every effort to locate steps on a wall with no pipe penetrations and, where steps are not specified to be provided, consideration shall be given to the safest means of seating the feet of ladders which will be used for access to structure interiors.

E. Non-compliance - Non-compliance with the requirements of this section may result in Architect's/Engineer's disapproval of the entire structure. When requested, Architect/Engineer will assist in determining the optimum location of covers, grates, and rungs.

3.3 INSTALLATION OF PRECAST STRUCTURES

A. Cut existing sewer piping and remove existing manholes as necessary.

B. Precast Bases: Place stone bedding, level, and tamp firmly in place. When absolutely necessary, pea stone may be used for minor grade adjustments in the stone bedding, but the depth shall not exceed 3/4 inch. Carefully lower precast base in place, taking extra care not to shift the stone bedding, and align all openings with the pipes to be connected. Leveling of the base by tamping or pounding on the top of the precast product is prohibited. If base is not level, lift it out; readjust stone bedding, and reset base. Continue this procedure until base is level.

C. Precast Risers and Top Sections: Thoroughly clean all joints of precast sections and install jointing material. Carefully set precast sections in place, making sure that rubber gasket or jointing materials are not displaced and that a good seal is attained.

D. Filling Precast Section Joints: Fill interior and exterior horizontal joints with flexible joint sealer. Cover inside and outside of joints with two coats of Bitumastic Black Paint as approved by Engineer/Architect. Joints shall be sealed with a rubber o-ring gasket.

E. Inverts:

1. Inverts shall be constructed in all manholes.

2. Precast Openings: Flexible connector consisting of a rubber gasket conforming to ASTM C-923, 11 gauge Series 304 stainless steel internal expansion sleeve, and stainless steel external compression take-up clamp.

3. For bases with preformed openings, pipes entering or leaving the manhole shall be placed in preformed openings provided in the precast wall at the proper invert elevation and grouted into place with 100 percent epoxy non-shrink grout.

4. Inverts built upon precast bases shall be constructed of concrete brick, half sections of sewer pipe or be cast in place. Care shall be exercised in forming inverts to give proper slope and shape to each channel. Inverts shall be the depth of the pipe.

5. When PVC material is used, all brick, concrete, or other masonry material that interfaces with the PVC, shall adhere to the PVC with 100 percent epoxy non-shrink grout.

6. Bench walls shall be constructed of sewer brick (Grade SS) and bench filled with concrete. Bench walls shall be carried a minimum of one brick course above top of highest pipe entering the manhole. Slope the top surface of the benching towards the channel at a pitch of approximately ½-inch/foot.

7. After initial setting bare concrete or grout shall be waterproofed with coal tar coating.

F. Frames:

1. All frames shall be set firmly in a bed of mortar not less than ½-inch thick. Concrete fill shall be placed around the outside as shown on the details and kept 2 inches below the top of the frame.

2. Precast grade rings set in mortar shall be used to bring manhole frames to grade, maximum 8 inches height for grade ring.

3. The frame and cover shall be depressed below edge of pavement elevation as indicated on the contract drawings.

4. The Contractor shall be responsible for maintaining and keeping all precast structures clean and free of debris until completion of the Contract.

3.4 CONNECTION TO EXISTING MANHOLE(S) OR STRUCTURE(S)

A. Where noted on the Drawings or as directed by the Architect/Engineer, the Contractor shall make connection to existing manholes or structures. The use of excessive force or blunt instruments is prohibited in installing the pipe into the existing wall.

B. If a stub exists and matches the size of the new sewer, the Contractor shall connect to the stub. The stub to manhole connection should be checked and repaired if damaged or in poor shape. If stub does not match the size of the new sewer, the stub shall be removed and the new sewer shall be inserted into the manhole.

C. If no stub exists, neatly core drill a hole through the existing wall, taking care to achieve the minimum diameter hole required to install the pipe true to line and grade, as shown on the contract drawings or as directed by the Architect/Engineer, and in a manner which will not

effect the structural integrity of the existing concrete. The structure shall be maintained in good repair.

D. For sanitary manholes or structures only, provide an approved flexible and watertight connection at the wall. For other structures, after inserting the connecting pipe, fill the annular space with non-shrink grout.

E. In making the connection to existing manhole(s), it shall be the Contractor's responsibility to dewater the structure and provide bypass pumping as required in order to make the connection.

F. The manhole shall be visually inspected by the Architect/Engineer for tightness of fit at all new joints.

3.5 STRUCTURE CONNECTION TO EXISTING SEWER

A. Where noted on the contract drawings or as directed by the Architect/Engineer, the Contractor shall provide a new connection to the existing sewer system by constructing a new manhole over the existing main. The Contractor shall be responsible for locating the existing service. Any damage to the existing sewer as a result of this work shall be repaired by the Contractor immediately and at no additional cost to the Owner.

B. Details of this connection shall be as shown on the contract drawings. Temporary support for the existing sewer shall be provided until the bench is poured. A water tight seal around the barrel openings of the existing main shall be provided.

C. Provide necessary adapters and specials required to make the connections.

D. Do work at such times and in such a manner as to cause a minimum of interruption to existing services.

E. In making the connection to the existing sewer(s), it shall be the Contractor's responsibility to dewater the sewer(s) and provide bypass pumping as required in order to make the connection.

3.6 TESTING

A. Testing of sanitary valve vault shall be accomplished by vacuum testing.

B. When the sanitary sewer is tested and approved by the Architect/Engineer, the wet well and valve vault shall be tested. The inlet and outlet pipe for the structures shall be plugged with a plug that allows no leakage.

C. The test head shall be placed inside the 24-inch opening and the seal inflated in accordance with the manufacturer's recommendations.

D. A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off. With the valves closed, the time shall be measured for the vacuum to drop to 9 inches. The structure shall pass the test if the time is greater than the following:

Diameter of Structure	Time (seconds)
48 inches	60
60 inches	75
72 inches	90

E. If the structure fails the initial test, necessary repairs shall be made. Retesting shall proceed until satisfactory results are obtained.

F. All structures and drop inlets shall be visually inspected for tight joints and neat workmanship. The flow lines in a structure shall be smooth and neat.

G. The structure shall be filled to the top of the rim with water. The allowable leakage shall not exceed 0.019 gallons/day/in manhole dia./vertical foot of structure depth. The structure shall pass the test if the measured leakage is less than the allowable leakage for a 4 hour test.

3.7 REJECTION AND REPAIR

A. Structure sections shall be subject to rejection on account of failure to conform to any of the specification requirements. In addition, individual sections of structure sections may be rejected because of any of the following:

1. Fractures or cracks passing through the wall, except for a single end crack that does not exceed the depth of the joint.

2. Defects that indicate imperfect proportioning, mixing, and molding.

3. Surface defects indicating honeycombed or open texture.

4. Damaged or cracked ends, where such damage would prevent making a satisfactory joint.

5. Any continuous crack having a surface width of 0.01 inch (0.25 mm) or more and extending for a length of 12 inches (305 mm) or more, regardless of position in the section wall.

6. Improper waterproofing materials or mil thickness.

B. Structure sections may be repaired with prior approval of the Architect/Engineer, if necessary, because of occasional imperfections in manufacture or accidental injury during handling and will be acceptable if, in the opinion of the Architect/Engineer, the repairs are sound and properly finished and cured, and the repaired manhole sections conform to the requirements of this specification.

3.8 MARKING AND PAINTING

A. Name and trademark of the manufacturer, as well as structure number, shall be clearly marked on each structure section.

B. Marking shall be indented into the structure bases, risers, and top sections or shall be painted thereon with waterproof paint.

C. Immediately after installation is completed, the Contractor shall touch up all marks, scars, and imperfections found in the specified coating systems. Work shall be done in accordance with the coating manufacturer's recommendation.

END OF SECTION

SECTION 33 41 00
STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Extent of storm sewer system work includes, but is not limited to the following:
1. Furnish and install new storm sewer drainage and under drain piping, fittings, and accessories
2. Furnish and install new storm manholes
3. Complete connections to existing piping
4. Complete connections to existing storm catch basin
5. Furnish and install underground chamber system
6. Flush existing and new storm pipes, capture and removing debris

B. Contractor shall be responsible to maintain flow through existing storm sewer systems by whatever means necessary, including pumping, temporary piping etc. Contractor shall coordinate with the Architect/Engineer for approval of proposed methods.

C. Related Sections:
1. Division 31 Section **"Earth Moving"**
2. Division 31 Section **"Erosion and Sediment Control"**
3. Division 33 Section **"Precast Structures"**

1.3 QUALITY ASSURANCE

A. All precast concrete sections and structures, and all castings shall each be the product of a single manufacturer who can furnish evidence of satisfactory experience in the product of high quality products of the type indicated and specified.

B. Pipe and pipe fittings shall be produced in a plant of recognized reputation that is regularly engaged in the production of pipe conforming to the specified standards. Pipe and pipe fittings of the same type shall be the product of a single manufacturer.

C. All pipe and pipe fittings, structures, and castings shall be of good quality and free from defects which would make it unfit for the use intended.

D. Contractor shall be responsible for furnishing all labor, materials, surveying instruments and tools necessary to establish and maintain all lines and grades.

1.4 SUBMITTALS

A. Submit Material Safety Data Sheet (MSDS) for nonshrink grout.

B. Submit manufacturer's data and shop drawings for precast structures, frames and covers, coatings, pipe connectors, backwater check valves, etc.

C. Manufacturer's literature and catalog cuts including technical, material specifications, dimensions, tolerances, and installation information for all underdrain products, pipe and pipe fittings, and geotextile fabrics.

D. Shop drawings, catalog cuts, and manufacturer's literature for all pipe and pipe fittings, to include coatings and linings, material specifications, dimensions, tolerances, and all related data shall be submitted.

E. Manufacturer's certification that pipe supplied meets the required specifications shall be submitted.

F. Pipe manufacturers shall furnish Certificates of Compliance on pipe, with each load of pipe supplied. Immediately turn certificates over the Architect/Engineer. Materials delivered to the site without accompanying certificates will be subject to rejection.

G. Submit record drawings indicating actual location of pipe runs, connections, wyes, stubs, structures and associated invert elevations. Record actual vertical separations at all exposed utility crossings. Record invert elevations at all utility crossings.

H. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

I. Submit for review layout of proposed underground detention basin as provided by the manufacturer, including system inverts, elevations, lengths, widths, connection details, total storage volume, water quality volume and the water quality volume storage elevation, in compliance with the contract drawings.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Each length of pipe delivered to the site shall be clearly marked at the factory with the name of the manufacturer, class of pipe, pipe diameter and all else as required by the codes, standards, and specifications referred to under this section. Omission of this information will be cause for rejection of pipe.

B. Store all materials in accordance with manufacturer's approved instructions. Store all materials so they can be easily inspected and so they will not be damaged prior to installation.

C. Carefully handle all pipes and fittings when loading and unloading to avoid damage to pipe, coatings, or linings. Pipe or fittings with damaged coatings or linings shall be repaired or replaced by the Contractor at his expense and to the satisfaction of the Architect/Engineer. Lift pipes and fittings by hoists or lower on skid ways in a manner to avoid shock. Lower pipe into

trench with derricks, rope, or suitable equipment for the safety and protection of workmen, materials, equipment, property, and the work.

D. Do not dump or drop pipe and fittings. Those that are dumped or dropped are subject to rejection by Architect/Engineer.

E. Carefully handle precast sections and all castings when loading and unloading to avoid damage. In the event of damage, either in delivery or installation, the damaged section shall be immediately removed form the project site and replaced at no additional cost to the Owner.

1.6 ABBREVIATIONS

CIP	Cast Iron Pipe
CMP	Corrugated Metal Pipe
CPP	Corrugated Polyethylene Pipe
DIP	Ductile Iron Pipe
PVC	Polyvinyl Chloride Pipe
PCPP	Perforated Corrugated Polyethylene Drain Pipe
RCP	Reinforced Concrete Pipe
SICPP	Smooth Interior Corrugated Polyethylene Pipe
VTP	Vitrified Tile Pipe (clay)

1.7 MATERIAL TESTS

A. Various tests and checks shall be performed, as specified herein, to determine compliance with the specifications and drawings. The Contractor is advised that failure of a test is suitable grounds for the Architect/Engineer to order that portion of the work removed and reconstructed, if necessary, to meet the requirements of the Contract Documents.

1.8 JOB CONDITIONS

A. The drawings indicate the required structure and pipe sizes, and locations of all structures, piping and appurtenances. Verify all locations and immediately notify Architect/Engineer of any discrepancies or conflicts.

B. Verify that survey benchmark and intended elevations for the work are as indicated and verify existing site conditions.

C. Utilities shown on the Contract Drawings are for the convenience of the Contractor, exact locations are not guaranteed. The Contractor shall verify existing utilities with the proper authorities.

D. The Contractor shall take precautions to protect from harm the work of other contractors on site, existing facilities, as well as adjacent property. The Contractor shall be responsible for all damage or injury done to pipes, structures, utilities, pavement, buildings, property or person as a result of work to complete this contract. The Contractor at his own expense shall repair or replace such property or item to the satisfaction of the property owner, utility owner, public agency having jurisdiction, Architect/Engineer and Owner's Designated Representative.

1.9 PROTECTION OF WATER AND GAS LINES FROM STORM SEWER

A. Refer to water main notes provided on the Contract Plans.

PART 2 – PRODUCTS AND MATERIAL

2.1 GENERAL

A. Caps and Plugs – Water tight, of similar manufacturer and producing the same joint conditions as the pipe on which the cap or plug is placed.

B. Bedding and Backfill Materials: Shall be as detailed on the Contract Drawings and as specified in Division 31 Section "Earth Moving".

C. Pipe Adapters – Join pipes of different materials with adapters specifically manufactured for that purpose and as approved by the Architect/Engineer. Where dissimilar materials join, such that galvanic action may produce corrosion, provide dielectric couplings to preclude damage to the materials.

D. Concrete for Pipe Encasements and Cradles – Class A concrete per NYSDOT Standard Specification Section 501.

E. Flowable concrete fill for sewer abandonment shall be Controlled Low Strength Material (CSLM) as specified in Division 31 Section "Earth Moving".

2.2 SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (SICPP)

A. Corrugated polyethylene pipe storm sewers shall be high-density corrugated polyethylene smooth interior pipe. Four-inch to 10-inch diameter pipe shall conform to AASHTO M252 with the addition of smooth interior and 12-inch to 36-inch diameter pipe shall conform to AASHTO M294, Type S. Material compounds shall conform to ASTM D3350. Pipe shall be SureLok ST (bell & spigot) as manufactured by ADS/Hancor, Smooth Flow Pipe (bell & spigot) as manufactured by Haviland Drainage Products, or Inline Bell (bell & spigot) as manufactured by Lane Enterprises.

B. Pipe shall be joined using a bell and spigot joint meeting ASSHTO M252 or AASHTO M294. The joint shall be soil tight and gaskets shall meet the requirements of ASTM F477.

C. Pipe joined with manholes that use flexible connectors (boots) shall use corrugated pipe adapters to provide a sealing surface for the flexible connector.

D. Pipe joints and fittings shall be of the same material as the pipe.

2.3 UNDERGROUND CHAMBER SYSTEM

A. System basis for design: ADS Stormtech chambers and ADS Stormtech end caps, layout as shown on the construction drawings.

B. Storm Chambers:

1. Provide polypropylene dome / arch shaped, fully open bottom corrugated chambers meeting ASTM F2787 and ASTM F2418.
2. Chamber height: 60" min. As noted on drawings.
3. Chamber bottom width: 100" min. As noted on drawings.
4. Loading: Chambers shall meeting AASHTO H-20 loading

C. End Caps: Provide polypropylene end caps compatible with and of the same manufacturer as the storm chamber.

D. Pre-Treatment: Provide pre-treatment row with woven separation fabric under the entire length of the row between the chambers and the stone base, and non-woven geotextile wrapped over the top of the chambers for the entire length of the row. Pre-treatment row to be the first row in the chamber bed at each inlet point and directly connected to the manhole or access structure.

E. Subject to compliance with the requirements, acceptable manufacturers also include CULTEC or Lane StormKeeper.

F. Submit for review layout, as provided by the manufacturer, including system inverts, elevations, lengths, widths, connection details, total storage volume, water quality volume and the water quality volume storage elevation for the underground chamber system in compliance with the contract drawings.

2.1 MANHOLES

A. Manholes shall be as specified in Division 33 Section "Precast Structures".

2.2 CONNECTIONS TO EXISTING MANHOLE

A. Pipe to Manhole Seal: Use Hydraulic cement.

2.3 DETECTABLE UNDERGROUND MARKING TAPE

A. For all PVC, CPP, SICPP, or DIP sewer pipe or laterals, provide detectable warning tape. Refer to Division 31 Section "Earth Moving".

PART 3 – EXECUTION

3.1 PREPARATION

A. Thoroughly clean interiors of pipes, fittings, and appurtenances, joint surfaces, and gaskets prior to installation. Maintain pipes and fittings clean.

B. Verify that excavation is in the proper location, that pipes and structures have been installed at the correct elevations, and that the subgrade has been properly prepared.

3.2 PIPE AND STRUCTURE INSTALLATION - GENERAL

A. Trenching and related excavation work shall be completed in accordance with Division 31 Section "Earth Moving" and in a manner as approved by the Architect/Engineer. Remove all boulders, organic or spongy material, and other deleterious matter. Verify that trench excavation is ready to receive work and that excavations, dimensions, and elevations are as indicated on drawings.

Remove large stones or other hard matter, which could damage piping or impede consistent backfilling or compaction.

B. Pipe Foundation: All pipes, fittings, or specials to be installed shall be properly bedded in uniformly supported on pipe foundations of the type specified in Division 31 Section "Earth Moving" and indicated on the Contract Drawings.

C. Firmly bed pipe in the required depth of aggregate in such a manner that the pipe barrel is uniformly supported and cradled throughout its length. Provide suitable depressions where required in the foundation material to permit adequate bedding of the bells or other projections. The total depth of bedding shall be constant across the trench width.

D. Install storm structures and pipelines to the required lines and grades indicated on the drawings, or as directed by the Architect Engineer using an approved method of control.

E. Carefully lower pipes, fittings, and structures into the trench. Apply joint lubricant (if required) in accordance with the approved manufacturer's recommendations. Join pipe sections and fittings. Join pipe and structures.

F. Select pipe and fittings so that there will be as small a deviation as possible at the joints and so that inverts present a smooth surface. Pipe and fittings, which do not fit together to form a tight fitting joint, are not permitted.

G. Use only mechanical cutters for cutting pipe.

H. Cut ends of pipe which terminate at catch basins, manholes, or other structures cleanly and trim to a neat, sheared edge, flush with the inside wall of the structure.

I. Maintain cleanliness of installed pipe, fittings, and structure interiors throughout the work. Plug ends when installation is not in progress so that dirt, foreign matter, water, animals, and people do not enter the work. Drainage of construction excavations through installed pipes shall not be permitted.

J. Maintain the excavation free of water during the progress of the work. No pipes or structures shall be laid in water nor shall there be any joints made up in water. No separate allowance for pumping or otherwise removing water will be made. All slides or cave-ins of the trenches or cuts shall be remedied at the expense of the Contractor, and to the satisfaction of the Architect/Engineer.

3.1 UNDERGROUND DETENTION BASIN

A. Install underground detention basin in accordance with manufacturer's installation instructions

and recommendations.

B. Remove any sediment or debris that accumulates or collects within the detention basin prior to final completion..

3.2 TESTING OF SEWERS AND APPURTENANCES

A. Upon completion of construction of the sewer, including trench backfill, the Contractor shall clean and flush all pipes. All water needed to flush the sewer system shall be furnished by the Contractor at no additional cost to the Owner. The system shall be left free of all stones, sand, silt, or mortar projects. The benches and inverts of manholes and bottoms of inlets shall have all mortar dropping chipped away to leave a smooth, clean surface.

B. All materials flushed from the sewer shall be intercepted and removed to prevent the materials from entering the existing sewer system.

C. The Contractor shall supply all materials, equipment, and labor as required or ordered by the Architect/Engineer, to test the gravity mains, manholes, and appurtenances in accordance with the provisions of these specifications.

D. The Contractor shall receive no additional compensation for making the leakage tests or corrective work necessary to reduce leakage below the maximum allowed by these Specifications or Division 33 Section "Precast Structures".

E. The Contractor shall be responsible to dewater the sewer and bypass sewage flow where necessary to complete testing.

F. The Contractor shall leakage test each installed facility. These tests shall be conducted in the presence of the Architect/Engineer or his designated representative. No test will be accepted unless witnessed by the Architect/Engineer or his designated representative. Records and data of these tests shall be submitted by the Contractor to the Owner's Designated Representative as part of the record drawing information.

G. Water used by the Contractor during any testing procedures will be paid by the Contractor. All hydrants for water supply for testing use shall be operated by the appropriate utility owner. Backflow preventer and meters for the hydrants shall be required and provided by the Contractor.

3.3 DISPLACEMENT TEST OF GRAVITY SEWERS

A. Sewers will be checked by the Contractor in the presence of Architect/Engineer or his designated representative to determine whether any displacement of the pipe has occurred. The test will be as follows:

1. The test shall be conducted after the final backfill has been in place at least 30 days to permit stabilization of the soil-pipe system.

2. No pipe shall exceed a deflection of 5 percent.

3. Deflection tests are to be run using a rigid ball or mandrel, having a diameter of not less than

95 percent of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.

4. If deflection exceeds 5 percent, replacement of the defective sewer will be required at no additional cost to the Owner.

3.4 LEAKAGE AND LEAKAGE TESTS OF GRAVITY SEWERS

A. General

1. Test section shall be no greater than 400 feet in length.

2. The tests for water tightness shall be made by the Contractor under the directions of the Architect/Engineer. The Contractor shall furnish, at his own expense, the necessary facilities for making the tests and determining groundwater conditions at the time of the test.

3. The Architect/Engineer will give the Contractor notice of the time and place when such tests will be made, which may be during a rainy season or period of high groundwater.

4. Hydrostatic-exfiltration and infiltration tests shall be conducted for a minimum test period of 24 hours. The Architect/Engineer may, at his discretion, require that the test period be extended beyond 24 hours in order to obtain meaningful test results.

B. Exfiltration (Gravity Sewer Lines)

1. Where no groundwater exists at the time of the tests, the sewers, manholes, and service connections shall be subjected to an internal water pressure test to the extent deemed necessary by the Architect/Engineer to determine their water tightness.

2. The lower end of the section shall be tightly plugged and the line filled with water. The line shall be vented to allow the air to escape from the pipe and the water level shall be brought to a point 2 feet above the crown of the pipe at its upper end shall be maintained for at least 1 hour. If deemed necessary by the Architect/Engineer, internal pressure tests will be made before backfilling of the section under test. Each joint and manhole will be inspected and any visible leakage shall be stopped by means satisfactory to the Architect/Engineer.

C. Infiltration (Gravity Sewer Lines)

1. Infiltration test shall be made in groundwater conditions as a check for water tightness of the sewers after backfilling has been completed and sufficient time has elapsed to permit the groundwater to rise to its normal level.

2. The test shall be made by using approved low head measuring weirs placed at the lower ends of the sections to be tested or by other approved methods. The Contractor shall erect a temporary bulkhead to shut off flow from above the section being tested, and shall provide pumps downstream of the measuring device to keep the system drained for the period of the test. The measurement of the water entering the section under this test will be made over a period of time established by the Architect/Engineer.

3. Allowable Leakage Infiltration: The maximum allowable leakage into the sewer lines including appurtenances shall be 100 gallons/mile/24 hours per 1 inch of internal diameter of the sewer. The maximum allowable infiltration expressed in gallons per hour is shown in Table B-1.

TABLE B-1
ALLOWABLE LIMITS OF INFILTRATION
BASED ON 100/GALLONS/INCH DIAMETER/MILE

Diameter of Sewer Inches	Infiltration Per Foot Per Hour Gallons	Diameter of Sewer Inches	Infiltration Per Foot Per Hour Gallons
4	0.0031	21	0.0166
6	0.0047	24	0.0189
8	0.0063	27	0.0213
10	0.0079	30	0.0237
12	0.0095	36	0.0284
15	0.0118	42	0.0331
18	0.0142	48	0.0379

4. Any section of sewer piping which does not meet the specified leakage test shall be repaired and retested by the Contractor at his expense.

D. Low Pressure Air Acceptance Test (Gravity Sewer Lines)

1. All branch fittings and ends shall be securely plugged to withstand the internal test pressures. The section of line being tested shall also be securely plugged at each manhole. All stoppers shall be adequately branched when required.

2. Air pressure tests shall be run following the guidelines of UNI-Bel (UNI-B-6-79) "Recommended Practice: For Low Pressure Air Testing of Installed Sewer Pipe."

3. General guidelines for air testing are provided. After a manhole to manhole reach of pipe has been backfilled to final grade, prepared for testing, and the specified waiting period has elapsed, the plugs shall be placed in the line at each manhole and secured.

   a. It is advisable to seal test all plugs before use. Seal testing may be accomplished by laying one length of pipe on the ground and sealing it at both ends with the plugs to be checked. The sealed pipe should be pressurized to 9 psig. The plugs shall hold against this pressure without bracing and without any movement of the plugs out of the pipe. No persons shall be allowed in the alignment of the pipe during plug testing. It is advisable to plug the upstream end of the line first to prevent any upstream water from collecting in the test line.

   b. This is particularly important in high groundwater situations.

   c. When plugs are being placed, the pipe adjacent to the manhole shall be visually inspected to detect any evidence of shear in the pipe due to differential settlement between the pipe and the manhole. A probable point of leakage is at the junction of the manhole and the pipe, and this fault may be covered by the pipe plug, and thus not revealed by the air test.

   d. Low pressure air shall be slowly introduced into the sealed line until the internal air pressure reaches 4.0 psig greater than the average back pressure of any groundwater above the pipe, but not greater than 9.0 psig. If groundwater is present, an air pressure correction must be made to the normal initial test pressure. This may be accomplished by dividing the vertical height (in feet) of the groundwater above the pipe invert by 2.31.

This value is added to the initial test starting pressure. The allowable pressure drop and duration of the test are not affected by this adjustment.

e. After a constant pressure of 4.0 psig (greater than the average groundwater back pressure), is reached, the air supply shall be throttled to maintain that internal pressure for at least two minutes. This time permits the temperature of the entering air to equalize with the temperature of the pipe wall.

f. When temperatures have been equalized and the pressure stabilized at 4.0 psig (greater than the average groundwater back pressure), the air hose from the control panel to the air supply shall be shut off or discontinued. The continuous monitoring pressure gauge shall then be observed while the pressure is decreased to no less than 3.5 psig (greater than the average back pressure of any groundwater over the pipe). At a reading of 3.5 psig, or any convenient observed pressure reading between 3.5 psig and 4.0 psig (greater than the average groundwater back pressure), timing shall commence with a stopwatch or other timing device that is at least 99.8 percent accurate.

g. A predetermined required time for a specified pressure drop shall be used to determine the lines acceptability. A pressure drop of 1.0 psig is specified in accordance with Table B-2.

h. If the time shown in Table B-2 for the designated pipe size and length elapses before the air pressure drops 1.0 psig, the section undergoing tests shall be passed and shall be presumed to be free of defects. The test may be discontinued once the prescribed time has elapsed even though the 1.0 psig drop has not occurred. If the pressure drops 1.0 psig before the appropriate time shown in Table B-2 has elapsed, the air loss rate shall be considered excessive and the section of pipe has failed the test.

i. If the section fails to meet these requirements, the Contractor shall determine at his own expense the source, or sources of leakage, and he shall repair or replace all defective materials and/or workmanship to the satisfaction of the Architect/Engineer. The extent and type of repair, which may be allowed, as well as results, shall be subject to the approval of the Architect/Engineer. The completed pipe installation shall then be retested and required to meet the requirements of this test.

TABLE B-2

SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015

1	2	3	4	Specification Time for Length (L) Shown (min./sec)							
Pipe Diameter (in.)	Minimum Time (min./sec.)	Length for Minimum Time (ft.)	Time for Longer Length (sec.)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	3:46	597	.380L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46

E. Pressure Testing of Individual Joints

1. General

a. Perform air and/or water pressure testing of individual sewer joints. The equipment and methods used for air/water pressure testing shall be approved by the Architect/Engineer and shall not utilize any untried or experimental equipment. Air/water pressure tests shall be made on each joint separately and at such other locations as the Architect/Engineer may direct.

b. Each lateral shall be tested using pressure test covering the entire lateral from mainline sewer to temporary cap to be placed at end of lateral.

2. Method and Equipment

a. Test Medium. A fluid (maximum viscosity of 2 centipoise) shall be used as the test medium. Both liquid (usually water) and air are acceptable, but the test procedure is different for each.

b. Equipment. The basic equipment used shall consist of a television camera, joint testing device (such as a packer), and test monitoring equipment. The equipment shall be constructed in such a way as to provide means for introducing the test medium, under pressure, into the VOID area created by the expanded ends of the joint testing device and means for continuously measuring the actual static pressure of the test medium, at and

within the VOID area only.

c. VOID pressure data shall be transmitted electrically from the VOID to the monitoring equipment. Example: via a TV picture of a pressure gauge located at the VOID, or via an electrical pressure transducer located at the VOID.

d. All test monitoring shall be above ground and in a location to allow for simultaneous and continuous observation of the television monitor and test monitoring equipment by the Architect/Engineer.

3. Test Procedure

a. Each sewer pipe joint shall and each complete lateral be individually tested at a test pressure equal to 1/2 psi per vertical foot of pipe depth (test pressure shall be a minimum of 5 psi and a maximum of 10 psi) in accordance with one of the following procedures:

b. Control Test. Prior to starting the pipe joint testing phase of the work, a two-part control test shall be performed as follows:

1.) To insure the accuracy, integrity, and performance capabilities of the testing equipment, a demonstration test will be performed in a test cylinder constructed in such a manner that a minimum of two known leak sizes can be simulated. This technique will establish the test equipment performance capability in relationship to the test criteria and insure that there is no leakage of the test median from the system or other equipment defects that could affect the joint testing results. If this test cannot be performed successfully, the Contractor shall be instructed to repair or otherwise modify his equipment and reperform the test until the results are satisfactory to the Architect/Engineer. This test may be required at any other time during the joint testing work if the Architect/Engineer suspects the testing equipment is not functioning properly.

2.) After entering each manhole section with the test equipment, but prior to the commencement of joint testing, the test equipment shall be positioned on a section of sound sewer pipe between pipe joints, and a test performed as specified. This procedure will demonstrate the reality of the test requirement, as no joint will test in excess of the pipe capability. The barrel of the sewer pipe shall meet the requirements specified for joint tests.

4. Liquid Test Procedure

a. The testing device shall be positioned within the line in such a manner as to straddle the pipe joint or lateral connection to be tested.

b. The testing device ends (end elements, sleeves) shall be expanded so as to isolate the joint or lateral connection from the remainder of the line and create a VOID area between the testing device and the pipe joint or lateral connection. The ends of the testing device shall be expanded against the pipe with sufficient pressure to contain a minimum of 10 psi within the VOID without leakage past the expanded ends.

c. Water or an equivalent liquid shall then be introduced into the VOID area until a pressure equal to or greater than the required test pressure is observed with the VOID pressure

monitoring equipment. If the required test pressure cannot be developed (due to joint leakage), the joint will have failed the test and shall be repaired by approved means.

d. The flow rate of the test liquid shall then be regulated to a rate at which the VOID pressure is observed to be the required test pressure. Reading of the test liquid flow meter shall then be taken. If the flow rate exceeds 1/4 gallon per minute (due to joint leakage), the joint will have failed the test and shall be repaired and retested.

5. Air Test Procedure

a. The testing device shall be positioned within the line in such a manner as to straddle the pipe joint or lateral connection to be tested.

b. The testing device ends (end elements, sleeves), shall be expanded so as to isolate the joint or lateral connection from the remainder of the line and create a VOID area between the testing device and the pipe joint or lateral connection. The ends of the testing device shall be expanded against the pipe with sufficient pressure to contain a minimum of 10 psi within the VOID without leakage past the expanded ends.

c. Air shall then be introduced into the VOID area until a pressure equal to or greater than the required test pressure is observed with the VOID pressure monitoring equipment. If the required test pressure cannot be developed (due to joint leakage), the joint will have failed the test and shall be repaired by approved means.

d. After the VOID pressure is observed to be equal to or greater than the required test pressure, the air flow shall be stopped. If the VOID pressure decays by more than 2 psi within 15 seconds (due to joint leakage), the joint will have failed the test and shall be repaired and retested.

3.3 FIELD QUALITY CONTROL

A. In the presence of the Owner's Designated Representative, inspect each length of pipe and each structure delivered to the job for flaws, cracks, dimensional tolerance and compliance with the applicable specifications. Only pipes, fittings, and structures accepted by the Owner's Designated Representative and so marked shall be installed in the work.

B. The Contractor shall inspect pipe joints and verify that they have been properly installed and made up, and free from sags, high spots, and excessive deflections.

C. The Owner's Designated Representative shall inspect each stretch of completed pipeline and structure prior to backfilling to insure compliance with the Contract Documents. The Contractor shall not continue with backfilling operations prior to inspection by the Owner's Designated Representative or prior to recording as built information.

D. Afford Architect/Engineer access to the work so that he may spot check the installations or check each length of pipe immediately after it has been installed, or check it at any time after installation.

E. Contractor shall request Owner's Designated Representative inspection prior to and immediately after placing aggregate cover over pipe.

F. Upon completion of construction of the sewer, including trench backfill, the Contractor shall clean and flush all pipes. The system shall be left free of all stones, sand, silt, mortar, and debris. The benches and inverts of manholes and bottoms of inlets shall have all mortar droppings chipped away to leave a clean and smooth surface.

G. All materials flushed from the sewer shall be intercepted and removed to prevent the materials from entering the existing sewer system.

3.4 DAMAGED FACILITIES

A. Any section of piping that is found defective in material, alignment, grade, joint, or otherwise, shall be corrected at no additional cost to the Owner.

B. In the event that dirt, debris, or any other foreign material has entered any portion of the piping or structures, flush the piping or structure with clean water. Continue the flushing process until the piping or structure is clean, as determined by Architect/Engineer.

C. Repair or replace any damage done to existing utility mains or their appurtenances as a result of work under this Contract to the satisfaction of the Architect/Engineer at no additional cost to the Owner.

END OF SECTION

ATTACHMENT A

QUAIFICATIONS STATEMENT

QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS

1. **SUBMITTED BY:**

   Official Name of Firm: _____

   Address: _____

   _____

   _____

2. **SUBMITTED TO:** _____

3. **SUBMITTED FOR:** _____

   Owner: _____

   Project Name: _____

   _____

   _____

   _____

   TYPE OF WORK: _____

   _____

   _____

4. **CONTRACTOR'S CONTACT INFORMATION**

   Contact Person: _____

   Title: _____

   Phone: _____

   Email: _____

EJCDC® C-451, Qualifications Statement.
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5. **AFFILIATED COMPANIES:**

Name: _____

Address: _____

_____

_____

6. **TYPE OF ORGANIZATION:**

☐ SOLE PROPRIETORSHIP

Name of Owner: _____

Doing Business As: _____

Date of Organization: _____

☐ PARTNERSHIP

Date of Organization: _____

Type of Partnership: _____

Name of General Partner(s): _____

_____

_____

☐ CORPORATION

State of Organization: _____

Date of Organization: _____

Executive Officers:

- President: _____

- Vice President(s): _____

_____

_____

- Treasurer: _____

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- Secretary: _____

☐ LIMITED LIABILITY COMPANY

State of Organization: _____

Date of Organization: _____

Members: _____

_____

_____

_____

☐ JOINT VENTURE

Sate of Organization: _____

Date of Organization: _____

Form of Organization: _____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

_____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

Joint Venture Managing Partner

- Name: _____

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- Address: _____

_____

7. LICENSING

Jurisdiction: _____

Type of License: _____

License Number: _____

Jurisdiction: _____

Type of License: _____

License Number: _____

8. CERTIFICATIONS

CERTIFIED BY:

Disadvantage Business Enterprise: _____

Minority Business Enterprise: _____

Woman Owned Enterprise: _____

Small Business Enterprise: _____

Other (_____): _____

9. BONDING INFORMATION

Bonding Company: _____

Address: _____

_____

Bonding Agent: _____

Address: _____

_____

_____

Contact Name: _____

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Phone: _____

Aggregate Bonding Capacity: _____

Available Bonding Capacity as of date of this submittal: _____

10. FINANCIAL INFORMATION

Financial Institution: _____

Address: _____

_____

Account Manager: _____

Phone: _____

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE LAST 3 YEARS

11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

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Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

12. SAFETY PROGRAM:

Name of Contractor's Safety Officer:_____

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

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YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

Total number of man-hours worked for the last 5 Years:

YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____

13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

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I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREWITH, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: _____

BY: _____

TITLE: _____

DATED: _____

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS _____ DAY OF _____, 20___

NOTARY PUBLIC - STATE OF _____

MY COMMISSION EXPIRES:_____

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

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SCHEDULE A

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

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SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

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SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

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SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE

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ATTACHMENT B

GEOTECHNICAL REPORT

LaBella
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GEOTECHNICAL SUBSURFACE INVESTIGATION and ENGINEERING REPORT

MUIRFIELD DRIVE DRAINAGE IMPROVEMENTS VILLAGE OF FAYETTEVILLE, ONONDAGA COUNTY, NEW YORK

Prepared for:
Town of Manlius
301 Brooklea Drive
Fayetteville, New York 13066

Prepared by:
LaBella Associates, D.P.C.
300 State Street, Suite 201
Rochester, New York 14614
COA #021272

LaBella Project No.: 2251531

10/23/2025

NOTE

This report is written using **U.S. Customary Units** unless otherwise noted.

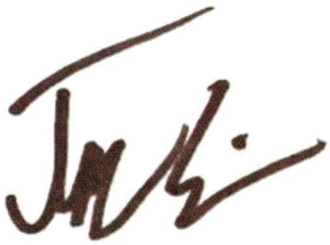
The professional services provided in this project include only the specific geotechnical aspects of the subsurface conditions at the site. The presence or implications of possible surface or subsurface contaminants from any source are outside the terms of reference for this geotechnical study and have not been investigated or addressed herein. Coal seam hazard evaluation, fire and gas hazard evaluation, site subsidence hazard evaluation, wetland impact study, septic field hazard or impact evaluation, slope stability and landslide hazard analysis, and a detailed site-specific seismic hazard evaluation are beyond the scope of work for this project.

The subsurface soil profile and design parameters provided in this report are estimated based on the results of the soil borings as indicated by: the boring logs, visual classification of the recovered soil and/or rock samples, geotechnical laboratory results (where applicable), analytical laboratory results (where applicable) and/or generally published soil and/or rock property correlations. Actual subsurface conditions beyond the soil borings and below the depths explored may vary, as well as subsurface conditions encountered in the field during and/or as a result of construction activity. The recommendations contained within this report are based on the subsurface conditions encountered. If subsurface conditions or the planned improvements vary from those presented within this report or on the plans referenced, the geotechnical engineer shall be notified immediately to identify if the recommendations provided herein are still applicable.

Please contact the undersigned Geotechnical Engineer with questions regarding the information provided herein.

This report was prepared by **LaBella Associates, D.P.C.**

Written by:



Jonathan A. Eisnor
Geotechnical Project Engineer
(electronic or copied signature unless in blue ink)

Reviewed by:



Christopher R. Redmond, PE
Senior Geotechnical Engineer
(electronic or copied signature unless in blue ink)

It is a violation of New York Education Law Article 145 Sec. 7209, and Article 147 Sec. 7307 for any person, unless acting under the direction of a licensed professional engineer, licensed professional geologist, licensed land surveyor, or registered architect to alter an item in any way. If an item bearing the seal of a licensed professional engineer, licensed professional geologist, licensed land surveyor, or registered architect is altered; the individual altering the document shall affix to the item their seal and the notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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C – INFILTRATION TEST RESULTS

1.0 INTRODUCTION

LaBella Associates, D.P.C. (LaBella) is pleased to present this summary report for the subsurface exploration for the improvements to be constructed at Muirfield Drive in the Village of Fayetteville, New York. For this investigation a total of two (2) test borings and two (2) infiltrations were advanced at the approximate locations depicted in Figure 1 – Exploration Location Plan that is provided in Appendix A.

Planned improvements at the Project Site addressed in this report include:

- Stormwater drainage improvements

LaBella's scope of services included advancing test borings and infiltration testing, preparing subsurface exploration logs, and preparing this summary of subsurface conditions for Muirfield Drive. These services were performed in general accordance with LaBella's proposal.

2.0 SUBSURFACE EXPLORATION PROGRAM

The subsurface exploration was performed by LaBella Environmental, LLC (LaBella) on April 23, 2025. A total of two (2) test borings were laid out and completed at the approximate locations depicted in Figure 1. After encountering shallow refusal in test boring MD-B02, test boring MD-B02A was advanced at an offset location. The soil borings were advanced using a track-mounted CME 55LC drill rig equipped with 3-¼" I.D. hollow stem augers and drive sampling tools.

Soil sampling and standard penetration testing (SPT) were conducted using a 140-pound automatic safety hammer dropping 30-inches to drive a 2-inch O.D. split barrel sampler in general conformance with ASTM Standard Practice D1586. The standard penetration resistance (N-Value) is calculated as described on the Boring Log General Information Key in Appendix B. A portion of each soil sample retrieved was placed and sealed in a glass jar. Upon completion of each test boring, the borehole was backfilled with auger cuttings to grade to closely match the existing ground surface. Prior to advancing any subsurface explorations, LaBella Environmental, LLC contacted Dig Safely New York (DSNY) to clear public utilities. Utility conflicts were not identified at any of the subsurface exploration locations.

2.1 Soil Identification Program

Soil samples were logged and visually identified by a LaBella geotechnical engineer. The soil identifications were based on the United Soil Classification System (USCS) and were made using visual-manual procedures in general accordance with ASTM D2488.

3.0 SUBSURFACE SOIL AND GROUNDWATER CONDITIONS SUMMARY

The subsurface conditions discussed below have been generalized from the exploration logs provided in this report. The information provided on the logs is representative of the location where each subsurface exploration was conducted. Subsurface conditions between exploration locations and depths sampled may vary. The stratification lines indicated on the logs are approximate and may indicate gradational changes. Please, refer to the attached exploration logs for conditions encountered at the time, location, and depth of each sampling.

3.1 Subsurface Conditions

Surfacings: The surface material at test borings MD-B01 and MD-B02 consisted of approximately 2 to 3 inches of topsoil.

Fill: Underlying the surfacings in test boring MD-B02, loose fill generally consisting of brown silty sand (SM), with trace roots was encountered and extended to at least a depth of approximately 2.0 feet below ground surface (bgs). The next sample interval met refusal, and the test boring was offset to MD-B02A.

Alluvial Deposits: Underlying the surfacings in test boring MD-B01, a layer of very loose alluvial deposits generally consisting of mottled gray-brown and brown silty sand (SM), with trace roots was encountered and extended to a depth of approximately 2.0 feet bgs.

Fluvial Deposits: Underlying the fill and alluvial deposits in test borings MD-B01 and MD-B02/MD-B02A, a layer of very loose to very dense fluvial deposits was encountered and extended to the boring termination depths ranging from approximately 15.8 feet bgs (MD-B01) to 17.0 feet bgs (MD-B02A). The fluvial soils varied, test boring MD-B01 generally consisted of brown to light brown clayey sand (SC) and in test boring MD-B02A the fluvial soils generally consisted of brown to light brown silty sand (SM) or light brown clayey sand (SC).

Bedrock was not encountered during the subsurface investigation and is not expected to be encountered during construction.

3.2 Groundwater Conditions

Groundwater was encountered in test boring MD-B02A during drilling and prior to backfilling the boreholes at a depth of approximately 9.1 feet bgs. Groundwater levels recorded on the exploration logs are based on field observations and visual observations of the soil samples and may not represent stabilized groundwater levels.

3.3 Infiltration Tests

Infiltration testing was conducted at Muirfield Drive at the locations shown in Figure 1 in general conformance with the *New York State Department of Environmental Conservation – New York State Stormwater Management Design Manual – Appendix D Infiltration Testing Requirements*. The results of the tests conducted are presented in Appendix C.

3.4 Expansive Soils

Based on visual examination of the retrieved soil samples, it is LaBella's professional opinion that potentially expansive soils were not identified.

3.5 Risk of Corrosion

The "risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete and/or unprotected steel. The rate of corrosion is based mainly on the following characteristics:

- For concrete: Sulfate (SO_4) content, sodium (Na) content
- For steel: Resistivity/electrical conductivity, reduction/oxidation (Redox) potential, presence of sulfides, and chloride content (Cl^-)
- For concrete & steel: soil moisture content, grain size distribution, and acidity (pH)

Should the structural engineer require soil samples be tested for the parameters listed above, LaBella can have soil samples sent for additional testing. The purpose of this testing would be to identify if a special type of cement (e.g., Type V – Sulfate resistant) must be used and/or if some type of special coating or cathodic protection will be required for buried metal items.

4.0 CLOSING

LaBella has prepared this summary report for the use by the Town of Manlius and the design team exclusively. Variations in the subsurface conditions may occur between test boring locations or there may be changes in the planned construction during the design phase.

Our services were conducted in a manner that is in accordance with generally accepted geotechnical engineering practice. Prospective bidders should understand that this report was prepared for design purposes only and may not contain sufficient information to prepare an accurate bid.

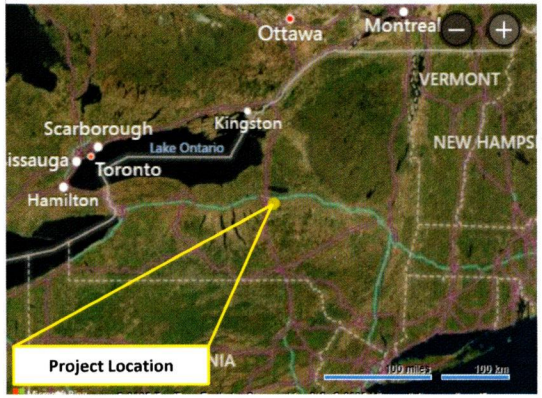
5.0 DISPOSITION OF SAMPLES

LaBella will hold all soil samples for 90 days after the date of this report. If the Client desires that these samples be retained for a longer period of time the Client shall notify LaBella in writing and make arrangements to obtain the samples from LaBella prior to the expiration of the 90 day time period; otherwise, the samples will be properly disposed by LaBella.

APPENDIX A

FIGURE

Site Region Map



Site Location Map



Boring Location Map



GENERAL NOTES:

1. AERIAL PHOTOGRAPHY WAS OBTAINED FROM MICROSOFT BING AND MAY NOT REPRESENT CURRENT CONDITIONS.
2. THIS FIGURE IS NOT TO BE USED FOR CONSTRUCTION, ESTIMATING, OR LAYOUT PURPOSES.
3. LOCATIONS ARE APPROXIMATE.

LEGEND:

- BORING LOCATION AND DESIGNATION
- INFILTRATION TEST LOCATION AND DESIGNATION

LaBella
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LaBella Associates, D.P.C.
300 State Street, Suite 201
Rochester, New York 14614
Phone: 585-454-6110

Town of Manlius

301 Brooklea Drive,
Fayetteville, New York
13066

GEOTECHNICAL SUBSURFACE INVESTIGATION

Muirfield Drive Drainage Improvements Geotech

Muirfield Drive, Fayetteville, New York 13066

PROJECT NO:	2251531
DATE:	May 2025
DRAWN BY:	DBK
CHECKED BY:	JAE

EXPLORATION LOCATION PLAN

FIGURE 1

APPENDIX B

EXPLORATION LOGS

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SOIL GENERAL INFORMATION SHEET

Soil Identification Terms

The exploration logs present observations and the results of tests performed in the field by the Geotechnical Engineers, Geologists, and Driller as noted. The identification of soils or soil like material is subject to limitations imposed by the field conditions and equipment used.

Soil identifications are visual descriptions on the basis of ASTM D2488. The soil density or consistency is based on the penetration resistance determined by ASTM D1586.

The following defines some of the terms utilized in the preparation of the exploration logs.

Abbreviations

N-Value - Standard Penetration Value	WOH - Weight of Rods & Hammer
WOR - Weight of Rods	▼ - Observed Groundwater Surface
NWE - No Water Encountered	bgs - below ground surface
HSG - Hydrologic Soil Group	N/A - Not Applicable

Relative Density of Coarse Grained Soils		Consistency of Fine Grained Soils		
Soil Density	**N Value**	**Soil Consistency**	**Unconfined Compressive Strength, (tsf)**	**N Value**
Very Loose	0 to 4	Very Soft	≤ 0.25	0 to 2
Loose	5 to 10	Soft	0.25 to 0.5	3 to 4
Medium Dense	11 to 30	Medium Stiff	0.5 to 1.0	5 to 8
Dense	31 to 50	Stiff	1.0 to 2.0	9 to 15
Very Dense	> 50	Very Stiff	2.0 to 1.0	16 to 30
		Hard	> 4.0	>30

Size Description	
Soil Type	**Particle Size**
Boulder	> 12"
Cobble	12" - 3"
Gravel-Coarse	3" - 3/4"
Gravel-Fine	3/4" - #4
Sand-Coarse	#4 - #10
Sand-Medium	#10 - #40
Sand-Fine	#40 - #200
Silt/Clay	< #200

< 3", Soil Particle Size Percent Ranges	
Quantifier	**Percent**
Mostly	> 50
Some	30 - 45
Little	15 - 25
Few	5 - 10
Trace	< 5

Moisture Condition	
Term	**Description**
Dry	No moisture to touch.
Moist	Damp but no visible water.
Wet	Free water in sample.

Plasticity	
Term	**Description**
Non-plastic	A 1/8-in. (3 mm) thread cannot be rolled at any water content.
Low	A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit.
Medium	A thread is easy to roll and not much time is required to reach the plastic limit. A lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit.

Dilatancy	
Term	**Description**
None	No visible change in the specimen.
Slow	Water appears slowly on the specimen surface during shaking.
Rapid	Water appears quickly on the specimen surface during shaking.

Notes:

1 The N-Value is the summation of the second and the third SPT values.

2 Split-spoon refusal is considered 50 blows over six inches.

3 If 50 blows is reached prior to advancing 6-inches, the penetration is generally reported as 50 over the nearest 1 inch value.

4 100 is the maximum reported N-Value on the Exploration Logs.

5 Auger, Roller Bit, and/or Casing refusal occurs if the driller is unable to advance the boring, normally indicating a very hard or very dense material, such as large boulders or bedrock. However, refusal is not always indicative of the upper surface of competent bedrock.

UNIFIED SOIL CLASSIFICATION SYSTEM SHEET

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]

Major Division			Group Symbol	Group Name [B]
Coarse-Grained Soils (More than 50% retained on No. 200 Sieve)	Gravels (50% or more of coarse fraction retained on No. 4 Sieve)	Clean Gravels (Less than 5% fines)	GW	Well-graded gravel [C, D, E]
			GP	Poorly graded gravel [C, D, E]
		Gravels with Fines (More than 12% fines)	GM	Silty gravel [C, E, F, G]
			GC	Clayey gravel [C, E, F, G]
	Sands (50% or more of coarse fraction passes No. 4 Sieve)	Clean Sands (Less than 5% fines)	SW	Well-graded sand [D, H, I]
			SP	Poorly graded sand [D, H, I]
		Sands with Fines (More than 12% fines)	SM	Silty sand [F, G, H, I]
			SC	Clayey sand [F, G, H, I]

Major Division			Group Symbol	Group Name [B]
Fine-Grained Soils (50% or More Passes the No. 200 Sieve)	Silts and Clays (LL < 50)	Inorganic	CL	Lean clay [K, L, M, N]
			ML	Silt [J, K, L, M, O]
		Organic (LL - oven dried <0.75)	OL	Organic clay [K, L, M, N]
				Organic silt [K, L, M, O]
	Silts and Clays (LL ≥ 50)	Inorganic	CH	Fat clay [K, L, M, P]
			MH	Elastic silt [K, L, M, Q]
		Organic (LL - oven dried <0.75)	OH	Organic clay [K, L, M, O, P]
				Organic silt [K, L, M, Q]
Highly Organic Soils			PT	Peat

[A] Based on the material passing the 3-in. (75-mm) sieve.

[B] If field sample contained cobbles and/or boulder, add "with cobbles and/or boulders" to group name.

[C] Gravels with 5 to 12 % fines require dual symbols:
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

[D] $Cu = D_{60} / D_{10}$ $Cc = (D_{30})^2 / (D_{10} \times D_{60})$

[E] If soil contains ≥ 15% sand, add "with sand" to group name.

[F] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[G] If fines are organic add "with organic fines" to group name.

[H] Sands with 5 to 12 % fines require dual symbols:
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

[I] If soil contains ≥15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 30 % plus No. 200 add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

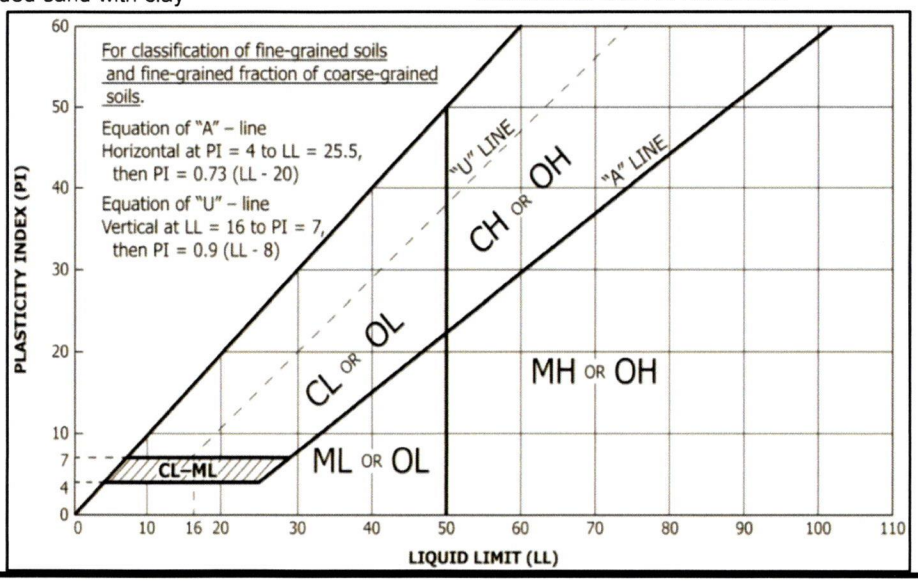
[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.

NOTE:

Generally soils are identified in accordance with ASTM D2488 unless specifically stated in the report that soils were classified in accordance with ASTM D2487.



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TEST BORING LOG

Boring No.:	MD-B01		
Start Date:	04/23/25		
Finish Date:	04/23/25		
Project Number:	2251531	**Drilling Firm:**	LaBella Environmental, LLC
Project Name:	Muirfield Drive Drainage Improvements Geotech	**Drill Rig:**	CME 55LC
Location:	Muirfield Drive, Fayetteville, New York 13066	**Driller:**	Vic Tompkins
Client:	Town of Manlius	**Inspector:**	D. Keller
Latitude:	43.02131		
Longitude:	-75.99099		
Surface Elev.:	+/-591		
Elevation Datum:	NAVD88		

Key: ——— Approximate Geologic Strata Change
-·-·-·-·-·- Approximate Gradation Change Within Strata

Sample Types: S-Split Spoon, G-Geoprobe Sleeve, R-Bedrock Core, U-Undisturbed Sample

Casing:	3-1/4" HSA
Sampler:	1-3/8" ID Split Spoon
Hammer:	140# Automatic, 30" drop
Undisturbed:	None
Rock Core:	None

BOREHOLE INFORMATION

Total Depth (ft):	15.8
Water Depth (ft):	NE
Bedrock Depth (ft):	NE

Depth (ft.)	Elevation (ft.)	Groundwater	Sample No.	Recovery (in.)	SPT Blows	N-Value	Group Symbol	STRATUM DESCRIPTIONS Mostly (≥50%); Some (30-45%), Little (15-25%), Few (5-10%), Trace (<5%)	COMMENTS (e.g., core run, % recovered, RQD)
			S-1	20	1	3		-TOPSOIL-	3-inches topsoil
1	590				1		SM	Silty sand: Very loose, mottled gray-brown and brown, mostly medium to fine sand, some silt, trace fine roots. Moist.	
					2				
2	589				4			-ALLUVIAL DEPOSITS-	
			S-2	15	3	7	SC	Clayey sand: Loose, brown, mostly sand, some clay, few gravel, trace coarse gravel. Moist.	
3	588				3				
					4			-FLUVIAL DEPOSITS-	
4	587				2				
			S-3	14	2	2	SC	Clayey sand: Very loose, brown, mostly sand, some clay. Moist.	
5	586				1				
					1				
6	585				1				
			S-4	12	WOH	2	SC	Clayey sand: Very loose, brown, mostly medium to fine sand, some clay. Wet.	
7	584				WOH				
					2				
8	583				2				
			S-5	18	WOH	2	SC	Clayey sand: Very loose, brown, mostly medium to fine sand, some clay, with trace wood. Wet.	
9	582				WOH				
					2				
10	581				2				
			S-6	10	WOH	4	SC	Clayey sand: Very loose, brown, mostly medium to fine sand, some clay. Wet.	
11	580				2				
					2				
12	579								
13	578								
14	577								
15	576		S-7	3	23	>50	SC	Clayey sand: Very dense, light brown, mostly sand, some clay, few gravel, slightly bonded. Dry.	
16	575				50/3"			-FLUVIAL DEPOSITS-	
								Bottom of Exploration 15.8 feet	
17	574								
18	573								
19	572								
20	571								
21	570								
22	569								
23	568								

Notes: 1.

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TEST BORING LOG

Boring No.:	**MD-B02**
Start Date:	04/23/25
Finish Date:	04/23/25
Latitude:	43.02145
Longitude:	-75.99099
Surface Elev.:	+/-594
Elevation Datum:	NAVD88

Project Number:	2251531
Project Name:	Muirfield Drive Drainage Improvements Geotech
Location:	Muirfield Drive, Fayetteville, New York 13066
Client:	Town of Manlius

Drilling Firm:	LaBella Environmental, LLC
Drill Rig:	CME 55LC
Driller:	Vic Tompkins
Inspector:	D. Keller

Key: ——— Approximate Geologic Strata Change
-·-·-·-·-·- Approximate Gradation Change Within Strata

Sample Types: S-Split Spoon; G-Geoprobe Sleeve; R-Bedrock Core; U-Undisturbed Sample

Casing:	3-1/4" HSA
Sampler:	1-3/8" ID Split Spoon
Hammer:	140# Automatic, 30" drop
Undisturbed:	None
Rock Core:	None

BOREHOLE INFORMATION

Total Depth (ft):	2.0
Water Depth (ft):	NE
Bedrock Depth (ft):	NE

Depth (ft.)	Elevation (ft.)	Groundwater	Sample No.	Recovery (in.)	SPT Blows	N-Value	Group Symbol	STRATUM DESCRIPTIONS Mostly (≥50%); Some (30-45%), Little (15-25%), Few (5-10%), Trace (<5%)	COMMENTS (e.g., core run, % recovered, RQD)
			S-1	16	2	5		-TOPSOIL-	2-inches topsoil
1	593				2		SM	Silty sand: Loose, brown, mostly medium to fine sand, some silt, trace fine roots. Moist.	
					3				
					4			-FILL-	
2	592		S	0	50/0"	>50		Bottom of Exploration 2.0 feet	Refusal on probable rip rap fill
3	591							Also see Test Boring Log MD-B02A.	
4	590								
5	589								
6	588								
7	587								
8	586								
9	585								
10	584								
11	583								
12	582								
13	581								
14	580								
15	579								
16	578								
17	577								
18	576								
19	575								
20	574								
21	573								
22	572								
23	571								

Notes:

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TEST BORING LOG

Project Number:	2251531	**Drilling Firm:**	LaBella Environmental, LLC	**Boring No.:**	MD-B02A
Project Name:	Muirfield Drive Drainage Improvements Geotech	**Drill Rig:**	CME 55LC	**Start Date:**	04/23/25
Location:	Muirfield Drive, Fayetteville, New York 13066	**Driller:**	Vic Tompkins	**Finish Date:**	04/23/25
Client:	Town of Manlius	**Inspector:**	D. Keller	**Latitude:**	43.02145
				Longitude:	-75.99099
Key:	——— Approximate Geologic Strata Change	**Casing:**	3-1/4" HSA	**Surface Elev.:**	+/-594
	-·-·-·-·-·- Approximate Gradation Change Within Strata	**Sampler:**	1-3/8" ID Split Spoon	**Elevation Datum:**	NAVD88
		Hammer:	140# Automatic, 30" drop	**BOREHOLE INFORMATION**	
Sample Types:	S-Split Spoon G-Geoprobe Sleeve	**Undisturbed:**	None	**Total Depth (ft):**	17.0
	R-Bedrock Core U-Undisturbed Sample	**Rock Core:**	None	**Water Depth (ft):**	9.1
				Bedrock Depth (ft):	NE

Depth (ft.)	Elevation (ft.)	Groundwater	Sample No.	Recovery (in.)	SPT Blows	N-Value	Group Symbol	STRATUM DESCRIPTIONS Mostly (≥50%); Some (30-45%), Little (15-25%), Few (5-10%), Trace (<5%)	COMMENTS (e.g., core run, % recovered, RQD)
								See MD-B02 for details from 0 to 2 feet	
1	593								
2	592		S-2	12	3	11	SM	Silty sand: Medium dense, brown, mostly sand, some silt, few gravel. Moist.	Sample numbering continued from MD-B02
3	591				3				
					8			**-FLUVIAL DEPOSITS-**	
4	590				8				
			S-3	7	7	15	SM	Silty sand: Medium dense, brown, mostly sand, some silt, few gravel. Moist.	
5	589				7				
					8				
6	588				9				
			S-4	7	8	34	SM	Silty sand: Dense, brown, mostly sand, some silt, few gravel. Moist.	
7	587				13				
					21				
8	586				14				
			S-5	16	4	6	SM	Silty sand: Loose, light brown, mostly medium to fine sand, some silt, trace coarse sand, trace fine gravel. Wet.	
9	585	▼			3				
					3			**-FLUVIAL DEPOSITS-**	
10	584				5				
			S-6	19	11	29	SC	Clayey sand: Medium dense, light brown, mostly sand, some clay, few gravel, slightly bonded, trace orgainics. Dry.	
11	583				15				
					14			**-FLUVIAL DEPOSITS-**	
12	582				18				
13	581								
14	580								
15	579		S-7	24	12	71	SC	Clayey sand: Very dense, light brown, mostly sand, some clay, few gravel, slightly bonded. Dry.	
16	578				37				
					34				
17	577				19				
								Bottom of Exploration 17.0 feet	
18	576								
19	575								
20	574								
21	573								
22	572								
23	571								

Notes: 1. Water likely perched.

APPENDIX C

INFILTRATION TEST RESULTS

INFILTRATION TEST DATA REPORT

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TEST NO. MD-D03

PROJECT	Muirfield Drive Drainage Improvements Geotech	PROJECT NO.	2251531
LOCATION	Muirfield Drive, Fayetteville, New York 13066	PROJECT MGR.	Craig Innis
CLIENT	Town of Manlius	FIELD REP	D. Keller
		TEST DATE	04/23/25 to 04/24/25

INFILTRATION POINT INSTALLATION DATA:

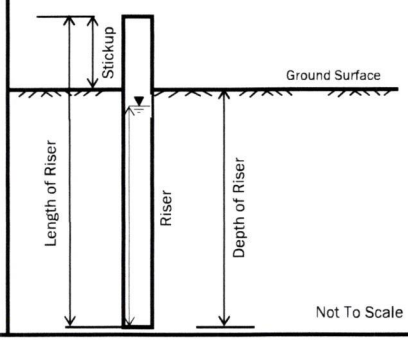
Installation Date:	04/23/25	Elevation Ground Surface:	591+/-
Coordinates:	43.0213	-75.9910	
Borehole Diameter (in.):	8	Riser Diameter (in.):	4
Stickup (ft):	2.3	Design Depth of Riser (ft):	6.0
Length Of Riser (ft):	8.9	As-Built Depth of Riser (ft):	6.6

TEST INFORMATION:

Test Reference Point: [X] Top Of Riser [ ] Ground Surface

Start Presoak Water Level (ft):	6.9	Start Presoak Date/Time:	4/23 / 13:15
Post Presoak Water Level (ft):	6.87	Depth To Scour Stone (ft):	8.63

SKETCH



DATA

Clock Time (hr:min)	Elapsed Time (min)	Depth To Water (ft)	Infiltration Rate (ft/hour)	Infiltration Rate (in/hour)	Comments
13:15	0	6.87	-	-	Begin Test 1 on 4/23
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
11:15	1320	6.87	0.00	0.0	End test on 4/24
	0		-	-	Begin Test 2
	15				
	30				
	45				
	60				
	0		-	-	Begin Test 3
	15				
	30				
	45				
	60				
	0		-	-	Begin Test 4
	15				
	30				
	45				
	60				

FINAL INFILTRATION RATE [1]: 0.0 inches per hour

Notes:

1. Final Infiltration Rate reported as: [ ] the average of the four tests [X] the value of the final test

INFILTRATION TEST DATA REPORT

LaBella
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TEST NO. MD-D04

Page 1 of 1

PROJECT	Muirfield Drive Drainage Improvements Geotech	PROJECT NO.	2251531
LOCATION	Muirfield Drive, Fayetteville, New York 13066	PROJECT MGR.	Craig Innis
CLIENT	Town of Manlius	FIELD REP	D. Keller
		TEST DATE	4/24/2025

INFILTRATION POINT INSTALLATION DATA:

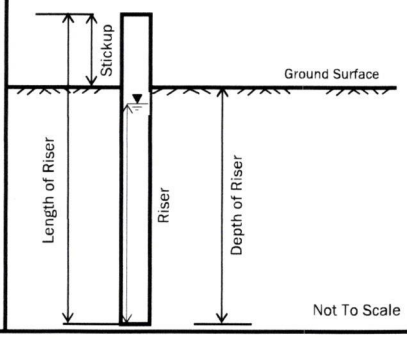
Installation Date:	04/23/25	Elevation Ground Surface:	594+/-
Coordinates:	43.0215	-75.9910	
Borehole Diameter (in.):	8	Riser Diameter (in.):	4
Stickup (ft):	2.6	Design Depth of Riser (ft):	6.0
Length Of Riser (ft):	9.1	As-Built Depth of Riser (ft):	6.5

TEST INFORMATION:

Test Reference Point: [X] Top Of Riser [ ] Ground Surface

Start Presoak Water Level (ft):	7.1	Start Presoak Date/Time:	4/23 / 13:00
Post Presoak Water Level (ft):	> 8.72	Depth To Scour Stone (ft):	8.72

SKETCH



DATA

Clock Time (hr:min)	Elapsed Time (min)	Depth To Water (ft)	Infiltration Rate (ft/hour)	Infiltration Rate (in/hour)	Comments
11:30	0	3.7	-	-	Begin Test 1
11:31	1	6.6	174.00	2088.0	
11:32	2	7.4	111.00	1332.0	
11:33	3	7.9	84.00	1008.0	
11:35	5	8.4	56.40	**676.8**	
12:02	0	6.72	-	-	Begin Test 2
12:04	2	7.80	32.40	388.8	
12:06	4	8.20	22.20	266.4	
12:08	6	8.33	16.10	193.2	
12:10	8	8.40	12.60	**151.2**	
12:13	0	6.72	-	-	Begin Test 3
12:16	3	8.05	26.60	319.2	
12:19	6	8.32	16.00	192.0	
12:21	8	8.42	12.75	153.0	
12:24	11	8.48	9.60	**115.2**	
12:27	0	6.72	-	-	Begin Test 4
12:30	3	8.00	25.60	307.2	
12:33	6	8.30	15.80	189.6	
12:36	9	8.42	11.33	136.0	
12:39	12	8.47	8.75	**105.0**	

FINAL INFILTRATION RATE [1]: 105.0 inches per hour

Notes:

1. Final Infiltration Rate reported as: [ ] the average of the four tests [X] the value of the final test
2. Pre-soak drained very quickly (under 5 minutes).

ATTACHMENT C

CHANGE ORDER BACKUP SHEETS

LaBella Associates
300 State Street
Rochester, New York 14614

Description of Change

CONTRACTOR CHANGE PROPOSAL

LaBella Project No.

Contractor Name:
Address:
Telephone No.:

Date:
Contract No.:
Field Order No.:
Change Proposal No.:

			LaBella REVISIONS
SECTION A: CONTRACTOR WORK		**Round Totals to Nearest Dollar**	
1. Total Contractor Labor			
2. Total Contractor Material			
3. Total Contractor Equipment			
4. Total Unit Price Costs			
5. SUBTOTAL	(Total lines 1 thru 4)	$ -	
6. Contractor's Override Combined O & P	(15% of line 5)	$ -	
7. Total Premium Portion of Contractor Labor			
8. CONTRACTOR TOTAL	(Total lines 5, 6 & 7) **8.**	$ -	
SECTION B: SUBCONTRACTOR WORK	(Provide a separate form **for each** Subcontractor.)		
9. Names of Subcontractors:		**Round Totals to Nearest Dollar**	
A.			
B.			
C.			
D.			
E.			
F.			
10. TOTAL SUBCONTRACTOR PROPOSALS	(Total lines A thru F)	$ -	
11. Contractor's Override on Subs' Proposals:			
11a. 10% of line 10 (First $ 10,000)		$ -	
11b. 5% of the next $ 90,000		$ -	
11c. 3% of any amount over $100,000		$ -	
12. Total Premium Portion of Subcontractor Labor			
13. SUBCONTRACTOR TOTAL	**13.**	$ -	
SECTION C: 14. TOTAL CONTRACT UNIT PRICE(S)	**14.**		
SECTION D: CONTRACTOR'S REQUESTED TOTAL		**Round Totals to Nearest Dollar**	
15. AMOUNT REQUESTED	(Total lines 8, 13, and 14) **15.**	$ -	

Contractor's Signature Date

Print Name of Authorized Representative

Print Title

Print name of Contact Person (if different)

Phone No. (if different from above)

SECTION E: PROJECT MANAGER'S COMMENTS:

REV: 9/9/2022

LaBella Associates
300 State Street
Rochester, New York 14614

EQUIPMENT EXPENSE CHANGE PROPOSAL

LaBella Project No. _____

Contractor Name: _____

Address: _____

_____

Telephone No.: _____

Date: _____

Field Order No.: _____

Change Proposal No.: _____

1. For self-owned equipment calculate rate in column 6.
2. Rented equipment will be paid for at actual cost. Complete columns 1, 3, 4, 9 and 12.
   Include a copy of the rental invoice or quote verified with the signature of the LaBella PM.
3. Operating cost includes fuel and lubricants but does not include operator's wages.
4. Minor equipment and hand tools are considered overhead costs and cannot be claimed.

Comments:

1	2	3	4	5	6	7	8	9	10	11	12
Indicate if Owned or Rented	Reference Page from Blue Book or from CD-ROM	**Complete Equipment Description** Year, Make, Complete Model No., Size, Capacity, H.P., GWV, Fuel Type used or other information to completely describe the equipment used.	Hours Required on Site	Monthly Rate from Blue Book	Column 5 divided by 176		Equipment Expense Column 4 multiplied by Column 6	Actual Operating Hours	Hourly Operating Cost Rate from Blue Book	Total Operating Cost Column 9 multiplied by Column 10	**Total Equipment Cost** Sum of Column 8 and Column 11 or Total Rental Cost
			-		$ -		$ -			$ -	$ -
			-		$ -		$ -			$ -	$ -
			-		$ -		$ -			$ -	$ -

LaBella Associates
300 State Street
Rochester, New York 14614

LABOR AND MATERIAL WORKSHEET

LaBella Project No. _____

Contractor Name: _____ Date: _____

Address: _____ Field Order No.: _____

_____ Change Proposal No.: _____

Telephone No.: _____

Use a separate form for **each** Subcontractor

LABOR

Work Description	Trade	Hours	Total Rate	Total Labor Cost	FOR LaBella USE ONLY LaBella Revisions
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
(Total from additional Labor Worksheet Extension(s) if required)					
TOTAL LABOR				$ -	

MATERIAL / EQUIPMENT RENTAL

Material Description	Quantity	Unit	Unit Cost	Material Cost	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
(Total from additional Material Worksheet Extension(s) if required)					
TOTAL MATERIAL				$ -	

REV: 9/9/2022

LaBella
Powered by partnership.

LaBella Associates
300 State Street
Rochester, New York 14614

LABOR RATE WORKSHEET

LaBella Project No. _____

Contractor Name: _____ Date: _____

Address: _____ County: _____

_____ **Trade:** _____

Telephone No.: _____ Effective Date: _____

FROM TO	REGULAR BASE RATE	PREMIUM PORTION Of OVERTIME
A. WAGE RATE PER HOUR		

PAYROLL TAXES AND INSURANCE

	F.I.C.A / Social Security	%	
	Medicare	%	
	Federal Unemployment Insurance	%	
	State Unemployment Insurance	%	0.00%
*	Workers' Compensation Insurance **Code:**_____	%	
**	Liability Insurance	%	
	Disability Insurance	%	

B. TOTAL TAXES AND INSURANCE PER HOUR	$ - 0.00%	$ -	$ -

BENEFITS	**$ per hour**		
Vacation and Holiday			
Health and Welfare			
Pension			
Annuity			
Education / Apprentice Training			
Supplemental Unemployment			
Security Fund			
Other			
C. TOTAL BENEFITS PER HOUR		$ -	

FOR FRINGE BENEFITS PAID IN THE ENVELOPE-SUBMIT COPIES OF 2 WEEKS OF CERTIFIED PAYROLL REPORTS

D. TOTAL LABOR RATE	(A + B + C) = D	$ -	$ -

E. PROJECT MANAGER'S COMMENTS: _____

* Workers Compensation is the net Contractor cost after applying territory adjustment, experience modification, discount(s) and assessments.

** Only Liability Insurance that is payroll related is reimbursable within the labor rate.

REV: 9/9/2022

LaBella Associates
300 State Street
Rochester, New York 14614

LABOR WORKSHEET EXTENSION

LaBella Project No. _____

FOR LaBella USE ONLY

Contractor Name: _____

Address: _____

_____

Telephone No.: _____

Date: _____

Field Order No.: _____

Change Proposal No.: _____

LABOR

FOR LaBella USE ONLY

Work Description	Trade	Hours	Total Rate	Total Labor Cost	LaBella Revisions
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
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				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
			TOTAL LABOR	$ -	

LaBella Associates
300 State Street
Rochester, New York 14614

MATERIAL WORKSHEET EXTENSION

LaBella Project No. _____

Contractor Name: _____

Address: _____

_____

Telephone No.: _____

FOR LaBella USE ONLY

Date: _____

Field Order No.: _____

Change Proposal No.: _____

MATERIAL / EQUIPMENT RENTAL

Material Description	Quantity	Unit	Unit Cost	Material Cost	FOR LaBella USE ONLY LaBella Revisions
				$ -	
				$ -	
				$ -	

LaBella Associates
300 State Street
Rochester, New York 14614

SUBCONTRACTOR CHANGE PROPOSAL

or / SUB of SUBCONTRACTOR

LaBella Project No. _____

Subcontractor Name: _____ Date: _____

Address: _____ Field Order No.: _____

_____ Change Proposal No.: _____

Telephone No.: _____ Use a separate form for **each** Subcontractor

A. LABOR

WORK DESCRIPTION	Trade	Hours	Total Rate	Total Labor Cost	FOR LaBella USE ONLY LaBella REVISIONS
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
Total from additional Labor Worksheet Extension(s) if required					
TOTAL SUBCONTRACTOR LABOR				$ -	

B. MATERIAL / EQUIPMENT RENTAL

MATERIAL DESCRIPTION	Quantity	Unit	Unit Cost	Material Cost	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
				$ -	
Total from additional Material Worksheet Extension(s) if required					
TOTAL SUBCONTRACTOR MATERIAL				$ -	

C. EQUIPMENT (From Equipment Expense Proposal)

TOTAL SUBCONTRACTOR EQUIPMENT	$ -

D. SUMMARY

Total Labor, Material, Equipment (A+B+C)	$ -	
No Mark-up on Sub Of Sub 15%	$ -	
Total Premium Portion of O.T.		
TOTAL SUBCONTRACTOR PROPOSAL	$ -	

_____
Subcontractor Signature

_____ Date

_____
Name & Title (Please type or print.)

REV: 9/9/2022

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/13/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Maureen Steria	
Foy Agency, Inc. P. O. Box 42 Deer River NY 13627	PHONE (A/C, No, Ext): (315) 493-2391	FAX (A/C, No): (315) 493-3267
	E-MAIL ADDRESS: maureen@foyagency.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : NGM Insurance Company	14788
INSURED IDH, LLC 10280 OLD STATE RD Carthage NY 13619	INSURER B : Sutton Specialty Insurace Co	16848
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 2026 01 13 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:	X		CP00135973	5/13/2025	5/13/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 500,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] HIRED AUTOS [X] SCHEDULED AUTOS [ ] NON-OWNED AUTOS	X		CA00045484	5/13/2025	5/13/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	X UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000	X		ISCEX0300002813-00	5/28/2025	5/13/2026	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					[ ] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder is included as Additional Insured if required by written contract on a Primary and Non Contributory basis. 30 Day Notice of Cancellation applies.

CERTIFICATE HOLDER

LaBella Associates, DPC
300 State Street, Suite 201
Rochester, NY 14614

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Paige Eves/PAIGE

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/13/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Foy Agency, Inc.
P. O. Box 42
Deer River NY 13627

CONTACT NAME: Maureen Steria
PHONE (A/C, No, Ext): (315) 493-2391 **FAX (A/C, No):** (315) 493-3267
E-MAIL ADDRESS: maureen@foyagency.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : NGM Insurance Company	14788
INSURER B : Sutton Specialty Insurace Co	16848
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
IDH, LLC
10280 OLD STATE RD
Carthage NY 13619

COVERAGES **CERTIFICATE NUMBER:** 2026 01 13 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [ ] OCCUR [X] GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC OTHER:	X		CP00135973	5/13/2025	5/13/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 500,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS HIRED AUTOS X SCHEDULED AUTOS NON-OWNED AUTOS	X		CA00045484	5/13/2025	5/13/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000	X		ISCEX0300002813-00	5/28/2025	5/13/2026	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Certificate Holder is included as Additional Insured if required by written contract on a Primary and Non Contributory basis. 30 Day Notice of Cancellation applies.

CERTIFICATE HOLDER
Town of Manlius
Onondaga County
301 Brooklea Dr
Fayetteville, NY 13066

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Paige Eves/PAIGE

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Town of Manlius

March 25, 2026
Re: 2026 Town of Manlius Watershed Stewards Greenways/Blueways Grant Program Application:
"**Public Education, Community Science, and Watershed Monitoring Initiative"**

TO: Onondaga County Department of Planning countyplanning@ongov.net

Dear Sir or Madam,

I am writing in my role as the Deputy Supervisor for the Town of Manlius to express my support for the Manlius Watershed Stewards in their application for a 2026 Greenways/Blueways Grant "**Public Education, Community Science, and Watershed Monitoring Initiative**." If awarded, Manlius Watershed Stewards will convene community partners and invest in planning efforts to create educational programming, enable community science and watershed data collection along Limestone Creek and its tributaries, for the benefit of our communities.

Limestone Creek is one of the major fisheries in Onondaga County, and we support efforts that serve to teach the public about the community benefits of Limestone Creek. We are also open to partnering with the Manlius Watershed Stewards on creating and sharing outreach materials, and to align our missions in resilient communities that can connect with nature and learn about topics like floodplain storage, erosion, and the health benefits of outdoor recreation.

As our communities in Central New York continue to see population growth and increasing development pressure, we are entering an important time for prioritizing lands and waters. The Manlius Watershed Stewards' focus on impacts at the watershed level, and their priority of engaging people to save stream habitat and improve floodplain protection, are a valuable contribution to the region.

We appreciate our partnerships with other community-based organizations like the Manlius Watershed Stewards, and look forward to working with them if they are awarded this grant.

Sincerely,

Alissa Italiano
Deputy Supervisor
Town of Manlius
aitaliano@townofmanlius.gov

Town Board – Sara Bollinger, Ingrid Gonzalez-McCurdy, Alissa Italiano, Katelyn Kriesel, Michael Nesci, William Nicholson

Credit Card Policy for the Town of Manlius

I. Scope

The Town of Manlius recognizes that credit cards are an essential requirement in the ordinary course of business in today's world. This will include travel and trips that are for Town of Manlius business as well. The Town of Manlius authorizes the use of credit cards.

II. Objectives

This policy will outline the use of the credit card and the employees that are authorized to possess a Town credit card.

III. Authorized Employees

a. Highway Superintendent
b. Town Supervisor
c. Assessor
d. Police Chief
e. Police Sergeant
f. Town Clerk
g. Recreation Director
h. Town Comptroller
i. Town Manager
j. Tax Collector
k. Director of Planning & Development
l. Police Captain
m. Police Captain
n. Police Liutenant

IV. Use of the Credit Card

The credit card will be used in compliance with the Town's Purchasing Policy. The purchases will be goods and services for Town business only. This will also include travel and trips that are for the Town. This will include airfare and hotel room for out-of-town conferences that have been approved. Meal expenses may be paid with the card if expenses are related to business travel to conferences. The employee using the card is responsible for the protection and custody of the card. Employees using the card should notify vendors and merchants that the credit card transaction should be exempt from all taxes where applicable. The Town tax exempt form can be provided by the Town Comptroller. The credit card will not be used for cash advances, personal use, or any other type of purchase not permitted by the Town. If the card is lost or stolen, the Town Comptroller should be notified immediately. The Board will approve when additional cards are needed.

V. Reporting

The Town Comptroller will download the statements each month and email the departments to have all POs and receipts to the Comptroller by 4:30 pm on the Monday before the Board Meetings. The Comptroller will set up any new cards with M&T Bank. The limits of cards will be discussed by the Supervisor and the Department Head. All Department Heads will be approving any charges that come through in the PO process. The Comptroller will audit all POs and receipts. In addition, the Comptroller will make sure that the Town is not paying any taxes.

TOWN OF MANLIUS

ADVERTISEMENT FOR PROFESSIONAL SERVICES

REQUEST FOR LETTERS OF INTEREST (RFLOI)
Comprehensive Managed Information Technology, Cybersecurity, and Communication Services

The Town of Manlius is seeking qualified professionals to provide Information Technology, Cybersecurity, and Communication services. The Request for Letters of Interest is available on the Town website www.townofmanlius.gov or from the Town Clerk. Requests for a copy of the RFLOI may be made to Carrie Grevelding at 315-637-3521 or sent via email to cgrevelding@townofmanlius.gov .Letters will be accepted between April 1, 2026 and May 31, 2026. It is anticipated that all Respondents will participate in an interview with Town personnel within 30 days of their submission.

1. Overview

The Town of Manlius is seeking Letters of Interest from qualified professional firms to provide comprehensive, fully managed Information Technology, Cybersecurity, and Communication Services for Town administrative operations and the Town of Manlius Police Department. The Town requires a structured, proactive, security-first service model that includes continuous monitoring, compliance alignment, strategic planning, lifecycle management, and documented governance oversight. Letter of interest will be evaluated by June 30, 2026. In July 2026, one or more Professional Service firms will be invited to submit a full proposal by August 30, 2026. The selected firm will provide a proposed contract with annual renewals for three (3) years for inclusion in the Town of Manlius 2027 budget.

2. Goals of the Engagement

- Ensure operational continuity across all Town facilities.
- Maintain and secure all digital systems and communication infrastructure.
- Implement layered cybersecurity protections aligned with industry best practices.
- Align with NYS SHIELD Act and CJIS Security Policy requirements.
- Provide 24x7 monitoring, escalation, and incident response.
- Deliver predictable budgeting and structured lifecycle planning.
- Provide executive-level reporting and governance support.

3. Town Administrative Operations Scope (Approx. 65 Workstations, 2 Sites)

- Unlimited remote and onsite helpdesk support.
- Break/fix remediation and issue resolution.
- Operating system patch management (servers and endpoints).
- Third-party application patch management.
- Firmware lifecycle management for firewalls, switches, and wireless infrastructure.
- 24x7 monitoring of servers, endpoints, and network devices.
- Managed Endpoint Detection and Response (EDR).
- 24x7 Security Operations Center (SOC) monitoring and escalation.
- DNS filtering and web threat protection.
- Email security and impersonation protection.
- Multi-factor authentication enforcement and conditional access policy management.
- Application control and zero-trust enforcement.
- Security awareness training and phishing simulations.
- Microsoft 365 administration and hardening.
- Microsoft 365 backup and offsite data replication.
- Server backup with disaster recovery testing and validation.
- Written Disaster Recovery Plan with defined RTO and RPO objectives.
- Firewall management and rule review.
- Switch and wireless configuration management.
- Secure remote access configuration.
- Network segmentation and VLAN management.
- Asset management and documentation repository maintenance.
- Vendor coordination and escalation management.
- VoIP telephone support and E911 configuration compliance.
- Technology budgeting, capital planning, and lifecycle forecasting.
- Quarterly technology and security review meetings.
- Annual security risk assessment.
- Written Information Security Program alignment.
- NYS SHIELD Act compliance monitoring.

4. Police Department Scope (Approx. 40 Workstations, 3 Sites, 20 Vehicles)

- Office workstation and vehicle-mounted terminal support.
- Break/fix remediation and field service.
- Operating system and application patch management.
- Firmware management for network and security devices.
- CJIS-aligned security controls and policy enforcement.

- Full disk encryption enforcement on all applicable devices.
- Multi-factor authentication enforcement.
- Isolated network segmentation and secure architecture.
- Managed Endpoint Detection and Response (EDR).
- 24x7 Security Operations Center (SOC) monitoring.
- DNS filtering and advanced threat protection.
- Secure evidence storage support and consultation.
- Microsoft 365 administration and backup.
- Offsite backup and disaster recovery validation.
- VoIP telephone support and E911 configuration compliance.
- Strategic equipment replacement and secure mobile deployment planning.

5. Service Model & Governance

- Documented escalation matrix and response time commitments.
- After-hours and emergency response availability.
- Ticketing platform with full visibility and reporting.
- Comprehensive network and system documentation maintenance.
- Quarterly executive reporting and performance review.
- Annual strategic planning session aligned with budget cycle.

6. Team & Municipal Experience Requirements

Respondents must demonstrate prior experience supporting municipal environments, including at least one Police Department requiring CJIS-aligned controls. Key assigned personnel shall be identified along with qualifications and relevant experience.

7. Pricing Model

The Town prefers a comprehensive managed services model with clearly defined scope, inclusive monitoring, security services, compliance oversight, and strategic planning. Pricing shall reflect the full scope of services outlined in this RFLOI. Hourly or limited-scope support models may be deemed non-responsive.

8. Evaluation Criteria

- Depth and completeness of proposed service approach.
- Demonstrated municipal and Police Department experience.
- Cybersecurity and compliance framework maturity.
- Staffing capacity and 24x7 monitoring capability.
- Cost effectiveness aligned with comprehensive service scope.
- Ability to provide strategic governance and planning support.

Additional information for consideration. No action is required on these items at this time.

Insurance Requirements

Auto Liability:	$1,000,000 Occurrence
General Liability: $	$1,000,000 Occurrence
	$1,000,000 Personal & Advertising Injury
	$2,000,000 General Aggregate
	$2,000,000 Products & Completed Operation Aggregate
Umbrella/Excess:	$1,000,000 Occurrence
Workers' Compensation:	Statutory Workers' Compensation
	$500,000 Employers' Liability
Professional Liability:	$2,000,000 Each Claim
	$4,000,000 Aggregate

No work shall be commenced under the contract until the successful Respondent has delivered to the Town of Manlius proof of insurance of all policies of insurance required by the contract.

Indemnification

Contractor shall indemnify, hold harmless and defend Owner from and against all claims, damages, losses, judgments, and expenses, including but not limited to reasonable attorney's fees, arising from, or related to Contractor's services under this Agreement to the extent caused by any negligent or culpable act or omission of Contractor. In the event the claims, damages, losses, judgments, and expenses, including but not limited to reasonable attorney's fees, are caused by the Owner's negligence, Owner shall fully indemnify and hold harmless Contractor. In the event the claims, damages, losses, judgments, and expenses, including but not limited to reasonable attorney's fees, are the result of the negligence of both the Owner and Contractor, Owner and Contractor shall be liable to the extent or degree of their respective negligence, as determined by mutual agreement of Owner and Contractor or as determined by adjudication of comparative negligence.

Payment

The successful Contractor will submit invoices monthly. Upon receipt, the Town Board will review and approve undisputed amounts. Approved payments will be processed via ACH transfer to the account designated by the Contractor.

HARRIS BEACH MURTHA
ATTORNEYS AT LAW

333 West Washington Street, Suite 200
Syracuse, New York 13202
315.423.7100

Joseph V. Frateschi, Esq.
Member
Direct: 315.214.2036
Fax: 315.422.9331
jfrateschi@harrisbeachmurtha.com

March 25, 2026

Town of Manlius Board
301 Brooklea Drive
Fayetteville, New York 13066

Re: Manlius, New York
Engagement Addendum for Legal Services

Dear All:

Please accept this letter as an addendum to the terms of our firm's engagement letter dated December 9, 2025 ("Engagement Letter") and agreed and accepted by Town of Manlius, New York, ("the Town") which terms remain in full force and effect and as revised by this Addendum. Based on recent requests, we shall include the additional and revised terms constituting this Addendum as follows:

Description of the Scope of Services to Be Performed. As requested by the Town, and under your direction, the Firm shall provide the within-described legal services (the "Scope of Services" or "Services") to the Town, as Client. We understand the requested Scope of Services to include the following identified below as the matter:

General preparation and presentation of a report for the Board containing the following information:

1. Scope of Data

Incident data for:

- All four Town fire departments
- All three EMS agencies serving the Town

Date will be for the period of calendar years 2023, 2024, and 2025.

2. Response Demand & Incident Volume

For each department/agency:

- Total number of incidents annually
- Incidents broken down by:

o Incident type (NFIRS or comparable categorization)

o Fire

- EMS
- Motor vehicle accidents
- Mutual aid given
- Mutual aid received
- False alarms
- Service calls

- Geographic distribution of incidents (if mapping is available)

3. Response Performance Metrics

For each department/agency and for the system overall:

- Dispatch time (call receipt to dispatch)
- Turnout time (dispatch to enroute)
- Travel time (enroute to arrival/on scene)
- Total response time (call receipt to arrival)
- Average response times
- Median response times
- 90th percentile response times
- First unit arrival time
- Full assignment arrival time (if applicable)

Also, if possible:

- Whether the department was able to respond to the call
- Instances where:
  - No unit was available
  - Mutual aid was required due to staffing or resource constraints (if known)

- o Response was delayed due to coverage overlap or lack thereof (if known)

4. Capacity & Coverage Analysis

Also, if possible:

- Simultaneous call volume analysis
- Peak demand times (time of day / day of week trends)
- Staffing levels relative to call volume
- Apparatus availability during peak demand
- Geographic coverage gaps or extended response zones

5. Comparative Analysis

The final report shall include:

- Individual departmental profiles with descriptive charts and graphs
- Side-by-side comparison charts between departments
- System-wide performance summary
- Identification of measurable service delivery shortfalls (if any)
- Identification of redundancies or inefficiencies, if supported by the data

As the Client's needs evolve, and at the discretion of the Client, the foregoing Scope of Services may be expanded or modified by the Client, as needed. In furtherance of the Scope of Services, the undersigned, as a Partner of the Firm, shall serve as lead attorney to assist the Town in all aspects of the litigation with the primary responsibility and direct local support provided by attorneys, Joseph Frateschi, Esq, (Syracuse Office) along with other attorneys of the Firm as needed.

Fees and Billing Arrangement. The Firm's fees for legal services performed by its various attorneys, paralegals, and non-attorney professionals ("Fees") are typically based principally on the amount of time devoted, multiplied by each individual's then current hourly billing rate. With respect to this engagement, we are willing to offer a lowered and blended rate structure provided to our Upstate municipal clients as follows: Partner, Counsel and Associates $200.00, Paralegals and Non-Attorney Professionals $175.00. We estimate the cost of the services to be roughly $2,000.00. In all events, we anticipate working closely with you to establish budget parameters that are sensitive to the Client's budgeted resources for the Scope of Services. The hourly rates may be adjusted by the Firm with the consent of Client from time-to-time and are generally adjusted as of January 1st of each calendar year.

We are willing to provide a litigation budget estimate upon request. However, any budget estimate provided is submitted in good faith and such a budget is subject to change under the circumstances.

In addition to fees for hourly services, the Client will reimburse the Firm for all out-of-pocket expenses ("Expenses") which the Firm incurs in the course of performing the Services such as photocopy, telecopier or express mail, secretarial overtime, process service fees and filings. The Firm may also require that the Client advance monies for expenses. The Firm sometimes requests service providers to submit certain charges directly to clients or will send invoices for certain charges directly to clients. In either case, the Client agrees to pay these charges by the due date established by the provider.

In the event a dispute arises between Client and the Firm regarding fees, Client may have the right to arbitrate that dispute pursuant to Part 137 of the Rules of the Chief Administrator of the Courts, a copy of which will be provided to Client upon request.

Termination of Engagement. Either of us may terminate the engagement at any time for any reason by written notice, subject, on our part, to the rules of professional responsibility. No such termination, however, will relieve the Agency of the obligation to pay the legal fees owed to us for services performed and other charges owed to us through the date of termination. After the completion of our services on your behalf, changes may occur in applicable laws or regulations that could have an impact upon your future rights and liabilities.

Conclusion of Representation; Disposition of Client Documents. Unless previously terminated, our representation with respect to the Services will terminate upon our sending you our final statement for services rendered in this matter. Following such termination, any otherwise nonpublic information you have supplied to us that is retained by us will be kept confidential in accordance with applicable rules of professional conduct. At your request, we will return your papers and property promptly after receipt of payment for any outstanding fees and costs. Our own files pertaining to the matter will be retained by the firm. These firm files include, for example, firm administrative records; internal lawyers' work product such as drafts, notes, internal memoranda; and legal and factual research, including investigative reports, prepared by or for the internal use of lawyers. We will retain all remaining documents for a certain period of time but reserve the right for various reasons including the minimization of unnecessary storage expenses, to destroy or otherwise dispose of them within a reasonable time after the termination of the engagement.

Again, we truly appreciate the opportunity to be of service to your Town. If the terms of this proposed engagement are acceptable, I ask that you please arrange for an authorized representative to acknowledge this letter below and return an original copy to my attention. As always, please feel free to call me with any questions or for additional information.

We understand the need to move these matters forward and request that you promptly respond by signing this Addendum and returning it to the undersigned. If there are any questions, please do not hesitate to contact me.

Very truly yours,

Joseph V. Frateschi, Esq.

AGREED AND ACCEPTED:
TOWN OF MANLIUS, NEW YORK

_____

By:
Date:

PRONEXUS
Projects. Consulting. Outsourcing.

115 Sully's Trail, Suite 11
Pittsford, New York 14534
Phone: (585) 662-2212
Fax: 585-402-7705
www.pronexusllc.com

Letter of Intent

ProNexus, LLC is pleased to have been exclusively selected to provide HR Consulting Services to the Town of Manlius. This letter outlines our mutual understanding of the engagement scope, leadership responsibilities, and related fees. Upon approval, ProNexus will reserve this project in our scheduling system in anticipation of a May / June 2026 start, consistent with your budgeting and Board planning timeline.

Engagement Objective

The purpose of this initial engagement is to provide the Town with an objective, third-party professional assessment designed to establish a clear understanding of current HR structure, priorities, and anticipated level of effort before broader project commitments are made.

This initial phase is intended to:

- Establish alignment between current state and desired future state.
- Identify risks, gaps, and areas of opportunity.
- Clarify priorities and sequencing potential HR initiatives.
- Develop a realistic project scope and corresponding cost estimate.
- Provide leadership with independent professional guidance to support informed decision-making.

This approach allows the Town to evaluate potential next steps based on objective findings prior to authorizing additional phases of work.

Proposed Scope of Work

Phase 1 HR Engagement Scope Exploration & Cost Estimate

To ensure appropriate alignment of scope, effort, and budget, ProNexus will conduct a focused front-end exploration phase designed to establish a clear understanding of current state versus desired future state.

Activities may include:

- Initial stakeholder meetings and discovery discussions.
- Review of current HR structure and key challenges.
- Preliminary gap analysis and risk identification.
- Clarification of priorities, sequencing, and expected outcomes.
- Development of refined level-of-effort assumptions.

Deliverable: Project Scope Confirmation and refined Project Cost Estimate to support informed budgeting and Board decision-making, including recommendations for potential future phases should the Town elect to proceed.

115 Sully's Trail, Suite 11
Pittsford, New York 14534
Phone: (585) 662-2212
Fax: 585-402-7705
www.pronexusllc.com

Staffing Approach & Cost Management: A Manager-level HR Consultant is recommended for this phase to ensure appropriate strategic leadership, assessment capability, and subject matter expertise.

Engagement Logistics

Proposed Role: HR Consultant – Organizational Review & Scope Assessment
Estimated Start: May / June 2026
Duration: Up to 3 days (24 hours total)
Estimated Utilization: Hybrid (onsite and remote as needed)
Reporting: Town Supervisor, with Board liaison as designated.

Consultant Qualifications

The assigned consultant will include:

- Public-sector and/or municipal HR familiarity.
- Civil service awareness.
- Experience supporting unionized environments.
- Employee relations and policy development expertise.
- Change management and training capabilities.

Professional Services Structure: Services will be provided under a professional services consulting arrangement, allowing the Town to engage independent expertise without creating an employment relationship.

Phase 1 Pricing: Up to 3-day / 24-hour assessment – ProNexus Manager: $3,600 (24 hrs. @ $150/hr.). Actual rate will be commensurate with the experience level of the professional assigned.

Excerpt from Rate Card:

	Upstate NY	
Staff level	Low	High
Corporate Hunman Resources		
Manager	$ 135	$ 165

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All consultants assigned are ProNexus employees; therefore, payroll taxes, benefits, insurance, and related employment costs are fully covered by ProNexus. ProNexus also provides a 3-day working interview guarantee, allowing the Town of Manlius to confirm practical fit. If a change is required, we will manage the transition accordingly.

Cancellation: Approval of this ELOI confirms mutual intent to proceed. If the engagement is cancelled prior to commencement, a $1,500 cancellation fee will apply to offset scheduling, staffing evaluation, and preparation costs.

Value to the Town

This engagement provides the Town Board and leadership with:

- Independent professional assessment.
- Clear definition of project scope and anticipated level of effort.
- Objective recommendations supporting governance decisions.
- A structured and cost-conscious foundation for future HR initiatives.

This initial phase reflects a prudent, governance-focused approach that allows the Town to evaluate its HR framework through an independent professional lens before committing to broader implementation activities.

Next Steps

1. Review and include this proposal on the March 25th Board agenda.
2. Confirm approval and any requested refinements.
3. Finalize engagement logistics and schedule kickoff for May / June 2026.

We appreciate the opportunity to support the Town of Manlius during this important phase and look forward to working together. Please reply with approval or requested modifications at your convenience.

Alissa Italiano Date	Robert Pickering 3/19/2026 Date
Acting Town Supervisor	Sr. Executive Vice President

Budget Items - 03-25-2026
Budget Additions

Acct Number	Acct Name		Adjustment
A00 4.2703	Age Friendly Donations	$	500.00
A00 5.5132.449	Garage-Maintenance Building	$	888,660.47
CM1 5.3120.493	DWI Equipment-Contractual	$	713.00
SS3 5.8110.400	Megin Farms Sewer-Contractual	$	0.34
SF2 4.2401	Manlius Fire-Earned Interest	$	8.84
A00 4.1001	Real Property Tax	$	3,294.56
A00 4.1520	Police Fees	$	420.00
SD1 4.1001	Real Property Tax	$	30,696.17
SF1 4.1001	Real Property Tax	$	38.60
SF1 4.2401	Earned Interest	$	4.68
SF2 4.1001	Real Property Tax	$	15.29
SF3 4.1001	Real Property Tax	$	25.98
SF4 4.1001	Real Property Tax	$	15.12
SL1 4.1001	Real Property Tax	$	22.81
SL2 4.1001	Real Property Tax	$	6.80
SL3 4.1001	Real Property Tax	$	5.87
SL4 4.1001	Real Property Tax	$	1.71
SL5 4.1001	Real Property Tax	$	11.58
SR1 4.1001	Real Property Tax	$	3,498.29
SR1 4.8160.102	Trash-Longevity Pay	$	750.00
SR2 4.1001	Real Property Tax	$	153.52
SS3 4.1001	Real Property Tax	$	3.41
SS3 4.2401	Earned Interest	$	0.31
SW3 4.1001	Real Property Tax	$	0.03
SW4 4.1001	Real Property Tax	$	0.11
W80 4.1001	Real Property Tax	$	0.02
A00 5.3120.101	Police-Overtime	$	3,715.95
A00 4.2002	EarthFest Donations	$	500.00

Budget Increase

From Acct Number	Acct Name	To Acct Number	Acct Name	Amount
B00 5.8010.401	Zoning Board-Office Supplies	B00 5.8010.402	Zoning Board-Seminars/Conferences	$ 25.00

301 Brooklea Drive
Fayetteville, NY 13066
Phone 315-637-3414
Fax 315-637-0713

Supervisor:
John T. Deer

Town Board:
Sara Bollinger
Ingrid Gonzalez-McCurdy
Alissa Italiano
Katelyn Kriesel
Michael Nesci
William Nicholson

Minutes
Town Board Meeting
March 11, 2026
6:30 PM

The Town of Manlius Town Board held a hybrid meeting with in-person attendees and virtual attendees.The meeting was live streamed on the Town Website, Town Facebook page and the Town YouTube Channel.
Deputy Supervisor Italiano presided, and the following Board members were present:

Absent	**John Deer, Supervisor**
	Sara Bollinger, Councilor
	Ingrid Gonzalez-McCurdy, Councilor
Absent	**Katelyn Kriesel, Councilor**
	Mike Nesci, Councilor
	William Nicholson, Councilor

The following Town Officers were present: Carrie Grevelding, Town Clerk. Joseph Frateschi, Town Attorney. Jason Cassalia, Chief of Police. Ann Oot, Town Manager. Kay Blythe, Assistant Town Manager. Bob Hall, Deputy Highway Superintendent. Maria Lenway, Comptroller.

In-Person Attendees:Bill Osuchowski, Pompey. Paul Kascha, Fayetteville. Joanne Britton, Fayetteville. Craig Dudczak, Fayetteville, Pat Gottschall, Fayetteville. James Horton, Fayetteville. Susan Burns, Fayetteville. Doug Burns, Fayetteville. Matt Mulcahy, Fayetteville. Jamie Mulcahy, Fayetteville. Dan Tyrel, Fayetteville. Cheryl Matt, Fayetteville. Mark Matt, Fayetteville. Eileen Knoll, Fayetteville. Dylan Black, Manlius. Chris Danaher, Fayetteville. Gary Slutzaky, Fayetteville. Hugh McCurdy, East Syracuse, NY

Draft

Virtual Attendees:Tom Poitras, Director of Planning and Development. Jon Gruenewald. Sue Oliver

Pledge Of Allegiance

Deputy Supervisor Italiano called the meeting to order at 06:33 PM. Councilor Nicholson led the Pledge of Allegiance. Deputy Supervisor Italiano welcomed everyone and thanked all for attending.

A moment of silence was held in memory of former Supervisor Richard Lowenberg.

Open Podium

NONE

Public Hearing

1. Drainage District #4 - Hoag Lane
    - No vote to be taken

Attorney Frateschi explained the purpose of the public hearing and the drainage district. He advised that the Planning Board approved the subdivisions for the Hoag Lane Development, contingent upon the formation of a drainage district.

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to waive the reading of the public notice.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to open the public hearing.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Draft

Chris Danaher, attorney for the developers, explained the reasoning behind the drainage district, noting that it was a condition of the Planning Board's approval.

Matt Mulcahey of Fayetteville addressed the Board, urging members to carefully review the details and remain vigilant as the plan is developed. He noted that Lot 17 is to remain in its natural state and raised concerns regarding unpaid property taxes. Mr. Mulcahey also provided a history of the project from its inception, emphasized the need to understand the potential liability the Town may be assuming, and suggested that the engineers give a presentation.

Elizabeth Merriam of Fayetteville expressed concern that the decision was made too quickly.

James Horton of Fayetteville discussed the flooding issues in his backyard and expressed concern that water will not be adequately retained. He also noted the potential need to purchase flood insurance.

Gary Slutzky expressed concerns regarding the development, including questions about responsibility and where sewage would go in the event of a backup. He also raised concerns about potential flooding in the area, specifically noting the detention pond at the end of Muirfield and the lack of fencing.

Pat Goltschall of Fayetteville stated that he is not fully opposed to the project but wants to ensure that everything is carried out appropriately. He inquired about the associated costs and emphasized the importance of paying close attention to details.

Eileen Knoll of Fayetteville, who resides adjacent to the culvert, expressed concern about the stream that discharges into her backyard.

Scot Freeman, engineer for the project, stated that he received an email from the Army Corps confirming that the wetlands permit is valid through March 14, 2027, provided the project is underway.

The Public Hearing will be held open.

Planning & Development

1. Proposed PUD - Medical Center Dr Tax Map #086.-01-11.0 - Burdick Street Apartments

    - Refer to Town of Manlius Planning Board, Onondaga County Planning Board, and Town of Manlius Watershed Stewards for Recommendations
    - Set Public Hearing Date - April 8, 2026 @ 6:31 PM

Draft

Director of Planning Tom Poitras attended virtually and provided an overview of the project. Brandon Jacobson, Developer, was present and discussed the Planned Unit Development (PUD) and proposed mixed-use building.

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to refer the proposed PUD for Medical Center Dr to the Onondaga County Planning Board, Town Planning Board, and the Manlius Watershed Stewards for recommendations.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Councilor Gonzalez-McCurdy made a motion, Seconded by Councilor Nicholson, to set the date for a public hearing on April 8, 2026, at 6:35 PM for a local law amending Chapter 155-20.8 entitled “Adopted District Plans” of the code of the Town of Manlius.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Set Date - Public Hearing on Proposed Local Law

1. E911 Surcharge Exemption

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to set the date for a public hearing on March 25, 2026, at 6:35 PM regarding proposed local law regarding the E911 surcharge exemption.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Town of Manlius Police Department

1. Police Department Building Original Lease

Draft

This matter was tabled for a future meeting.

Town Highway Department

1. National Grid Work Permits

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to authorize the Town Supervisor to sign the highway department permit application submitted by National Grid for the removal of 592-feet of gas main and the installation of 662-feet of 4-inch plastic gas main on Burlington Drive from Fayetteville Manlius Road to Sherbrooke Road intersection.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to authorize the Town Supervisor to sign the highway department permit application submitted by National Grid for the removal of 427-feet of gas main and the installation of 473-feet of 4-inch plastic gas main on Sherbrook Road from Fayetteville Manlius Road to Burlington Drive intersection.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to authorize the Town Supervisor to sign the highway department permit application submitted by National Grid for the removal of 723-feet of gas main and the installation of 737-feet of 4-inch plastic gas main on Taylor Road from Tilton Road to east of 7125 Taylor Rd.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None

Draft

Results: Passed

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to authorize the Town Supervisor to sign the highway department permit application submitted by National Grid for the removal of 385-feet of gas main and the installation of 400-feet of 4-inch plastic gas main on Berkshire Parkway from Fayetteville Manlius Road to approximately 7698 Berkshire Parkway.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Muirfield Drainage

1. IDH Contract

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to enter into contract and authorize the supervisor to sign the contract with IDH LLC in the amount of $372,000 for the Muirfield Drive Stormwater Improvements subject to final legal review.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Enders Road Sidewalk

1. NYS Department of Transportation Application

Councilor Bollinger made a motion, Seconded by Councilor Gonzalez-McCurdy, to adopt the resolution documenting financial commitment for a project submitted to the NYS Department of Transportation – Transportation Alternatives Program.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Draft

Letter of Support - Village of Manlius

1. Manlius Safe Routes to School and Sidewalk Extension

Councilor Gonzalez-McCurdy made a motion, Seconded by Councilor Nicholson, to authorize Deputy Supervisor Italiano to sign the letter of support to the NYS Department of Transportation TAP for the Village of Manlius' Safe Routes to School and Sidewalk Extension Program.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Town Municipal Facilities & Police Department Headquarters - Facilitation Contract

1. Karen Lynn Kaplan

Councilor Gonzalez-McCurdy made a motion, Seconded by Councilor Bollinger, to authorize the supervisor to sign the Consultant Contract with Karen Lynn Kaplan in the amount of $2,000 subject to final legal review.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Gonzalez-McCurdy

Nayes: Councilor Nicholson
Abstain: None
Results: Passed

Age-Friendly Committee

1. Neighborhood Workshop Proposal - Fisher Associates

Councilor Gonzalez-McCurdy made a motion, Seconded by Councilor Nicholson, to enter into a contract with Fisher Associates in the amount of $2,300 for the Neighborhood Design Workshop subject to legal review.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Draft

Tree Commission

1. Contract with Cornell Cooperative Extension of Onondaga County

Councilor Gonzalez-McCurdy made a motion, Seconded by Councilor Bollinger, to authorize the supervisor to sign the contract with Cornell Cooperative Extension of Onondaga County not to exceed the amount of $4,000 subject to final legal review.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Routine Business

1. Supervisor's Reports - February 2026

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to approve the supervisor’s reports for February 2026 as presented by the Town Comptroller.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson

Nayes: None
Abstain: Councilor Gonzalez-McCurdy
Results: Passed

2. Budget Items

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to approve the Budget Adjustments as presented by the Town Comptroller.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to approve the Budget Transfers as presented by the Town Comptroller.

Ayes: Councilor Bollinger, Councilor Italiano, Councilor Nesci, Councilor Nicholson,

Draft

Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

3. Announcements

Councilor Nicholson announced that on March 24, the Manlius Watershed Stewards will host a public presentation at the Fayetteville Library. The presentation will focus on drainage management and basin project, with participation from an engineer from LaBella.

Councilor Bollinger announced that on March 12, Centro will be holding a public meeting in the Manlius Village Center regarding proposed route changes and the implementation of on-demand busing in the area. She further noted that a public meeting regarding the Genesee/Burdick Street corridor will be held on March 16 at the Fayetteville Library from 5:00 PM to 7:00 PM. Additionally, a virtual meeting on March 26 will provide an overview of the zoning project and its process, scheduled from 12:00 PM to 1:00 PM.

Councilor Nesci provided a follow-up on the Meadowbrook-Limestone Waste Water Treatment Plant project, noting that Legislator Denton has spoken with the new Commissioner regarding the project. He stated that the project is now in the final design stages, with construction anticipated to begin in mid-fall of this year. Once the design stage is completed, there will be a public forum with the Commissioner to hear from the community.

4. Approval of Minutes - February 25, 2026

Councilor Nicholson made a motion, Seconded by Councilor Bollinger, to the minutes from February 25, 2026 as presented by the Town Clerk.

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

5. Approval of Abstract #5

Councilor Bollinger made a motion, Seconded by Councilor Nicholson, to approve abstract #5 in the amount of $424,934.10.

TOWN OF MANLIUS
Fund Summary
Abstract #5 - 2026

Draft

CODE	FUND	TOTALS
A	General Fund Townwide	$314,734.68
B	General Fund Part Town	$6,475.20
DA	Highway Fund Townwide	$91,732.85
DB	Highway Fund Part Town	$263.50
SR1	Trash	$250.99
SR2	Brush	$250.99
SL1	Overhead Lighting	$2,535.43
SL2	Underground Lighting	$3,713.36
SL3	Entry Lighting	$180.58
SL4	Garden Park Lighting	$986.94
SL5	Ratnour Bridge Lighting	$3,809.58
	Total	$424,934.10

Ayes: Deputy Supervisor Italiano, Councilor Bollinger, Councilor Nesci, Councilor Nicholson, Councilor Gonzalez-McCurdy

Nayes: None
Abstain: None
Results: Passed

Adjournment

There being no further business to come before the Board, upon motion duly made by Councilor Nesci and seconded by Councilor Nicholson the Board voted unanimously to adjourn regular session at 07:50 PM.

Respectfully Submitted by:

Carrie Grevelding
Town Clerk

Draft

Abstract #6

ACCT	NAME	AMOUNT
A00	NON-DEPARTMENTAL	536.00
A00-1010	Town Board	2,000.00
A00-1110	Justices	26.66
A00-1220	Supervisor	894.17
A00-1620	Buildings	110.00
A00-1640	Central Garage	360.00

:18 PM REGULAR DEPARTMENT PAYMENT REGISTER

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
A00-3120	Police	28,233.23
A00-5132	Garage	1,006.58
A00 TOTAL	General Fund Townwide	33,166.64
B00-3620	Codes Enforcement	80.00
B00 TOTAL	General Fund Part Town	80.00
DA0-5130	Machinery	3,731.11
DA0-5140	Brush & Weeds	8,142.00
DA0-5142	Snow Removal	64,007.00
DA0 TOTAL	Highway Fund Townwide	75,880.11
	** TOTAL **	109,126.75

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
A00	NON-DEPARTMENTAL	160.00
A00-1010	Town Board	5,000.00
A00-3120	Police	7,742.57
A00 TOTAL	General Fund Townwide	12,902.57
DA0-5142	Snow Removal	194.52
DA0 TOTAL	Highway Fund Townwide	194.52
	** TOTAL **	13,097.09

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
A00-1620	Buildings	516.26
A00-3120	Police	332.61
A00-5132	Garage	802.52
A00-9061	Employee Benefits	250.00
A00 TOTAL	General Fund Townwide	1,901.39
B00	NON-DEPARTMENTAL	50.00
B00 TOTAL	General Fund Part Town	50.00
SW2-8340	Transmission/Distribution	34,354.30
SW2 TOTAL	Manlius Con Water Dist	34,354.30
W80-8340	Transmission/Distribution	267.65
W80 TOTAL	Schepp Water District	267.65
W90-8340	Transmission/Distribution	46.10
W90 TOTAL	Watervale Water District	46.10
	** TOTAL **	36,619.44

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
A00-1010	Town Board	150.00
A00-1420	Attorney	14,287.52
A00-1440	Engineer	4,718.00
A00-1620	Buildings	6,266.97
A00-1640	Central Garage	5,168.26
A00-3120	Police	103.50
A00-5132	Garage	14,915.00
A00-6310	Tree Commission	750.00
A00-9061	Employee Benefits	2,600.00
A00 TOTAL	General Fund Townwide	48,959.25

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
B00-3620	Codes Enforcement	1,719.98
B00-8010	Zoning	1,517.00
B00-8020	Planning	3,089.50
B00 TOTAL	General Fund Part Town	6,326.48
SR1-8160	Refuse	212,284.60
SR1 TOTAL	Manlius Res Trash Dist	212,284.60
SR2-8160	Refuse	26,384.58
SR2 TOTAL	Manlius Res Brush Dist	26,384.58
SW3-8310	Water Administration	10,204.00
SW3 TOTAL	Skyridge Water District	10,204.00
TA2	NON-DEPARTMENTAL	3,975.00
TA2 TOTAL	Trust & Agency - Other	3,975.00
	** TOTAL **	308,133.91

** DEPARTMENT TOTALS **

ACCT	NAME	AMOUNT
A00-1620	Buildings	63.02
A00-3120	Police	1,032.92
A00-5132	Garage	1,601.70
A00 TOTAL	General Fund Townwide	2,697.64
DA0-5130	Machinery	476.88
DA0-5140	Brush & Weeds	38.94
DA0-5142	Snow Removal	118.36
DA0 TOTAL	Highway Fund Townwide	634.18
	** TOTAL **	3,331.82