

**CITY OF GRAHAM
AGENDA
TUESDAY, OCTOBER 6, 2015
7:00 P.M.**

Meeting called to order by the Mayor
Invocation and Pledge of Allegiance

- 1. Consent Agenda:**
 - a. Approval of Minutes – September 1, 2015 Regular Session
 - b. Tax Releases & Refunds
 - c. Boards & Commissions Appointments

- 2. Presentation from Impact Alamance**

- 3. Award Bid for Senator Ralph Scott Parkway Extension**

- 4. Consider Participation in a Graham Route for Link Transit**

- 5. Resolution Authorizing the City Manager and Finance Officer the Authority to Determine and Dispose of Surplus Personal Property**

- 6. Issues Not Included on Tonight's Agenda**

**CITY OF GRAHAM
REGULAR SESSION
TUESDAY, SEPTEMBER 1, 2015
7:00 P.M.**

The City Council of the City of Graham met in regular session at 7:00 p.m. on Tuesday, September 1, 2015, in the Council Chambers of the Municipal Building located at 201 South Main Street.

Council Members Present:

Mayor Jerry Peterman
Mayor Pro Tem Jimmy Linens
Council Member Jim Albright
Council Member Chip Turner
Council Member Lee Kimrey

Also Present:

Frankie Maness, City Manager
Darcy Sperry, City Clerk
Nathan Page, City Planner
James Lloyd, Chief Code Enforcement Officer
Melody Wiggins, Recreation & Parks Director

Mayor Jerry Peterman called the meeting to order and presided at 7:00 p.m. Mayor Pro Tem Jimmy Linens gave the invocation and everyone stood to recite the Pledge of Allegiance.


Consent Agenda:

- a. *Approval of Minutes – August 4, 2015 Regular Session*
- b. *Tax Releases & Refunds*

CITY OF GRAHAM RELEASE ACCOUNTS						
SEPTEMBER COUNCIL MEETING						
ACCT #	YEAR	RECEIPT	NAME	RE/PP	REASON FOR RELEASE	RELEASED
43036	2015	8076	WOLF, JACK H	RE	VALUE CORRECTED BY ALA CO	234.04
608932	2015	7080	STUTTS, JANICE B L/E	RE	HOMESTEAD EXEMPTION	228.57
115922	2015	476-477	BARE, MARK ANTHONY	PP	BOAT & MOTOR DOUBLE LISTED	144.42
140579	2015	7411	TINNIN, FRANK LEE	PP	BOAT DOUBLE LISTED	73.53
163572	2015	4878	MCGHEE, HOWARD LEE JR	PP	CORRECT VALUE OF BOAT	5.46
192070	2015	1068	BURKE REALTY OF ALAMANCE	PP	NOT IN CITY OF GRAHAM 2015	7.37
533662	2015	1567	COBB, EDWARD BRANELL	PP	SOLD BOAT IN 2013	2.41
611784	2015	3015-3016	GRAHAM MARINE SALES	PP	SOLD BOAT & MOTOR IN 2014	19.43
614337	2015	2081-2083	DEAN, JOEL ALAN	PP	SOLD BOAT & JET SKIS IN 2014	16.16
652020	2015	4314	LEBERT, DONALD	PP	MOBILE HOME DOUBLE LISTED	19.43

CITY OF GRAHAM REFUNDS						
SEPTEMBER COUNCIL MEETING						
ACCT #	YEAR	RECEIPT	NAME	RE/PP	REASON FOR REFUND	AMOUNT REFUNDED
172210	2015	4922	MCSWAIN, JAYSON TODD	RE	CORRECTED VALUE ON BOAT (TAX PAID IN FULL)	5.01

- c. *Boards & Commissions Appointments*

Memorandum		
To:	Graham City Council	
cc:	Frankie Maness	
From:	Darcy Sperry	
Date:	9/1/2015	
Re:	Boards and Commissions Vacancies and Requests for Appointments	

New Appointments

<u>Board</u>	<u>Name</u>	<u>Term Expiration Date</u>
Graham Appearance Commission	Jan Seads	6/30/2019

08/26/2015

Dear City Council Members,

As required by General Statute of North Carolina, the governing body of a municipal fire district must appoint two of five members to serve on the Local Firefighter's Relief Fund Board. Due to the loss of board member James McClure and the out of fire district residency of Don Bulla I request that Ray Fogleman and Billy Braxton be appointed as Relief Fund Trustees by the Graham City Council.

Respectfully Submitted,

John c. Andrews Jr.



Chief Graham Fire Department

d. Request from Graham First United Methodist Church to close East Market Street on October 31, 2015 from 5:00pm-7:00pm for a Community Trunk or Treat event

Mayor Peterman asked the Council Members if they would like to pull any of the items from the Consent Agenda. Council Member Jim Albright asked to pull item "d. Request from Graham First United Methodist Church to close East Market Street on October 31, 2015 from 5:00pm-7:00pm for a Community Trunk or Treat event."

Council Member Lee Kimrey made a motion to approve items "a", "b" and "c" on the Consent Agenda, seconded by Council Member Chip Turner. All voted in favor of the motion.

Council Member Albright pointed out that the actual request was for East Market Street to be closed from 3:30pm-8:00pm with the event to be held from 5:00pm-7:00pm.

Mayor Peterman made a motion to approve the Request from Graham First United Methodist Church to close East Market Street on October 31, 2015 from 3:30pm-8:00pm for a Community Trunk or Treat event, seconded by Council Member Albright. All voted in favor of the motion.

Old Business:***a. Public Hearing: City of Graham Comprehensive Plan. Review of Final Draft:
i. Adoption of City of Graham Comprehensive Plan 2035***

City Planner Nathan Page explained that this is an update to the City's Growth Management Plan 2000-2020 which has served as the City's comprehensive plan since May 2, 2000. He further stated that over the past two (2) years, the City has worked to draft a new comprehensive plan to guide the City's decisions over the next twenty (20) years. Mayor Peterman opened the Public Hearing.

Mr. Roger Walden, 108 Bristol Drive Chapel Hill, NC stepped forward to answer questions from the Council. Mr. Walden represents Clarion Associates who was the City's consultant on this project. Mr. Walden offered his professional and personal thanks to the members of the Steering Committee.

Council Members expressed their desire to have Strategy 2.4.2: Establish Communications and Coordination Mechanisms with the Alamance-Burlington School System moved from a Mid-Term Priority to a Near-Term Priority. In addition, they asked for Regional Transit to be listed as a Long-Term Priority in this plan.

Ms. Marcy Green, 6808 Whitsett, and Mr. Griffin McClure, 501 Grandview Drive Graham, NC, both stepped forward to express their support for this new plan.

Council Member Kimrey expressed concern over the word "designate" used in conjunction with the North Main Street National Historic District. In addition, he expressed concern over "accessory dwelling units" and the word "should" pertaining to automobile parking on the street, which are both located in the Suburban Residential section of the plan. Council Member Kimrey stated that he felt the word "consider" would be more appropriate in place of "designate". Mr. Walden agreed and suggested that it could read something along the lines of "continue to consider the possibility of North Main Street becoming a Local Historic District".

After much discussion about the Suburban Residential section of the plan, Mr. Walden suggested moving "accessory dwelling unit" from Principal Uses to Supporting Uses and have language along the lines of "may include accessory dwelling units provided that they maintain the character of the area in which they are located." Additionally, Mr. Walden suggested "should" be changed to "it is desirable that automobile parking be located on the street." Mayor Peterman suggested that the word "encourage" could be used in place of the word "should" when talking about parking on the street. Council agreed with these changes.

Mr. Page suggested to Council that the following be used in conjunction with adding Regional Transit as a Long Term Priority: Strategy 3.2.5. Consider coordinating within the region to implement a transit system for citizens to access the governmental offices located in downtown Graham and increase accessibility to the Alamance Community College as a long term goal. Council was in agreement. Mayor Peterman closed the Public Hearing.

Mayor Peterman made the motion to approve the Comprehensive Plan as written, including the changes, and become effective September 5, 2015, seconded by Mayor Pro Tem Linens. All voted in favor of the motion. Mayor Peterman thanked Mr. Walden for all of his work on this plan and also asked staff to send thank you letters to the members of the Steering Committee.

RESOLUTION ADOPTING *THE GRAHAM 2035 COMPREHENSIVE PLAN*

WHEREAS, The *City of Graham Growth Management Plan 2000-2020* has served as the City of Graham's comprehensive plan since it was adopted on May 2, 2000; and

WHEREAS, *The Graham 2035 Comprehensive Plan* is the guiding policy document for Graham and provides the community an opportunity to outline how it will grow through visions, goals, and policies. The Plan is implemented through action-oriented strategies that address issues including opportunities downtown and in key potential growth areas, local and regional transportation, public facilities and services, the natural environment, Graham's historic character, housing and neighborhoods, and economic growth and development; and

WHEREAS, over the past year and a half, the City of Graham has worked with Clarion Associates, local steering committee members, business owners, community leaders, and several citizens to develop a new comprehensive plan to guide the City of Graham's decisions over the next 20 years; and

WHEREAS, three public workshops were held on April 8, 2014, November 17, 2014, and September 1, 2015, three notices in the City GRAM newsletter were distributed to all City of Graham Water Customers, 50 signs were placed at intersections throughout the City and our current and proposed extraterritorial jurisdiction, and various social media outlets promoted the development process of *The Graham 2035 Comprehensive Plan*; and

WHEREAS, the City of Graham Planning Board recommended approving *The Graham 2035 Comprehensive Plan* on March 17, 2015; and

NOW, THEREFORE BE IT RESOLVED, the City Council of the City of Graham, North Carolina hereby adopts *The Graham 2035 Comprehensive Plan* for the City of Graham and its jurisdiction, replacing the *City of Graham Growth Management Plan 2000-2020*. *The Graham 2035 Comprehensive Plan* as herein adopted shall be City of Graham's comprehensive plan in accordance with North Carolina General Statutes Section 160A-383.

BE IT FURTHER RESOLVED, *The Graham 2035 Comprehensive Plan* shall provide guidance to City Council of the City of Graham, North Carolina, advisory members, staff, citizens, and potential applicants in understanding the City of Graham's stated policies and preferences. The City Council of the City of Graham, North Carolina and staff may also use *The Graham 2035 Comprehensive Plan* to provide guidance on developing future work plans, strategies, and budgeting decisions.

This Resolution shall be in full force and effect on September 5, 2015.

Adopted this 1st day of September, 2015 by the City Council of the City of Graham, North Carolina.



Gerald R. Peterman, Mayor

ATTEST:

Darcy L. Sperry, City Clerk

b. Graham Area Business Association to Discuss Purchase of Holiday Decorations

City Manager Frankie Maness explained that the Graham Area Business Association advised they would like to remove this item from consideration. Council Member Turner made a motion to withdraw this item, seconded by Council Member Albright. All voted in favor of the motion.

Requests and Petitions of Citizens

➤ ***Roger Springs (S1501). This is an application by Green Mountain Engineering for a new Major Subdivision off of Rogers Road, east of the South Graham Municipal Park***

Mr. Page explained that this is a request to create a new major subdivision on the subject property for forty-one (41) lots. He added that the property is currently vacant and the proposal includes connecting existing road stubs and advised that the applicant has recently requested the removal of a path to the South Graham Municipal Park.

Mr. Greg Garrett, 221 Jonestown Road Winston-Salem, NC, stepped forward to answer questions from the Council. Mr. Garrett represents Shugart Enterprises, the builder for this project. Mr. Garrett advised that the homes being proposed for this project will be similar to those they are currently building in the South Park subdivision in Graham. He further stated that the target buyer for this proposed subdivision is the "empty-nest" buyer – one looking to downsize but stay in Graham. Mr. Garrett advised that there are several reasons as to why they are opposed to constructing the path to the park. He went on to say that one reason is safety. He advised that

grade change in the property would make constructing the path problematic. He also expressed concern as to where the path would tie into Rogers Road. Mr. Garrett stated that they believe the best connection and access to the Park is via Thompson Road, where there is already a handicapped accessible sidewalk. He further stated that the cost to construct the path would equate to approximately one thousand dollars (\$1,000) per lot and they don't see their buyers as wanting to pay that additional cost.

Following discussion about the path grade, the existing gravesites within the proposed plan, access roads to and from the proposed subdivision and clarification of the proposed name "Rogers Spring", Mr. McClure stepped forward to express his concern for crossing Rogers Road at Thompson Road. He believes that it would be more dangerous for citizens to cross at the crest of the hill which is where Mr. Garrett is proposing. He further stated that if the City is really committed to growing a greenway system that links parks to our neighborhoods, he encourages Council to explore constructing a path. Graham Recreation & Parks Director Melody Wiggins stepped forward and advised that ADA surfacing is not limited to asphalt. She added that access to parks is what "empty nesters" are looking for. Ms. Wiggins further stated that the Recreation & Parks Department is advocating that we get access and connectivity to parks every chance we get.

Being no further discussion, Council Member Kimrey made a motion to recommend approval with the following condition:

- A final site plan must be submitted to and approved by the TRC before a building permit and/or certificate of occupancy will be issued;

And that the application is consistent with the Growth Management Plan 2000-2020, seconded by Mayor Pro Tem Linens. All voted in favor of the motion.

Approve Engineering Contract for Phase I Graham Recreation Complex (Jim Minor Road Park)

Mr. Maness explained that just as we awarded contracts last month for projects that we are working on, we need to award the engineering contract for Phase I of our Recreation Complex which Council approved project budget funding for two months ago. Mr. Maness explained that we received two (2) proposals for this project. After he and Ms. Wiggins reviewed both proposals, they are recommending that Council award the contract to Alley, Williams, Carmen & King whose bid is estimated at eighty-eight thousand dollars (\$88,000).

Council Member Kimrey asked if changes had been made with the location of the shelter in this first phase of development. Ms. Wiggins advised that the pods have changed and the playground is now closest to the shelter proposed in this first phase.

Mayor Pro Tem Linens made the motion we award the engineering contract for the City of Graham Recreation Complex to Alley, Williams, Carmen & King, seconded by Council Member Turner. All voted in favor of the motion.

Resolution Providing Approval of a Multifamily Housing Facility to be Known as Oneida Mill Lofts in the City of Graham, North Carolina and the Financing Thereof with the Burlington Housing Authority's Multifamily Mortgage Revenue Note in an Amount Not to Exceed \$8,000,000

Mr. Maness explained that part of the funding mechanism for the Oneida Mills project is the issuance of private activity bonds, up to eight million dollars (\$8,000,000). He further explained that the City of Graham and the Graham Housing Authority can issue these bonds on behalf of the developer but neither agency has the resources or expertise to effectively manage the process. The

developer has reached out to the Burlington Housing Authority, who has experience, and they have agreed to issue these bonds. A public hearing has been held in Burlington at which both the Burlington Housing Authority and the Burlington City Council have agreed to help with the issuance of these bonds. Mr. Maness stated that because the project is located within Graham's corporate limits, consent from the City of Graham must be given to allow Burlington Housing Authority to issue these bonds.

Following discussion, Council Member Albright made the motion to approve the resolution providing approval of a multifamily housing facility to be known as Oneida Mill Lofts in the City of Graham, North Carolina and the financing thereof with the Burlington Housing Authority's multifamily mortgage revenue note in an amount not to exceed \$8,000,000, seconded by Council Member Kimrey. All voted in favor of the motion.

**RESOLUTION PROVIDING APPROVAL OF A MULTIFAMILY HOUSING
FACILITY TO BE KNOWN AS ONEIDA MILL LOFTS IN THE CITY OF
GRAHAM, NORTH CAROLINA AND THE FINANCING THEREOF WITH
THE BURLINGTON HOUSING AUTHORITY'S MULTIFAMILY MORTGAGE
REVENUE NOTE IN AN AMOUNT NOT TO EXCEED \$8,000,000**

WHEREAS, the City Council of the City of Graham (the "City") met in Graham, North Carolina at 7:00 p.m. on the 1st day of September, 2015; and

WHEREAS, the Burlington Housing Authority (the "Authority"), a public body and body corporate and politic organized and operating pursuant to the North Carolina Housing Authorities Law, Article 1 of Chapter 157 of the General Statutes of North Carolina, as amended (the "Act"), has tentatively agreed to issue its multifamily mortgage revenue note in an amount not to exceed \$8,000,000 (the "Note"), for the purpose of financing the acquisition of the Oneida Mills cotton mill and the renovating and equipping therein by Pumpkin Hill Mill, LLC, a North Carolina limited liability company (the "Borrower"), or an affiliate or subsidiary thereof, of a mixed income multifamily residential rental facility to be known as Oneida Mill Lofts (the "Development"); and

WHEREAS, the Development will consist of approximately 134 units, located on an approximately 6.8 acre site at 219 West Harden Street in the City of Graham, Alamance County, North Carolina; and

WHEREAS, pursuant to Section 157-39.1 of the Act, the jurisdiction of the Authority extends to up to ten miles outside the city limits of the City of Burlington, including the City of Graham, so long as the City of Graham consents to the exercise of such powers by the Authority within the borders of the City of Graham; and

WHEREAS, the City of Graham acknowledges that the acquisition of Oneida Mill and the renovation thereof into affordable housing will satisfy a need for affordable housing within the City of Graham, and further the City of Graham desires to consent to the issuance by the Authority of the Note to finance the Development within the borders of the City of Graham; and

WHEREAS, Section 147(f) of the Internal Revenue Code of 1986, as amended (the "Code"), requires that any notes issued by the Authority for the Development may only be issued after approval of the plan of financing by the City following a public hearing with respect to such plan; and

WHEREAS, on August 6, 2015, the Authority held a public hearing with respect to the issuance of the Note to finance, in part, the Development (as evidenced by the Certificate and Summary of Public Hearing attached hereto) and has requested the City to approve the issuance of the Note as required by the Code; and

WHEREAS, the City has determined that approval of the issuance of the Note is solely to satisfy the requirement of Section 147(f) of the Code and shall in no event constitute an endorsement of the Note or the Development or the creditworthiness of the Borrower, nor shall such approval in any event be construed to obligate the City of Graham, North Carolina for the payment of the principal of or premium or interest on the Note or for the performance of any pledge, mortgage or obligation or agreement of any kind whatsoever which may be undertaken by the Authority, or to constitute the Note

or any of the agreements or obligations of the Authority an indebtedness of the City of Graham, North Carolina, within the meaning of any constitutional or statutory provision whatsoever;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GRAHAM:

1. The City Council hereby consents to and approves the issuance by the Authority of its multifamily mortgage revenue note to provide financing for the acquisition, rehabilitation and equipping of the Development within the jurisdiction of the City of Graham.

2. The proposed mixed income housing development consisting of the acquisition, rehabilitation and equipping of the Development described above in the City of Graham, Alamance County, North Carolina by the Borrower and the issuance of the Authority's multifamily mortgage revenue note therefor in an amount not to exceed \$8,000,000 are hereby approved for purposes of Section 147(f) of the Code. The Mayor is hereby authorized to execute such approval certificates as may be required to evidence the City's approval of the issuance of the Note for purposes of Section 147(f) of the Code.

3. This resolution shall take effect immediately upon its passage.

Council member Jim Albright moved the passage of the foregoing resolution and Council member Lee Kimrey seconded the motion, and the resolution was passed by the following vote:

Ayes: Council members Jerry Peterman, Jimmy Linens, Jim Albright, Chip Turner and Lee Kimrey

Nays: None

Not voting: None

CERTIFICATION

I, Darcy L. Sperry, City Clerk of the City of Graham, North Carolina, DO HEREBY CERTIFY that the foregoing is a true and exact copy of a Resolution adopted by the City Council for the City of Graham, North Carolina, in regular session convened on September 1, 2015.

WITNESS my hand and the corporate seal of the City of Graham, North Carolina, this the 1st day of September, 2015.


City Clerk



Consider Offer to Purchase City Property (former Mid-State Magic Property)

Mr. Maness explained that approximately one (1) year ago, Council sought to list this piece of vacant property owned by the City, with a real estate agent. Mr. Maness stated that the City has received an offer in the amount of one hundred seventy-five thousand dollars (\$175,000). He further stated that the City has approximately three hundred thirty-five thousand dollars (\$335,000) invested in this property.

Mr. Maness reminded Council that a few years back, Council had established a per acre price of seventy-two thousand five hundred dollars (\$72,500).

Being no further discussion, Council Member Lee Kimrey made the motion that we do not accept the offer and authorize the City Manager to seek or negotiate higher offers, seconded by Mayor Pro Tem Linens. All voted in favor of the motion.

First Reading of an Ordinance to Amend Chapter 2, Division 4 of the Code of Ordinances

Mr. Maness explained that our Fire Department has requested we amend our ordinance to allow their volunteer pool to extend up to two (2) miles outside the City's corporate limits. He advised that our current ordinance restricts residency to up to one (1) mile from the corporate limits. Mr. Maness also added that we are looking to change the reference from part-time to volunteer throughout the ordinance.

Mayor Pro Tem Linens made the motion to move the Ordinance to amend Chapter 2, Division 4 of the Code of Ordinances, seconded by Council Member Albright. All voted in favor of the motion.

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF GRAHAM,
AMENDING CHAPTER 2, DIVISION 4 OF THE CODE OF ORDINANCES OF THE
CITY OF GRAHAM, NORTH CAROLINA**

- **DIVISION 4. - VOLUNTEER FIREFIGHTERS**

- **Sec. 2-275. - Membership qualifications; benefits generally.**

(a) All **volunteer** members of the city fire department shall be residents of the city or reside within **two miles** of the city limits. A **volunteer** firefighter moving outside the city limits or the **two-mile** limit must resign from the fire department unless he requests a hearing before a committee consisting of the mayor, city manager and fire chief. This committee, appointed by the city council, has the authority to determine if the firefighter is eligible to remain a member of the fire department. Decisions made by the committee shall be final. Applicants must be 18 years of age, of good character, and have a doctor's report attesting to their physical fitness.

(b) Any firefighter who shall have served the fire department for ten years shall be eligible for honorary membership.

(c) Any firefighter, active or retired, with 20 years service shall receive all the following benefits in acknowledgment of, and in grateful appreciation of, his devotion to public service:

- (1) North Carolina Firemen's Fraternal Life Insurance dues and North Carolina Firemen's Pension Fund dues will be paid by the city.
- (2) He shall have a life appointment to the position of honorary firefighter.
- (3) He shall have a free city firefighter tag.

(d) Full-time firefighters shall also receive benefits as may be provided by the city for regular employees.

- **Sec. 2-276. - Compensation.**

(a) Each year in the budget, the city council shall make an appropriation to the fire department for **volunteer** firefighter's fees.

(b) This sum is to be paid to each member for attendance at fires, trainings and meetings. The fees shall be distributed at the end of each November.

(c) With the exception of the full-time chief, the above shall apply to full-time firefighters when on call back duty only.

- **Sec. 2-277. - Records.**

The treasurer of the fire department shall keep a record of the funds and disbursements thereof, relating to **volunteer** firefighters, received from sources other than city appropriations, which shall be open to inspection by the city manager at all times.

- **Sec. 2-278. - Dismissal for failure to meet training requirement.**

At the end of the calendar year, any **volunteer** firefighter who has failed to meet the 36-hour training requirement required by the state shall be dismissed from the fire department.

Issues Not Included on Tonight's Agenda

Mr. Jamie Gerhart, 4605 Sycamore Shoals Durham, NC, informed Council that the Sheetz sponsored 1st Annual DC Burlington Double Elimination Cornhole Tournament will be held on September 26, 2015. All proceeds will benefit Sheetz Family Charities.

Council Member Kimrey inquired as to the status of reviewing the City's personnel policy. Mr. Maness advised that the City is currently working on the pay study and position classification plans. Like with many changes, Mr. Maness advised that this is something that we are probably going to need consultant and legal review prior to adoption.

Mr. Maness extended congratulations to Burlington City Manager Harold Owen on his recent retirement. He went on to say that he is proud to consider himself a colleague of Mr. Owen.

Mayor Peterman advised Council that the joint meeting requested by the Planning Board between Council and the Planning Board will not take place. He further advised that he will attend the Planning Board's next scheduled meeting and advise them of this decision. Mayor Peterman stated that the issue the Planning Board had was with the payment-in-lieu system for sidewalks and has since been resolved.

Mayor Peterman welcomed Mykonos, a new Greek restaurant, to Graham.

At 9:20 p.m. Council Member Kimrey made a motion to adjourn, seconded by Council Member Albright. All voted in favor of the motion.

Darcy Sperry, City Clerk

**CITY OF GRAHAM
RELEASE ACCOUNTS**

OCTOBER COUNCIL MEETING

<u>ACCT #</u>	<u>YEAR</u>	<u>RECIPT</u>	<u>NAME</u>	<u>RE/PP</u>	<u>REASON FOR RELEASE</u>	<u>RELEASED</u>
41738	2015	1848	CRABTREE, DONNA ALLEN	RE	QUALIFIED FOR HOMESTEAD EXEMPTION	221.18
491475	2015	2656	FOOD LION LLC	PP	CORRECT VALUES - ALA CO	8.88
491475	2015	2659	FOOD LION LLC	PP	CORRECT VALUES - ALA CO	161.63
68151	2015	6657	SIMMONS ENGINEERING	PP	SOLD IN 2014 - 1988 CHEV MP	4.55
68151	2015	6656	SIMMONS ENGINEERING	PP	SOLD IN 2014 - 1989 GMC SUBURBAN	9.56
71379	2015	834	BRADSHAW, MICKEY LYNN	PP	DOUBLE LISTED JET SKI	3.69
507650	2015	261	ANDREWS, SAMUEL CRAIG	PP	DID NOT OWN JAN 2015 - 1990 SUNBIRD	6.51
380633	2015	2214	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	11.45
380633	2014	6165	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	11.44
380633	2013	6190	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	11.06
380633	2012	6217	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	12.83
380633	2011	6163	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	14.79
380633	2010	6200	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	17.83
380633	2009	6163	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	22.16

TOTAL RELEASES 517.56

CITY OF GRAHAM
REFUNDS

OCTOBER COUNCIL MEETING

<u>ACCT #</u>	<u>YEAR</u>	<u>RECEIPT</u>	<u>NAME</u>	<u>RE/PP</u>	<u>REASON FOR REFUND</u>	<u>AMOUNT REFUNDED</u>
380633	2008	6163	PRO COLOR INC	PP	SOLD PROPERTY IN 2007 - DBL LISTED	(28.25)

TOTAL REFUNDS (28.25)

Memorandum



To: Graham City Council
cc: Frankie Maness
From: Darcy Sperry
Date: 10/6/2015
Re: Boards and Commissions Vacancies and Requests for Appointments

New Appointments

<u>Board</u>	<u>Name</u>	<u>Term Expiration Date</u>
Graham Appearance Commission	Bonnie Hutchinson	6/30/2019
Graham Historical Museum	Rebecca Holmes	6/30/2018



**Volunteer Application
City of Graham Boards and Commissions**

RECEIVED

SEP 14 2015

**CITY OF
GRAHAM**

If you are a City of Graham resident or reside in the extra-territorial jurisdiction (ETJ), at least 18 years, and are willing to volunteer your time and expertise to your community, please complete and return to:

By mail: City of Graham, Attn: City Clerk, PO Drawer 357, Graham, NC 27253

By email: aburgess@cityofgraham.com

By Fax: (336)570-6703

For questions, call: (336)570-6700

Please check all Boards and Commissions on which you would be willing to serve:

Extra-territorial residents can only serve on the Board of Adjustment or the Planning Board

- | | |
|---|--|
| <input type="checkbox"/> Alcohol Beverage Control (3 years) | <input type="checkbox"/> Canine Review Board (3 years) |
| <input type="checkbox"/> Board of Adjustment (3 years) | <input checked="" type="checkbox"/> Planning Board (3 years) |
| <input checked="" type="checkbox"/> Appearance Commission (4 years) | <input type="checkbox"/> Recreation Commission (3 years) |
| <input type="checkbox"/> Graham Housing Authority (5 years) | <input checked="" type="checkbox"/> Tree Board (3 years) |
| <input type="checkbox"/> Graham Historical Museum (3 years) | <input checked="" type="checkbox"/> Historic District Commission (4 years) |
| <input type="checkbox"/> Graham Sports Hall of Fame (6 years) | |

If you are currently serving on a Board in the City of Graham, please list:

Personal Information

Name: Bonnie L. Hutchinson

Mailing Address: 205 Albright Ave. - Graham

Home Address (if different) _____

Home Phone: 336-260-6863 Work Phone: _____

Employer: City of Burlington Position: horticulturist

Email Address: livingspace@mac.com

Civic Involvement (please list the names of civic organizations in which you hold current membership):

none currently

Please list any work, volunteer, and/or educational experience that you would like us to consider

Masters in Landscape Architecture, previous

Why do you wish to serve the City in this capacity?

I would like to be a part of improving my city. service on App. Commission



**Volunteer Application
City of Graham Boards and Commissions**

RECEIVED

SEP 21 2015

If you are a City of Graham resident or reside in the extra-territorial jurisdiction (ETJ), at least 18 years, and are willing to volunteer your time and expertise to your community, please complete and return to:

By mail: City of Graham, Attn: City Clerk, PO Drawer 357, Graham, NC 27253

By email: dsperry@cityofgraham.com

By Fax: (336)570-6703

For questions, call: (336)570-6700

Please check all Boards and Commissions on which you would be willing to serve:

Extra-territorial residents can only serve on the Board of Adjustment or the Planning Board

- | | |
|--|--|
| <input type="checkbox"/> Alcohol Beverage Control (3 years) | <input type="checkbox"/> Canine Review Board (3 years) |
| <input type="checkbox"/> Board of Adjustment (3 years) | <input checked="" type="checkbox"/> Planning Board (3 years) |
| <input type="checkbox"/> Appearance Commission (4 years) | <input type="checkbox"/> Recreation Commission (3 years) |
| <input type="checkbox"/> Graham Housing Authority (5 years) | <input type="checkbox"/> Tree Board (3 years) |
| <input checked="" type="checkbox"/> Graham Historical Museum (3 years) | <input type="checkbox"/> Historic Resources Commission (4 years) |
| <input type="checkbox"/> Graham Sports Hall of Fame (6 years) | |

If you are currently serving on a Board in the City of Graham, please list:

Personal Information

Name: REBECCA (BECKY) HOLMES

Mailing Address: 211 SHEA COURT

Home Address (if different) _____

Home Phone: 336-253-1972 Work Phone: _____

Employer: RETIRED Position: _____

Email Address hflyrebecca@aol.com

Civic Involvement (please list the names of civic organizations in which you hold current membership):

Please list any work, volunteer, and/or educational experience that you would like us to consider

Why do you wish to serve the City in this capacity?

Just moved to Graham less than 2 yrs ago. Would love to contribute to the city - Always interested in historical events



STAFF REPORT

SUBJECT:	SEN. RALPH SCOTT PARKWAY EXTENSION CONSTRUCTION AWARD
PREPARED BY:	FRANKIE MANESS, CITY MANAGER

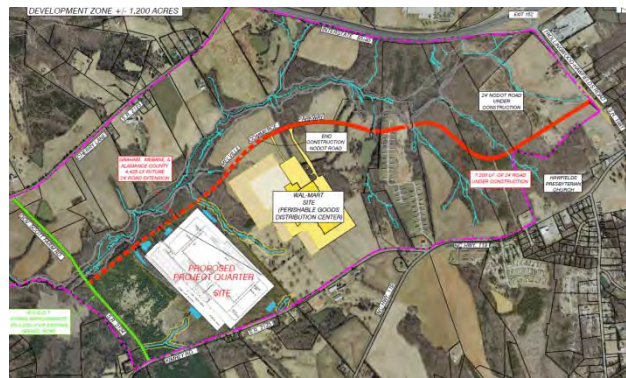
REQUESTED ACTION:

Award contract to lowest responsible bidder for the Sen. Ralph Scott Parkway Extension (a.k.a.: Project Quarter Roadway Extension).

BACKGROUND/SUMMARY:

The joint roadway project is part of the Project Quarter (Lidl) incentive package and includes the construction of 4.425 feet of new roadway that begins at Gov. Scott Farm Rd and extends east to where it will connect with the current Senator Ralph Scott Parkway (currently under construction by NCDOT).

Sealed bids will be opened on October 2nd. Due to the time constraints associated with the project, the construction award should be addressed at the earliest possible meeting of the Council. Therefore, this item is being placed on the agenda in anticipation of acceptable bids being received prior to the Council Meeting, but not in time to include the results in this Staff Report.



FISCAL IMPACT:

At the time that this staff report was drafted, sealed bids had not been opened. The roadway project is estimated to cost \$2 million with the construction costs representing an overwhelming majority of those costs. The project has encountered two issues that will likely result in additional expense: 1) 35,500 CY of soil left over from the ongoing roadway construction is in the way and must be moved or removed; 2) the project start date has been pushed forward in an attempt to accommodate travel to construction sites from a temporary concrete plant across from the Wal-Mart site.

STAFF RECOMMENDATION:

Engineers and Staff will present the results of the bidding and recommend an award at our Council Meeting. It will be further recommended that the contract award be subject to easement acquisition and permit approvals.

SUGGESTED MOTION(S):

I move we award the contract to _____ in the amount of \$_____ for the Sen. Ralph Scott Parkway Extension, subject to final easement acquisition and permit approvals.

SPECIFICATIONS AND BID DOCUMENTS

FOR

Senator Ralph Scott Parkway Extension

OWNER: City of GRAHAM
Graham, North Carolina

Mayor: Jerry Peterman

Council Members:

Jimmy Linens
Jim Albright
Lee Kimrey
Chip Turner

City Manager – Frankie Maness
City Attorney – Keith Whited

Prepared by:



alley, williams, carmen & king, inc.
engineers and architects
740 chapel hill road - post office box 1179
burlington, north carolina 27216-1179



TABLE OF CONTENTS

BIDDING REQUIREMENTS	<u>PAGES</u>
Table of Contents	TOC-1
Advertisement For Bids	A-1
Instructions to Bidders (AWCK)	B-1 : B-6
Bid Forms	Contract 1 BF-1 : BF-6
Contractor's Qualification Statement	CQS-1 : CQS-3
E-Verify	000500-1
Minority Business Contract Provisions	MBE-1 : MBE-14
 CONTRACT FORMS	
Construction Contract	CC-1 : CC-3
Performance Bond	PEB-1 : PEB-3
Payment Bond	PAB-1: PAB-3
Certificate of Owner's Attorney	COA-1
Certificate of Insurance	CI-1
Notice of Award	NA-1
Notice to Proceed	NP-1
 CONDITIONS OF CONTRACT	
General Conditions of the Contract for Construction	C700-1 : C700-62
Supplemental General Conditions	SGC-1 : SGC-7
 SPECIFICATIONS	
 OSHA	 OSHA-1 : OSHA-2
 DIVISION 1 - GENERAL REQUIREMENTS	
01015 – Project Requirements	01015-1 : 01015-5
Stormwater Inspections for General Permit NCG010000	1
01025 – Measurement and Payment	01025-1 : 01025-9
01027 – Applications for Payment	01027-1 : 01027-9
01039 – Coordination and Meetings	01039-1 : 01039-3
01300 - Submittals	01300-1 : 01300-3
01400 - Quality Control	01400-1 : 01400-3
01500 - Construction Facilities and Temporary Controls	01500-1 : 01500-5
01600 – Materials and Equipment	01600-1 : 01600-2
01620 – Project Special Provisions	01620-1 : 01620-4
01700 - Contract Closeout	01700-1 : 01700-4
 DIVISION 2 - SITEWORK	
02010 - Subsurface Investigation	02010-1
02230 – Site Clearing	02230-1 : 02230-3
02240 - Dewatering	02240-1 : 02240-2
02260 - Excavation Support and Protection	02260-1 : 02260-2
02321 – Trenching and Excavating for Utilities and Structures	02321-1 : 02321-6
02322 - Rock Excavation	02322-1 : 02322-3
02511 – Paving Repair	02511-1 : 02511-3
02630 - Storm Drainage	02630-1 : 02630-3
02825 - Lawns and Grasses	02825-1 : 02825-4
 DIVISION 3 – CONCRETE	
03100 – Concrete Formwork	03100-1 : 03100-3
03200 – Concrete Reinforcement	03200-1 : 03200-2
03300 – Cast-In-Place Concrete	03300-1 : 03300-5
03370 – Concrete Curing	03370-1 : 03370-2
03410 – Precast Concrete Structures	03410-1 : 03410-4

ADVERTISEMENT FOR BIDS

City of Graham
Contract 1: Senator Ralph Scott Parkway Extension
Graham, North Carolina

Sealed bids for construction of Senator Ralph Scott Parkway Extension will be received by the City of Graham at the Graham City Hall Building, 201 South Main Street, Graham, NC 27253, until **11:00 A.M., Friday, October 2nd, 2015.**

The work will include the following items:

Approximately 4,400 LF of paved roadway with associated roadside swales and culvert crossings.

Project plans and specifications with blank forms of the proposal, may be obtained from Alley, Williams, Carmen & King, Inc. upon request. Digital versions of the same may be downloaded from the following link: <http://www.awck.com/resources/bidding-plans/project-15104-c1-sen-raph-scott-pkwy-ext/>.

Consideration will be given only to bids of Contractors who submit evidence that they are licensed under "An Act to Regulate the Practice of General Contracting", ratified by the General Assembly of the State of North Carolina on March 10, 1925, and as subsequently amended, when such Act is applicable.

Each Proposal shall be accompanied with a deposit of cash or CERTIFIED CHECK on some bank or trust company insured by the Federal Deposit Insurance Corporation in an amount equal to not less than five percent (5%) of the Proposal, said check to be made payable to the City of Graham.

In lieu of the above cash or CERTIFIED CHECK, the bidder may execute a Bid Bond for the same amount.

Disadvantaged Business Enterprise provisions are included in the contract. The contractor should study and become familiar with these items.

A Pre-bid meeting will be held at the Graham City Hall Building, 201 South Main Street, Graham, North Carolina, 27253 on September 22nd, 2015 at 2 PM. All bidders are strongly encouraged to attend.

No Bidder may withdraw his bid within 60 days after the actual date of the opening thereof. The City reserves the right to reject any or all bids and to waive informalities.

ENGINEER:

Alley, Williams, Carmen & King, Inc.
Post Office Box 1179 (27216-1179)
740 Chapel Hill Road
Burlington, North Carolina 27215

Jerry Peterman, Mayor

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS. Terms used in these Instructions to Bidders shall have the meanings assigned to them in the General Conditions and the Supplementary Conditions. Additional terms are defined as follows:

Successful Bidder - The lowest, qualified, responsible, and responsive Bidder to whom Owner (on the basis of Owner's evaluation as herein provided) makes an award.

2. COPIES OF BIDDING DOCUMENTS. Bidding Documents may be obtained from Alley, Williams, Carmen & King, Inc., Post Office Box 1179/740 Chapel Hill Road, Burlington, North Carolina 27216-1179.

Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misrepresentations resulting from the use of incomplete sets of Bidding Documents.

Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

EXAMINATION OF CONTRACT DOCUMENTS AND SITE. It is the responsibility of each Bidder, before submitting a Bid, to (a) thoroughly examine the Contract Documents, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work. (c) consider Federal, State and Local Laws and Regulations that may affect cost, progress, performance, or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors, or discrepancies discovered by Bidder in the Contract Documents.

Subsurface Information. A report of Subsurface Exploration has not been prepared for this project. The Bidder, at Bidder's own expense, is encouraged to perform subsurface investigations within accessible areas. The Bidder, by way of establishing a unit price for the work within the contract agreement's price schedule or by otherwise submitting a bid on this project, has acknowledged that he is aware of the limited subsurface information or data, and has satisfied himself that his established unit price is sufficient to ensure the proper completion of the project and the conditions which may effect the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials; rock excavation; water tables or similar conditions at the site; availability of labor, water, electric power, roads, and uncertainties of weather, river stages, or similar conditions at the site; and the character of equipment and facilities needed preliminary to and during prosecution of the work. Any failure by the CONTRACTOR to acquaint himself with these facts will not relieve him from responsibility for work. The OWNER and ENGINEER assume no responsibility nor will be liable for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available by the OWNER/ENGINEER.

On request 72 hours in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall not create any holes, bore, or clear any land and restore the site to its former condition upon completion of such explorations. Arrangements for site visits shall be made by calling the Engineer.

- 3.02 Easements. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction ingress and egress or storage of materials and equipment are to be provided by Contractor. See Division 1, Section “Project Requirements” for additional information.
- 3.03 Bidder’s Representation. The submission of a Bid will constitute and incontrovertible representation by Bidder the Bidder has complied with every requirement concerning examination of the Contract Documents and the site, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
4. INTERPRETATIONS AND ADDENDA. All questions about the meaning or intent of the Bidding Documents and the Contract Documents shall be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda, mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than 10 days prior to the date for opening of Bids may not be answered. Only answers issued by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
5. CONTRACT TIMES. The number of days within which, or the dates by which, the work is to be substantially complete and also completed and ready for payment are set forth in the Bid Form.
6. LIQUIDATED DAMAGES. Provisions for liquidated damages are set forth in the Supplementary Conditions. The amount of liquidated damages set forth is \$400.00 per calendar day for each day work is not completed beyond the completion date.
7. SUBSTITUTE OR “OR-EQUAL” ITEMS. The procedure for submission of any application for review of substitute or “or-equal” items by Contractor and consideration by Engineer is set forth in Paragraph 6.05 of the General Conditions and may be supplemented in the project requirements section of Division 1, General Requirements. The Contract, if awarded, will be on the basis of materials and equipment indicated on the Drawings or specified in the Specifications. Application for review of substitute or “or equal” materials or equipment will not be considered by Engineer unless received by Engineer within 15 working days prior to the bid opening. Judgment concerning substitutes and “or-equal” reviews will be determined by the sole discretion of the Engineer.
8. DISADVANTAGED BUSINESS PARTICIPATION. The City of Graham has a 10% Minority Business Goal (MBE) for this project. Refer to Minority Business Contract Provisions Pages MBE-1 through MBE-14 for particulars.
9. BID FORM. The Bid Form for Contract 1 is included in the Bidding Documents and must be completed in ink.

Bids by corporations must be executed in the corporate name by the president or vice-president (or other corporate officers accompanied by evidence of authority to sign for the

corporation). Bids by partnerships must be executed in the partnership name and signed by a partner. Bids by joint ventures shall be signed by each participant in the joint venture or by a representative of the joint venture accompanied by evidence of authority to sign for the joint venture.

All blanks in the Bid Form shall be filled. A bid price shall be indicated for each section, bid item, alternative, adjustment unit price items, and unit price item listed therein, or the words "No Bid", "No Charge" "No Change", or other appropriate phrase shall be entered.

The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.

No alterations in Bids, or in the printed forms therefore, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the Bidder; if initialed, Owner may require the Bidder to identify any alteration so initialed.

10. **BID SECURITY**: Each bid must be accompanied by cash, certified check of the bidder, or a bid bond, duly executed by the bidder as principal and having as surety thereon a Surety Company approved by the Owner, in the amount of 5% of the bid. Such cash, checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the Owner and accepted bidder have executed the contract, or, if no award has been made within 45 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.
11. **MODIFICATION AND WITHDRAWAL OF BIDS**. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
 - 11.1 **Telegraphic Modification**: Telegraphic modification of bids is not permitted.
 - 11.2 **Bid Withdrawal**: Withdrawal of a bid, after bids are opened, will only be permitted under the provisions of laws and regulations.
12. **OPENING OF BIDS**. Bids will be publicly opened and read aloud. An abstract of the amount of the Base Bids and major alternatives (if any) will be made available to Bidders after the opening of Bids.
13. **BIDS TO REMAIN SUBJECT TO ACCEPTANCE**. All Bids will remain subject to acceptance for the number of days set forth in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the bid security prior to that date.
14. **AWARD OF CONTRACT**. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of Owner to make an award to that Bidder. Owner also reserves the right to waive informalities.

In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to the Owner that the award will be in the best interests of Owner.

15. SIGNING OF AGREEMENT. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by three (3) unsigned counterparts of the Agreement with all other written Contract Documents attached. Within the number of days set forth in the Bid Form, the Successful Bidder shall sign, leaving the dates blank, and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and Power of Attorney. Within twenty (20) days thereafter, Owner shall execute all copies of the Agreement and other Contract Documents submitted by Contractor (Successful Bidder); shall insert the date of contract on the Agreement, Bonds, and Power of Attorney; and shall return all copies to Engineer for review and distribution. Distribution of signed copies shall be as stipulated in the Agreement. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.
16. SALES AND USE TAX. Provisions for sales and use taxes are set forth in the General and Supplementary Conditions. The Contractor will be required to submit statements on sales tax paid to the Owner as outlined in Division 1 "Applications for Payment".
17. INSURANCE. Insurance requirements for the project shall be provided as follows:

CONTRACT 1 INSURANCE REQUIREMENTS LIMITS OF LIABILITY IN THOUSANDS (000)

	<u>Each Person</u>	<u>Each Occurrence</u>	<u>Aggregate</u>
<u>GENERAL LIABILITY</u>			
Personal Injury (Including Bodily Injury)	\$ 1,000	\$ 1,000	
Property Damage		\$ 1,000	\$ 1,000
Or			
Personal Injury (Including Bodily Injury) and Property Damage Combined		\$ 1,000	\$ 2,000
<u>AUTOMOBILE LIABILITY</u>			
Bodily Injury	\$ 1,000	\$ 1,000	
Property Damage		\$ 1,000	
Or			
Bodily Injury and Property Damage Combined		\$ 1,000	\$ 2,000
<u>OWNER'S PROTECTIVE LIABILITY*</u>			
Personal Injury (Including Bodily Injury)	\$ 1,000	\$ 1,000	
Property Damage		\$ 1,000	\$ 1,000
Or			
Personal Injury (Including Bodily Injury) and Property Damage Combined		\$ 1,000	\$ 2,000

- This is a special additional policy written for this project alone which specifically indemnifies the City of Graham as the Owner of this project.

** Note: THE CITY OF GRAHAM MUST BE NAMED AS AN ADDITIONAL NAMED INSURED ON THE CONTRACTOR'S POLICY.

WORKMEN'S COMPENSATION As required by law.

SPECIAL HAZARD Blasting (as required).

NOTE: WRITTEN NOTICE OF CANCELLATION MUST BE 30 DAYS AND STATED ON THE CERTIFICATE OF INSURANCE.
 AGGREGATE AMOUNT MAY NOT INCLUDE EXCESS COVERAGES.

18. SAFETY. Within five (5) calendar days following the bid opening, the selected contractor shall submit to the Owner the following documents as evidence of the safety record of the Contractor:

- A. OSHA 200 Log for the Bidder's Firm for the last 5 years.
- B. Current Worker's Compensation Rating for Bidder's firm.

Review of these records shall be a part of evaluating the bidder's qualifications and a poor safety record may be cause for rejection of bid.

19. QUANTITIES AND UNIT PRICES. Owner reserves the right to delete any bid item or items in the bid prior to awarding the contract, except such deletions shall not reduce the total bid by more than 25% unless mutually agreed upon.

The Owner/Engineer reserves the right to make at any time after award of the contract such changes in quantities as are necessary to complete the project. Such changes in quantities shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as changed at the unit prices agreed to in the Proposal.

The non-utilization or partial utilization of any bid item shall not serve as a claim for any contract or unit price adjustment as the Contractor shall be paid the unit price bid for the number of units actually installed.

20. SUBMISSION OF BIDS. Bids shall be submitted at the time and place indicated in the Advertisement For Bid, or the modified time and place indicated by Addendum. Bids shall be enclosed in an opaque sealed envelope or wrapping, addressed to:

City of Graham
PO Box 357
201 South Main Street
Graham, NC 27253

Bids shall be marked with the name, license number, and address of the Bidder and shall be accompanied by the bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed with the notation "BID ENCLOSED" on the face of it.

Each bid envelope shall be identified on the outside as to the appropriate bid submitted.

Bidders must bid on all sections that are included in the contract documents. Bidders that do not complete the contract documents in full will be considered non-responsive.

Bidders shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

Bids received after the time and date for receipt of Bids will be returned unopened.

Oral, telephone, facsimile, or telegraph Bids are invalid and will not receive consideration.

No Bidder may submit more than one Bid per contract. Multiple Bids under different names will not be accepted from one firm or association.

END OF SECTION

BID FORMS FOR CONTRACT 1
City of Graham
Senator Ralph Scott Parkway Extension

PROJECT IDENTIFICATION:

City of Graham
Contract 1: Senator Ralph Scott Parkway Extension

THIS BID IS SUBMITTED TO:

City of Graham
201 South Main Street
Graham, NC 27253

1. The undersigned bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents within the specified time and for the amount indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement For Bids and the Instructions to Bidders, including without limitation those dealing with the disposition of bid security. This Bid will remain subject to acceptance for 45 days after the day of bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Documents within 20 days after the date of Owner's Notice of Award.
3. In submitting this Bid, Bidder represents that:
 - a. Bidder has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
 - b. Bidder has visited the site and become familiar with and satisfied itself as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
 - c. Bidder is familiar with and has satisfied itself as to all Federal, State and Local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

- d. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site.
- e. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- g. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to obtain for itself any advantage over any other Bidder or over Owner.

4. Bidder will complete the Work for the following prices:

Contract 1: Senator Ralph Scott Parkway Extension

Owner: City of Graham

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
1.	Mobilization	1	LS	\$	\$
2.	Clearing & Grubbing and Debris Removal	1	LS	\$	\$
3.	Clean Stone for Erosion Control Devices	100	Tons	\$	\$
4.	Class 1 Rip-Rap	75	Tons	\$	\$
5.	Class B Rip-Rap	375	Tons	\$	\$
6.	Silt Fence	5,000	LF	\$	\$
7.	Hardware Cloth	180	LF	\$	\$
8.	Slope Drains	410	LF	\$	\$
9.	Silt Basin Type 'B'	6	EA	\$	\$
10.	Stabilization Stone	100	Tons	\$	\$
11.	Incidental Stone	100	Tons	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
12.	Excelsior Matting	10,000	SY	\$	\$
13.	Wattles	470	LF	\$	\$
14.	Temporary Construction Entrance	2	EA	\$	\$
15.	Temporary Stream Crossing	1	EA	\$	\$
16.	Seeding and Mulching	1	LS	\$	\$
17.	Grading	1	LS	\$	\$
18.	Undercut Excavation	1,000	CY	\$	\$
19.	Rock Excavation	2,000	CY	\$	\$
20.	15" RCP Storm Sewer Pipe, Class III	264	LF	\$	\$
21.	18" RCP Storm Sewer Pipe, Class III	88	LF	\$	\$
22.	36" RCP Storm Sewer Pipe, Class III	120	LF	\$	\$
23.	42" RCP Storm Sewer Pipe, Class III	64	LF	\$	\$
24.	48" RCP Storm Sewer Pipe, Class III	232	LF	\$	\$
25.	72" CAP Storm Sewer Pipe, 8 GA	90	LF	\$	\$
26.	15" Concrete Endwall – NCDOT Std. 838.80	1	EA	\$	\$
27.	36" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
28.	42" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
29.	48" Concrete Endwall – NCDOT Std. 838.80	3	EA	\$	\$
30.	72" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
31.	Open Throat Catch Basin – NCDOT Std. 840.04	1	EA	\$	\$
32.	Asphalt Intermediate Course Type I-19.0C	3,260	Tons	\$	\$
33.	Asphalt Surface Course Type SF-9.5C	2,300	Tons	\$	\$
34.	ABC Stone Base	8,770	Tons	\$	\$
35.	Pavement Striping	1	LS	\$	\$
36.	Guardrail w/GRU350 End Treatments, Complete in Place	2,700	LF	\$	\$
37.	Traffic Control	1	LS	\$	\$
38.	Borrow Material	10,000	CY	\$	\$
39.	Unsuitable Material Offsite Removal	10,000	CY	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
40.	Geotextile Fabric For Stabilization	2,500	SY	\$	\$
41.	Fire Hydrant Adjustment	2	EA	\$	\$
42.	Water Valve Box Adjustment	2	EA	\$	\$
43.	Manhole Adjustment	2	EA	\$	\$
44.	Contingency Allowance	1	EA	\$ 50,000.00	\$ 50,000.00

Total Bid – Contract 1

5. Bidder agrees that the Work covered by the section or sections included in the contract award will be completed by the completion dates listed below. Contract time commences to run as provided in Paragraph 14.04 of the General Conditions. Completion shall mean completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions.

Completion Date

Stone Base Complete to Sta: 94+00
 Contract 1 Completion:

December 31st, 2015
 June 30st, 2016

Bidder also agrees that should the bidder fail to accept a contract if awarded to them, or default on any other provisions of a contract award, the cash, certified check, or bid bond attached hereto shall become the property of the City of Graham as ascertained as liquidating damages for such default.

6. Communications concerning this Bid shall be sent to Bidder at the following address:

7. The terms used in this Bid, which are defined in the General Conditions included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.
8. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the contract documents.
9. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified above, which shall be stated in the Agreement. Bidder agrees that as liquidated damages for delay (but not as a penalty), Bidder

shall pay Owner **Four Hundred Dollars (\$400.00)** for each day that expires after the time specified and in accordance with the Agreement.

10. The Owner reserves the right to add or delete bid items and add to or deduct from the estimated quantities as necessary to complete the project with no change in the unit price bid.

11. *The following documents are attached to and made a condition of the Bid:*

- A. **Required Bid security in the form of Bid Bond – Certified Check (circle type of security provided);**
- B. **Bidder is instructed to complete the Contractor’s Qualification Statement; see pages CQS-1 to CQS-3;**
- C. **Bidder is instructed to complete either Affidavit A (pages MBE 10 and 11) or Affidavit B (page MBE-12).**
- D. **Bidder is instructed to complete the Affidavit of Compliance with N.C. E-Verify Statues; see page 000500-1.**

SIGNATURE OF BIDDER

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(Signature of Individual)

doing business as _____

Business address _____

Phone No. _____ Date _____, 20_____

If a Partnership

By _____
(Firm Name)

(signature of general partner)

Business address _____

Phone No. _____ Date _____, 20_____

If a Corporation

By _____
(Corporation Name)

(signature of authorized person)

(title)

Business address _____

Phone No. _____ Date _____, 20_____

Fax No. _____

END OF SECTION

CONTRACTOR'S QUALIFICATION STATEMENT

Regarding Project: City of Graham
Contract 1: Senator Ralph Scott Parkway Extension

Submitted by:

Name _____ Corporation

Firm _____ Partnership

Address _____ Individual

_____ Joint Venture

Telephone _____ Other

North Carolina License No. _____

A. How many years has your organization, under its present business name, been in business as a licensed contractor? _____

B. Under what other or former names has your organization operated during the past ten years?

Explain! _____

C. If a corporation, provide the following information:

Date of incorporation _____

State of incorporation _____

President's name _____

Secretary's name _____

Treasurer's name _____

D. If an individual, partnership, etc., provide the following information:

Date of organization _____

Names of all partners or principals

E. Please list the projects (and locations) that your organization has completed in the past two years that are similar in scope to the project named above.

F. Please give the name of the proposed field supervisor on the above named project and provide a summary of this person's experience and qualifications for such work.

Name _____

Qualifications _____

G. What percentage of the above named project do you anticipate completing through the utilization of subcontractors? _____%.

Please list the areas of work and the names of subcontractors that you anticipate utilizing on the above named project.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

H. Have you ever failed to satisfactorily complete any work awarded to you? If so, note when, where and why?

I. Name of Bonding Company and name and address of agent.

Company _____

Agent _____

Address _____

Dated on this _____ day of _____, 2015 _____

Name of Organization: _____

By: _____

Title: _____

NORTH CAROLINA

_____ COUNTY

I, _____, a Notary Public for the said County and State, do hereby

certify that _____ personally appeared before me this day and acknowledged the answers to the foregoing questions and all statements therein contained are true and correct.

Witness my hand and official seal, this the _____ day of _____, 20____.

Notary Public

(SEAL)

My Commission Expires:

STATE OF NORTH CAROLINA

AFFIDAVIT of COMPLIANCE
with N.C. E-Verify Statutes

COUNTY OF ALAMANCE

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of _____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.
2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.
3. _____ Employer employs 25 or more employees in the State of North Carolina, and is in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes. Employer will verify the work authorization of new employees through E-Verify and shall retain the records of verification for a period of at least one year.

_____ Employer employs fewer than 25 employees and is therefore not subject to the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes.
4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes.
5. Employer shall keep the City of Graham informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina General Statutes.

Further this affiant sayeth not.

This the ____ day of _____, 20__

Affiant

STATE OF NORTH CAROLINA

COUNTY OF _____

Sworn to and subscribed before me, this the ____ day of _____, 20__

Notary Public

[SEAL]

My Commission Expires: _____

MINORITY BUSINESS CONTRACT PROVISIONS (CONSTRUCTION)

SECTION A: INTENT

It is the intent of these guidelines that the City of Graham, as awarding authority for this construction project, and the contractors and subcontractors performing the construction contract (s) awarded shall cooperate and in good faith do all things legal, proper and reasonable to achieve the statutory goal of ten percent (10%) for participation by minority businesses in each construction project as mandated by GS 143-128.2. Nothing in these guidelines shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids.

SECTION B: DEFINITIONS

1. Minority - a person who is a citizen or lawful permanent resident of the United States and who is:
 - A. Black, that is, a person having origins in any of the black racial groups in Africa;
 - B. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - C. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, or the Pacific Islands;
 - D. American Indian; that is, a person having origins in any of the original Indian people of North America; or
 - E. Female.
2. Minority Business – means a business:
 - A. In which at least fifty-one percent (51%) is owned by one or more minority persons, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons or socially or economically disadvantaged individuals; and
 - B. Of which the management and daily business operations are controlled by one or more of the minority persons or socially and economically disadvantaged individuals who own it.
3. Socially and economically disadvantaged individual – means the same as defined in 15 U.S.C. 637. “Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities”. “Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged”.
4. Public Entity – means State and all public subdivisions and local government units.
5. Owner – City of Graham.

SECTION C: RESPONSIBILITIES

1. Office for Historically Underutilized Businesses, Department of Administration (hereinafter referred to as HUB Office).

The HUB Office has established a program, which allows interested persons or businesses qualifying as a minority business under G.S. 143-128.2, to obtain certification in the State of North Carolina procurement system. The information provided by the minority businesses will be used by the HUB Office to:

- A. Identify those areas of work for which there are minority businesses, as requested.
- B. Make available to interested parties a list of prospective minority business contractors and subcontractors.
- C. Assist in the determination of technical assistance needed by minority business contractors.

In addition to being responsible for the certification/verification of minority businesses that want to participate in the State construction program, the HUB Office will:

- (1) Maintain a current list of minority businesses. The list shall include the areas of work in which each minority business is interested.
- (2) Inform minority businesses on how to identify and obtain contracting and subcontracting opportunities through the State Construction Office and other public entities.
- (3) Inform minority businesses of the contracting and subcontracting process for public construction building projects.
- (4) Work with the North Carolina trade and professional organizations to improve the ability of minority businesses to compete in the State construction projects.
- (5) The HUB Office also oversees the minority business program by:
 - a. Monitoring compliance with the program requirements.
 - b. Assisting in the implementation of training and technical assistance programs.
 - c. Identifying and implementing outreach efforts to increase the utilization of minority businesses.
 - d. Reporting the results of minority business utilization to the Secretary of the Department of Administration, the Governor, and the General Assembly.

2. Owner – City of Graham

- A. Develop and implement a minority business participation outreach plan to identify minority businesses that can perform public building projects and to implement outreach efforts to encourage minority business participation in these projects to include education, recruitment, and interaction between minority businesses and non-minority businesses.
- B. Furnish to the Historically Underutilized Business Office a minimum of twenty-one (21) days prior to the bid opening the following:

- (1) Project description and location;
- (2) Locations where bidding documents may be reviewed;
- (3) Name of representative of the owner who can be contacted during the advertising period to advise who the prospective bidders are;
- (4) Date, time and location of the bid opening.
- (5) Date, time and location of prebid conference, if scheduled.

- C. Attend the scheduled prebid conference.
 - D. At least 10 days prior to the scheduled day of bid opening, notify minority businesses that have requested notices from the public entity for public construction or repair work and minority businesses that otherwise indicated to the Office for Historically Underutilized Businesses an interest in the type or work being bid or the potential contracting opportunities listed in the proposal. The notification shall include the following:
 - (1) A description of the work for which the bid is being solicited.
 - (2) The date, time, and location where bids are to be submitted.
 - (3) The name of the individual within the owner's organization who will be available to answer questions about the project.
 - (4) Where bid documents may be reviewed.
 - (5) Any special requirements that may exist.
 - E. Utilize other media, as appropriate, likely to inform potential minority businesses of the bid being sought.
 - F. Maintain documentation of any contracts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
 - G. Review, jointly with the designer, all requirements of G.S. 143-128.2(c) and G.S. 143-128.2(f)- (i.e. bidders' proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing good faith efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce). The City of Graham reserves the right to reject any or all bids and to waive informalities.
 - H. Reviewing of minority business requirements at Preconstruction conference.
 - I. Monitoring of contractors' compliance with minority business requirements in the contract documents during construction.
 - J. Review prime contractors' pay applications for compliance with minority business utilization commitments prior to payment.
 - K. Make documentation showing evidence of implementation of Owner's responsibilities available for review by Owner, State Construction Office and HUB Office, upon request.
3. Designer – Alley, Williams, Carmen & King, Inc.

Under the single-prime bidding, separate prime bidding, construction manager at risk, or alternative contracting method, the designer will:

- A. Attend the scheduled prebid conference to explain minority business requirements to the prospective bidders.
- B. Assist the owner to identify and notify prospective minority business prime and subcontractors of potential contracting opportunities.
- C. Maintain documentation of any contacts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
- D. Review jointly with the owner, all requirements of G.S. 143-128.2(c) and G.S. 143-128.2(f)- (i.e. bidders' proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing Good Faith Efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce) —prior to recommendation of award.
- E. During construction phase of the project, review “MBE Documentation for Contract Payment” – (Appendix E) for compliance with minority business utilization commitments. Submit Appendix E form with monthly pay applications to the owner.

- F. Make documentation showing evidence of implementation of Designer's responsibilities available for review by owner and HUB Office, upon request.

4. Prime Contractor (s), CM at Risk, and Its First-Tier Subcontractors

Under the single-prime bidding, the separate-prime bidding, construction manager at risk and alternative contracting methods, contractor (s) will:

- A. Attend the scheduled prebid conference.
- B. Identify or determine those work areas of a subcontract where minority businesses may have an interest in performing subcontract work.
- C. At least ten (10) days prior to the scheduled day of bid opening, notify minority businesses of potential subcontracting opportunities listed in the proposal. The notification will include the following:
 - (1) A description of the work for which the subbid is being solicited.
 - (2) The date, time and location where subbids are to be submitted.
 - (3) The name of the individual within the company who will be available to answer questions about the project.
 - (4) Where bid documents may be reviewed.
 - (5) Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three (3) minority businesses in the general locality of the project who offer similar contracting or subcontracting services in the specific trade, the contractor(s) shall notify three (3), but may contact more, if the contractor(s) so desires.

- D. During the bidding process, comply with the contractor(s) requirements listed in the proposal for minority participation.
- E. Identify on the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).
- F. Make documentation showing evidence of implementation of PM, CM-at-Risk and First-Tier Subcontractor responsibilities available for review by Owner and HUB Office, upon request.
- G. Upon being named the apparent low bidder, the Bidder shall provide one of the following: (1) an affidavit (Affidavit C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal; (2) if the percentage is not equal to the applicable goal, then documentation of all good faith efforts taken to meet the goal. Failure to comply with these requirements is grounds for rejection of the bid and award to the next lowest responsible and responsive bidders.
- H. The contractor(s) shall identify the name(s) of minority business subcontractor(s) and corresponding dollar amount of work on the schedule of values. The schedule of values shall be provided as required in Article 14 of the General Conditions of the Contract to facilitate payments to the subcontractors.
- I. The contractor(s) shall submit with each monthly pay request(s) and final payment(s), "MBE Documentation for Contract Payment" – (Appendix E), for designer's review.
- J. During the construction of a project, at any time, if it becomes necessary to replace a minority business subcontractor, immediately advise the owner and the Director of the HUB Office in writing, of the circumstances involved. The prime contractor shall make a good faith effort to replace a minority business subcontractor with another minority business subcontractor.

- K. If during the construction of a project additional subcontracting opportunities become available, make a good faith effort to solicit subbids from minority businesses.
- L. It is the intent of these requirements apply to all contractors performing as prime contractor and first tier subcontractor under construction manager at risk.

5. Minority Business Responsibilities

While minority businesses are not required to become certified in order to participate in the project, it is recommended that they become certified and should take advantage of the appropriate technical assistance that is made available. In addition, minority businesses who are contacted by owners or bidders must respond promptly whether or not they wish to submit a bid.

SECTION D: DISPUTE PROCEDURES

It is the policy of this state that disputes that involves a person's rights, duties or privileges, should be settled through informal procedures. To that end, minority business disputes arising under these guidelines should be resolved as governed under G.S. 143-128(g).

SECTION E: MINORITY BUSINESS SUBCONTRACT GOALS:

The goals for participation by minority firms as subcontractors on this project have been set at **10%**.

The bidder must identify on its bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts or affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce, as required by G.S. 143-128.2(c) and G.S. 143-128.29(f).

The lowest responsible, responsive bidder must provide, within 72 hours after notification of being low bidder, Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

Provide Affidavit D, which includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, **with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.** (See Section F).

The above information must be provided as required. Failure to submit these documents is ground for rejection of the bid.

SECTION F: MINIMUM COMPLIANCE REQUIREMENTS

All written statements, affidavits or intentions made by the Bidder shall become a part of the agreement between the Contractor and the City of Graham for performance of this contract. Failure to comply with any of these statements, affidavits or intentions, or with the minority business guidelines shall constitute a breach of the contract. A finding by the City of Graham that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the City of Graham whether to terminate the contract for breach.

In determining whether a contractor has made Good Faith Efforts, the City of Graham will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts. Good Faith Efforts include:

1. Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
2. Making the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due.
3. Breaking down or combining elements of work into economically feasible units to facilitate minority participation.
4. Working with minority trade, community, or contractor organizations identified by the Office for HUB and included in the bid documents that provide assistance in recruitment of minority businesses.
5. Attending any prebid meetings schedule by the owner.
6. Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
7. Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
8. Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
9. Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
10. Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

A Good Faith effort will be deemed met by any Bidder who attempts at least 5 of the above described efforts.

If the MBE subcontract goals are not achieved, the Bidder shall provide the following documentation to the Owner (upon request within 72 hours after notification of being low bidder).

1. Copies of solicitations for quotes to at least three (3) MBE firms from the source list provided by the State's Office for Historically Underutilized Businesses (Address: 1336 Mail Service Center, Raleigh, North Carolina 27699-1336; Phone/Fax: 919-807-2330) for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location date and time when quotes must be received.
2. Copies of quotes or responses received from each firm responding to the solicitation.
3. A telephone log of follow-up calls to each firm sent a solicitation.
4. For subcontracts where an MBE firm is not considered to be the lowest responsible subbidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
5. Documentation of any contracts, correspondence or conversation with MBE firms made in an attempt to meet the goals.

SECTION G: SUBCONTRACT AWARD

Upon being named apparent low bidder, the Bidder shall provide a Letter of Intent, with a description of the scope of services and dollar value from each minority firm proposed for use in this contract. Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder. The Owner reserves the right to waive any irregularities in MBE documentation if they can be resolved prior to award of the contract, and the Owner finds it to be in the best interest to do so and award the contract.

SECTION H: SUBCONTRACTOR PAYMENT REQUIREMENTS:

North Carolina General Statute 143-134.1 states that the percentage retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payment made by the Owner to the prime contractor. Failure to comply with this provision shall be considered a breach of the contract, and the contract may be terminated in accordance with the termination provisions of the contract.

The Contractor shall provide an itemized statement of payments (Appendix E) to each MBE subcontractor with each request for payment or before final payment is processed.

SECTION I: AWARD OF CONTRACT

The Award of Contract will be made without regard to race, religion, color, creed, national origin, sex, age, or handicapping condition, as defined in G.S. 168A-3. Nothing in this section shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids.

SECTION J: RECORDS:

Bidders who are awarded contracts shall maintain records of all documentation relative MBE contract provisions for a period of not less than three (3) years from the date of completion of this project.

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

Pay Application #: _____ Period: _____

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

MBE Firm Name	MBE Type	Amount Paid this Period	Total Payments to Date	Total Amount Committed

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

Date: _____

Approved/Certified By: _____

Name

Title

Signature

SUBMIT DOCUMENT WITH EACH PAY REQUEST & FINAL PAYMENT

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

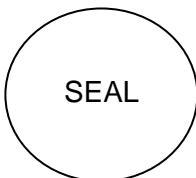
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

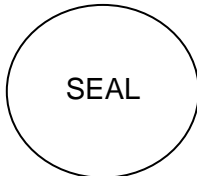
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____

My commission expires _____

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

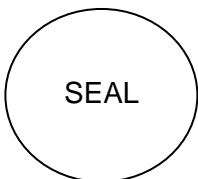
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

Project ID# _____ (Project Name) Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

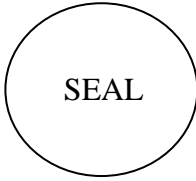
Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

CONSTRUCTION CONTRACT

THIS AGREEMENT, made the ___ day of ___ in the year 2015 by and between _____ the Party of the First Part, hereinafter called the

CONTRACTOR, and City of Graham, the Party of the Second Part, hereinafter called the OWNER.

WITNESSETH:

That for and in consideration of the payments and agreements to be made and performed by the OWNER, the CONTRACTOR at its own proper cost and expense and with skill and diligence, will construct and complete all work included in a Construction Contract for the construction of:

Contract 1: Senator Ralph Scott Parkway Extension

City of Graham

Graham, North Carolina

in accordance with Contract Documents, and in full compliance with this Agreement and the CONTRACTOR agrees to receive the prices stated in the Proposal attached to be full compensation for furnishing all labor, materials and equipment necessary to execute all the work contemplated in this Construction Contract.

The work on the site is to be commenced when directed by the ENGINEER, and to be diligently prosecuted to completion by the following dates:

Stone Base Complete to Sta: 94+00 – December 31st, 2015
Contract 1 Completion – June 30th, 2016

It is agreed by and between both parties to this Construction Contract that the ENGINEER shall in all cases determine the quantity of the several kinds of work and materials which are to be paid for under this Construction Contract, and he shall determine all questions in relation to lines, levels and dimensions of the work and as to the interpretation of the plans and specifications. Payment shall be made in accordance with provisions as outlined in the Proposal.

The Contract Documents shall consist of the following:

1. Table of Contents
2. Summation of Detailed Information to Bidders
3. North Carolina Sales Tax
4. OSHA's Revised Standard for Excavations 29 CFR Part 1926
5. Project Special Provisions
6. Material Specifications
7. Proposal
8. Construction Contract
9. Drawings Entitled: Contract 1: Senator Ralph Scott Parkway Extension

consisting of the following sheets:

Cover Sheet and Sheets 2 – 23

IN WITNESS WHEREOF the Parties hereto have executed this Agreement on the day and date first above written in three (3) counterparts, each of which shall, without proof or accounting for other counterparts, be deemed an original Construction Contract.

FOR THE CONTRACTOR

WITNESS:

Proprietorship or Partnership

OR

ATTEST:

(Contractor)

TITLE _____
(Corporate Secretary or
Assistant Secretary only)

By _____

TITLE _____
(Owner, Partner, or
Corporate President or
Vice-President only)

CORPORATE SEAL

FOR THE OWNER

WITNESS:

Proprietorship or Partnership

OR

ATTEST:

City of Graham
(Owner)

TITLE _____
(Corporate Secretary or Assistant Secretary only)

By _____

TITLE _____

CORPORATE SEAL

PERFORMANCE BOND

Date of Execution: _____

Name of Principal: _____
(Contractor)

Name of Surety: _____

Name of Contracting Body _____ City of Graham

201 South Main Street, Graham, NC 27253

Amount of Bond: \$ _____

Project: _____ Contract 1: Senator Ralph Scott Parkway Extension

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by the presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, identified as shown above and hereto attached:

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being waived, then, this obligation to be void; otherwise to remain in full force and virtue.

Whenever Contractor shall be, and declared by Contracting Body to be in default under the Contract, the Contracting Body having performed Contracting Body's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

- 1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Contracting Body elects, upon determination by the Contracting Body and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Contracting Body, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by Contracting Body to Contractor under the Contract and any amendments thereto, less the amount properly paid by the Contracting Body to Contractor.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in three (3) counterparts.

Witness:

Contractor: (Trade or Corporate
Name)

(Proprietorship or Partnership)

By: _____

Attest: (Corporation)

Title: _____
(Owner, Partner, or Corp.
Pres. or Vice-Pres. only)

By: _____

(Corporate Seal)

Title: _____
(Corp. Sec. or
Asst. Sec. only)

(Surety Company)

Witness:

By: _____

Title: _____
(Attorney in Fact)

Countersigned:

(Surety Corporate Seal)

N. C. Licensed Resident Agent

Name and Address - Surety Agency

Surety Company Name and N. C.
Regional or Branch Office Address

PAYMENT BOND

Date of Execution: _____

Name of Principal: _____
(Contractor) _____

Name of Surety: _____

Name of Contracting Body: _____
City of Graham
201 South Main Street, Graham, NC 27253

Amount of Bond: \$ _____

Project: _____
Contract 1: Senator Ralph Scott Parkway Extension

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by the presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, identified as shown above and hereto attached:

NOW THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

All persons supplying labor and material in the prosecution of the work, known as claimant, shall be defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

The above named Principal and Surety hereby jointly and severally agree with the Contracting Body that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Contracting Body shall not be liable for the payment of any costs or expenses of any such suit.

No suit or action shall be commenced hereunder by any claimant:

a) unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, The Contracting Body, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Contracting Body or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvements, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in Three (3) counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or
Asst. Sec. only)

Contractor: (Trade or Corporate Name)

By: _____

Title: _____
(Owner, Partner, or Corp.
Pres. or Vice-Pres. only)

(Corporate Seal)

(Surety Company)

By: _____

Title: _____
(Attorney in Fact)

(Surety Corporate Seal)

Witness:

Countersigned:

N. C. Licensed Resident Agent

Name and Address - Surety Agency

Surety Company Name and N. C.
Regional or Branch Office Address

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, Keith Whited, the duly authorized and acting

Legal representative of: City of Graham do hereby certify as follows:

I have examined the foregoing contract and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Keith Whited, City Attorney

Date: _____

CERTIFICATE OF INSURANCE

(Attach to this sheet)

NOTICE OF AWARD

TO: _____

PROJECT DESCRIPTION: City of Graham
Contract 1: Senator Ralph Scott Parkway Extension
AWCK Job No. 15104

Advertisement for Bids dated _____ and Instructions to Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$ _____

You are required by the Instructions to Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) Calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date Of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S Acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be Entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____ 2015.

City of Graham
Owner

By _____
Frankie Maness

Title _____
City Manager

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO AWARD is hereby acknowledged by _____

This the _____ day of _____ 2015.

By: _____

Title: _____

NOTICE TO PROCEED

TO: _____ DATE: _____
 _____ PROJECT: Contract 1: Senator Ralph Scott Parkway
 _____ Extension

You are hereby notified to commence WORK in accordance with the Agreement dated _____
 on or before _____. Stone base shall be installed through Station 94+00 by
 December 31st, 2015. The date of completion of all WORK for Contract 1 is June 30th, 2016.

 City of Graham
 Owner
 By _____
 Frankie Maness
 Title City Manager

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED
 is hereby acknowledged by _____

This the _____ 2015.
 By: _____
 Title: _____
 Employer Identification
 Number: _____

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

Copyright © 2007 National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

Associated General Contractors of America
2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308
(703) 548-3118
www.agc.org

The copyright for this EJCDC document is owned jointly by the four EJCDC sponsoring organizations and held in trust for their benefit by NSPE.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1 – Definitions and Terminology.....	1
1.01 Defined Terms	1
1.02 Terminology	5
Article 2 – Preliminary Matters	6
2.01 Delivery of Bonds and Evidence of Insurance.....	6
2.02 Copies of Documents	6
2.03 Commencement of Contract Times; Notice to Proceed.....	6
2.04 Starting the Work	7
2.05 Before Starting Construction.....	7
2.06 Preconstruction Conference; Designation of Authorized Representatives	7
2.07 Initial Acceptance of Schedules	7
Article 3 – Contract Documents: Intent, Amending, Reuse.....	8
3.01 Intent	8
3.02 Reference Standards	8
3.03 Reporting and Resolving Discrepancies	9
3.04 Amending and Supplementing Contract Documents	9
3.05 Reuse of Documents.....	10
3.06 Electronic Data	10
Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points.....	11
4.01 Availability of Lands	11
4.02 Subsurface and Physical Conditions.....	11
4.03 Differing Subsurface or Physical Conditions	12
4.04 Underground Facilities	13
4.05 Reference Points.....	14
4.06 Hazardous Environmental Condition at Site	14
Article 5 – Bonds and Insurance	16
5.01 Performance, Payment, and Other Bonds	16
5.02 Licensed Sureties and Insurers	16
5.03 Certificates of Insurance.....	17
5.04 Contractor’s Insurance	17
5.05 Owner’s Liability Insurance	19
5.06 Property Insurance.....	19
5.07 Waiver of Rights	20
5.08 Receipt and Application of Insurance Proceeds	21

5.09	Acceptance of Bonds and Insurance; Option to Replace	21
5.10	Partial Utilization, Acknowledgment of Property Insurer	22
Article 6 – Contractor’s Responsibilities.....		22
6.01	Supervision and Superintendence	22
6.02	Labor; Working Hours	22
6.03	Services, Materials, and Equipment.....	22
6.04	Progress Schedule.....	23
6.05	Substitutes and “Or-Equals”	23
6.06	Concerning Subcontractors, Suppliers, and Others	25
6.07	Patent Fees and Royalties.....	27
6.08	Permits	27
6.09	Laws and Regulations	28
6.10	Taxes.....	28
6.11	Use of Site and Other Areas.....	28
6.12	Record Documents	29
6.13	Safety and Protection.....	29
6.14	Safety Representative	30
6.15	Hazard Communication Programs.....	30
6.16	Emergencies	30
6.17	Shop Drawings and Samples.....	31
6.18	Continuing the Work.....	32
6.19	Contractor’s General Warranty and Guarantee.....	33
6.20	Indemnification.....	33
6.21	Delegation of Professional Design Services	34
Article 7 – Other Work at the Site		35
7.01	Related Work at Site	35
7.02	Coordination.....	35
7.03	Legal Relationships	36
Article 8 – Owner’s Responsibilities.....		36
8.01	Communications to Contractor	36
8.02	Replacement of Engineer	36
8.03	Furnish Data	36
8.04	Pay When Due.....	36
8.05	Lands and Easements; Reports and Tests	36
8.06	Insurance.....	36
8.07	Change Orders.....	37
8.08	Inspections, Tests, and Approvals.....	37
8.09	Limitations on Owner’s Responsibilities.....	37
8.10	Undisclosed Hazardous Environmental Condition	37
8.11	Evidence of Financial Arrangements.....	37
8.12	Compliance with Safety Program	37
Article 9 – Engineer’s Status During Construction.....		37
9.01	Owner’s Representative	37

9.02	Visits to Site	37
9.03	Project Representative.....	38
9.04	Authorized Variations in Work.....	38
9.05	Rejecting Defective Work.....	38
9.06	Shop Drawings, Change Orders and Payments	39
9.07	Determinations for Unit Price Work.....	39
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work	39
9.09	Limitations on Engineer's Authority and Responsibilities.....	39
9.10	Compliance with Safety Program	40
Article 10 – Changes in the Work; Claims.....		40
10.01	Authorized Changes in the Work.....	40
10.02	Unauthorized Changes in the Work.....	41
10.03	Execution of Change Orders	41
10.04	Notification to Surety	41
10.05	Claims.....	41
Article 11 – Cost of the Work; Allowances; Unit Price Work		42
11.01	Cost of the Work	42
11.02	Allowances	45
11.03	Unit Price Work.....	45
Article 12 – Change of Contract Price; Change of Contract Times.....		46
12.01	Change of Contract Price	46
12.02	Change of Contract Times	47
12.03	Delays	47
Article 13 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work.....		48
13.01	Notice of Defects.....	48
13.02	Access to Work	48
13.03	Tests and Inspections.....	49
13.04	Uncovering Work.....	49
13.05	Owner May Stop the Work	50
13.06	Correction or Removal of Defective Work	50
13.07	Correction Period	50
13.08	Acceptance of Defective Work	51
13.09	Owner May Correct Defective Work.....	52
Article 14 – Payments to Contractor and Completion		52
14.01	Schedule of Values	52
14.02	Progress Payments.....	52
14.03	Contractor's Warranty of Title.....	55
14.04	Substantial Completion	55
14.05	Partial Utilization	56
14.06	Final Inspection	57
14.07	Final Payment.....	57
14.08	Final Completion Delayed	58

14.09 Waiver of Claims	58
Article 15 – Suspension of Work and Termination.....	59
15.01 Owner May Suspend Work.....	59
15.02 Owner May Terminate for Cause.....	59
15.03 Owner May Terminate For Convenience	60
15.04 Contractor May Stop Work or Terminate.....	60
Article 16 – Dispute Resolution.....	61
16.01 Methods and Procedures	61
Article 17 – Miscellaneous	61
17.01 Giving Notice	61
17.02 Computation of Times.....	62
17.03 Cumulative Remedies	62
17.04 Survival of Obligations	62
17.05 Controlling Law.....	62
17.06 Headings	62

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *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.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. a preliminary Schedule of Submittals; and
 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

- A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:
1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
 2. is of such a nature as to require a change in the Contract Documents; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

- B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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. 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.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and

shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is

required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage 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 but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. *Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise*

or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

- C. *Contractor's Fee*: The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

- involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying

documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, 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;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTAL GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. EJCDC C-700, 2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplemental Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplemental Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

1. Paragraph 2.03.A shall be revised as follows:
 - A. The bids are good for 60 calendar days from the bid opening. The Owner will make a contract award within this 60-day period. After being notified of the award, the contractor will have 20 days to submit bonds and insurance to owner and execute the contracts. Upon receipt, the Owner has 20 days to execute the contract. Notice to Proceed will be issued no later than the 40th day from the contract award.
2. Delete paragraph 2.05.A.3 in its entirety.
3. Delete paragraph 2.07.A.3 in its entirety.
4. Add the following new paragraphs immediately after paragraph 4.02.B:
 - C. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants relied upon the following reports of exploration and tests of subsurface conditions at the Site:
 1. None
 - D. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants relied upon the following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the Site:
 1. None
5. Add the following sub-paragraph to the end of paragraph 4.05.A:
 1. Replacement of property monuments or irons disturbed by the contractors operation shall be reestablished by a licensed registered Land Surveyor in the State of North Carolina.
6. Add the following new paragraphs immediately after paragraph 4.06.A:
 1. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants relied upon the following reports of Hazardous Environmental Conditions at the Site:
 - a. None
 2. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER's Consultants relied upon the following drawings of Hazardous Environmental Conditions which are at or contiguous to the Site:
 - a. None.

7. Revise paragraph 5.03.A to read as follows:
 - A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, Certificate of Insurance (and other evidence of insurance requested by owner or any other additional insured; specifically including but not limited to copies of insurance policies) which CONTRACTOR is required to purchase and maintain in accordance with paragraph 5.04. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions Certificates of Insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.
8. Add the following paragraph immediately after 5.04.B:
 - C. Contractor shall provide general and automobile liability insurance coverage to the limits as shown in Instructions to Bidders, Section 19, Insurance.
9. Revise paragraph 5.06.A to read as follows:
 - A. Owner, at Owner's option and expense, may purchase property insurance as will protect Owner against claims which may arise from operations under this contract.
10. Delete paragraphs 5.07 thru 5.10 INCLUSIVE FROM THE "General Conditions".
11. Add the following new paragraph immediately after paragraph 6.06.G:
 - H. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.
12. Paragraph 6.10.A shall be revised to read as follows:
 - A. CONTRACTOR shall include in his bid all costs for all sales and use tax applicable to the project. CONTRACTOR shall submit to the OWNER an Itemized list of the quantity and value of materials and rentals used on the project and the amount of sales and use tax paid on such materials and rentals. Itemized list shall be submitted monthly to the ENGINEER. ENGINEER will not authorize monthly pay requests to CONTRACTOR until sales and use tax report has been submitted to the ENGINEER. See Section 01027 for additional information.
13. Add the following paragraph immediately after 6.11 D:
 - E. Contractor shall not use owner's property except in performing the work specified in the contract documents.
14. Paragraph 8.11.A. shall be revised to read as follows:
 - A. Owner shall execute Certificate of Finance Officer form and document will be an exhibit to the Form of Agreement. See page CFO-1.

15. Add the following new paragraphs immediately after paragraph 9.03.A:
- B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:
1. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.
 2. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
 3. Liaison:
 - a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
 4. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
 5. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 6. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

7. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
8. Inspections, Tests, and System Startups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
9. Records:
 - a. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - b. Maintain records for use in preparing Project documentation.
10. Reports:
 - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.
 5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
 8. Authorize Owner to occupy the Project in whole or in part.
16. Paragraph 11.03.D shall be revised to read as follows:
- D. The Owner reserves the right to increase or decrease the estimated quantities in the contract as necessary to complete the project. Such changes in quantities from the estimated quantity shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work at the unit prices established in the contract. Overruns and under runs of estimated quantities shall not constitute a basis for any claims under this contract.
17. Add the following new paragraph 11.03.E:
- E. The Owner reserves the right to eliminate any item from the contract and such action will in no way invalidate the Contract. Payment will be made for the remaining items in the contract at the unit price established in the Contract. The elimination of any items from the contract shall not constitute a basis for any claims under this contract
18. Add the following new paragraph 11.03.F.
- F. The contract to be awarded for the proposed work may be extended fifty (50%) of the contract price without consent or permission of the Contractor, and an additional fifty (50%) with the consent of the Contractor. Total extensions shall not to exceed one hundred (100%) percent of the contract price.
19. Delete paragraph 15.04.A. in its entirety.
20. Delete Article 16 in its entirety.
21. Add paragraph 18.0 to the "General Conditions".

ARTICLE 18 - LIQUIDATED DAMAGES

- A. The date of beginning and the time of completion of the WORK are ESSENTIAL CONDITIONS of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on the available date specified in the Supplemental General Conditions.
- B. The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- C. If the Contractor shall fail to complete the work within the contract time or extension of time granted by the Owner, then the Contractor will pay the Owner of the amount of liquidated damages as specified in the Bid Form for each calendar day that the Contractor shall be in the default after the time stipulated in the contract documents.
- D. The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following, and the Contractor has promptly given WRITTEN NOTICE of such delay to the Owner or Engineer.
1. To any preference, priority of allocation order duly issued by the Owner.
 2. To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, act of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and
 3. To any delays of subcontractors occasioned by any of the causes specified in paragraphs (a) and (b) of this article.
- E. PROVIDED FURTHER, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of contract, notify the Owner, in writing, of the cause of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.
- F. It is further agreed that, if default is made in completion, the Owner shall default as liquidated damages, the sum of four hundred dollars (\$400.00) per day for each and every calendar day completion is delayed in excess of the contract time set forth in the Bid Form. This amount is agreed upon as reasonable due to the effect of each section of the work on the time of completions of the entire project.

END OF SECTION

NOTE: The registered Professional Engineer referred to in this document is the RPE secured by the Contractor and not the design RPE for this parking and storm drainage improvements project.

FACT SHEET: OSHA'S REVISED STANDARD FOR EXCAVATIONS
29 CFR PART 1926 OCTOBER 31, 1989

I. SCOPE

Covers all open excavations; defines excavation to include trenches.

II. GENERAL REQUIREMENTS

Protection of employees in excavations against cave-ins except when the excavation is in stable rock or less than five feet deep and examination by a competent person provides no evidence that a cave-in should be expected; and against falling rock, soil or material by use of an 'adequate' system. -The latter operation includes scaling to remove loose rock or soil, installation of protective barricades and other 'equivalent protection'. Material or equipment which might fall or roll into an excavation must be kept at least two feet from the edge of excavations, or have retaining devices, or be prevented from falling with a combination of both precautions.

Daily inspections of excavations, adjacent areas, and protective systems by a competent person and the removal of exposed employees if-evidence –of possible cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions until necessary precautions have been taken.

Removal of, or neutralization of surface encumbrances which may create a hazard.

Estimate location of underground installations (sewer, telephone, electrical, fuel and other lines; storage tanks, etc.) prior to digging; pinpoint actual locations as estimated locations are approached.

Ramps, runways, ladders or stairs as means of access/egress must be within 25 feet of an employee work area if a trench is four feet or more deep.

Warning system for mobile equipment including barricades, hand or mechanical signals, or stop logs.

Testing and Controls for hazardous atmospheres including emergency rescue equipment and daily inspections for potentially hazardous conditions by a 'competent person'. Controls include respirators or additional ventilation, if needed, and individually attended lifelines during descent into bell-bottom pier holes or similar excavations.

-Support systems such as shoring & bracing or underpinning to ensure the stability of adjacent structures such as buildings, walls or sidewalks.

III. REQUIREMENTS FOR PROTECTIVE SYSTEMS

Sloping and benching systems - four options:

1. A slope of 34 degrees or less, in lieu of soil classification. A slope of this gradation or less is considered safe for any type of soil.

2. Maximum allowable slopes and allowable configurations for sloping and benching systems will be determined through use of Appendices A (Soil Classification) and B (Sloping and Benching).
3. Designs of sloping or benching shall be selected from and be in accordance with data provided in written form, the text to identify: Criteria that affect the selection, the limits of use of the data and sufficient explanatory data as necessary to assist in making a correct choice of a protective system.

At least one copy of the tabulated data identifying the Registered Professional Engineer who approved the information shall be maintained at the job site during the time the work is being carried out.

4. Excavations can be designed by a Registered Professional Engineer, put in written form and kept at the work site, but must include, at least, the magnitude and configuration of the slopes determined to be safe for the project and the name of the RPE who approved the plan.

Support, shield and other protective systems - four options:

1. Designs for timber shoring in trenches set in accordance with the conditions and requirements determined by using Appendices A and C (timber shoring for trenches). For aluminum hydraulic shoring Appendices A and D can be used if manufacturer's tabulated data is not available.
2. Designs using manufacturer's tabulated data may be used, deviation allowed only with specific, written approval of the manufacturer.
3. Designs using other tabulated data may be used provided the data is in writing and includes: Explanatory information to aid the user in making a selection, the criteria determining the selection, and the limits on the use of the data. At least one copy of the information, including the identity of the RPE, kept at the work Site during construction of the protective system.
4. Design by a Registered Professional Engineer. Design systems not using any of the three previously cited options must be approved by a RPE, shall be in writing and include the identity of the RPE and details such as sizes, types and configurations of the materials to be used. At least one copy of the plan is to be at the job site during construction.

The standard allows an employer to use a trench box or shield that is either designed or approved by a registered professional engineer (RPE), or is based on tabulated data prepared or approved by an RPE.

The standard allows construction workers to remain inside trench shields that are being repositioned, provided that the shields are moved horizontally only and the shields are not lifted.

According to the new standard, information necessary for the safe installation, placement, use and removal of any trench support system must be available at the work site at all times, but a written log or record of inspections is not necessary.

This final standard goes into effect 60 days after publication in the Federal Register.

SECTION 01015 - PROJECT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of these Contracts, including General and Supplementary Conditions and other Division 1-16 Specification Sections, apply to this Section.

1.2 COORDINATION

- A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, operation and maintenance.

1.3 CONSTRUCTION STAKEOUT

- A. On behalf of Owner, Engineer will provide construction stakeout for proposed improvements as shown on the drawings. Offset stakes will be provided for all structure locations to provide horizontal and vertical control.
- B. Contractor will be responsible for scheduling Engineer to have improvements staked. A 48-hour minimum notice to Engineer will be required. Restaking will be paid for by the Contractor at the Engineer's current Hourly Rates.

1.4 EASEMENTS AND RIGHTS-OF-WAY

- A. The easements (temporary or permanent) and rights-of-way for the roadway will be provided by Owner. Contractor shall confine his construction operations within the limits indicated on the drawings. Contractor shall use due care in placing construction tools, equipment, excavated materials, and pipeline materials and supplies in order to avoid damage to property and interference with traffic.
- B. Bidders are advised that easements not obtained by Owner prior to award of contract will be obtained by the Power of Eminent Domain and will be available within 60 days from the date of issuance of Notice to Proceed. Bidders shall not seek any compensation from Owner as a result of Owner not having all easements within 60 days from issuance date of Notice to Proceed.
- C. Contractor shall coordinate with all utility owners to have all existing utilities located within the limits of disturbance.
- D. Easements (temporary or permanent) across private property are indicated on the drawings. Contractor shall set stakes to mark the boundaries of construction easements across private property. Contractor shall furnish, without charge, competent persons from his force and such tools, stakes, and other materials as may be required to stake out the boundaries of construction

easements. The stakes shall be protected and maintained until completion of construction and cleanup.

- E. Contractor shall not enter any private property outside the designated limits of disturbance without written permission from the owner of the appropriate property. Contractor shall provide one (1) copy of such written permission to the Owner and Engineer.

1.5 OPERATION OF EXISTING FACILITIES

- A. Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.

1.6 LOCATION OF EXISTING UTILITIES

- A. Prior to beginning work, Contractor shall notify all existing utility companies and have all existing utilities located.
- B. All utility conflicts shall be brought to the attention of the Engineer immediately. Engineer will promptly review utility conflicts and advise Contractor as to how to proceed.

1.7 NOTICES TO OWNERS AND AUTHORITIES

- A. Contractor shall, as provided in General Conditions, notify Owners of adjacent property and utilities when prosecution of the work may affect them.
- B. When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, Contractor shall give notice sufficiently in advance to enable the affected persons to provide for their needs. Notices will conform to any applicable local ordinance and, whether delivered orally or in writing, will include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
- C. Utilities and other concerned agencies shall be contacted at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

1.8 LINES AND GRADES

- A. All work shall be done to the lines, grades and elevations shown on the construction drawings.
- B. Owner will periodically check the lines and grades for compliance with the construction drawings. Any discrepancy will be brought to the attention of the Owner, Engineer and Contractor immediately and will be resolved prior to proceeding with additional construction. This check does not relieve Contractor from providing his own quality control.

1.9 UNFAVORABLE CONSTRUCTION CONDITIONS

- A. During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine his operations to work, which will not be affected adversely by such conditions. No portion of the work shall be constructed under conditions, which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the work in a proper and satisfactory manner. No additional cost will be made for such special means taken by the Contractor.

- B. Contractor shall review local weather forecasts and take necessary precautions to remove or relocate equipment, materials, supplies, etc. when precipitation is predicted which may result in the inundation of the work area. Contractor will not make a claim against the Owner or Engineer in the event a rainfall event or events occur and the Contractor's equipment, materials, supplies temporary work areas or completed work are damaged or lost due to flooding or other disaster. It is the Contractor's responsibility to repair or replace any lost or damaged item resulting from such flooding or such other disaster.

1.10 CLEAN-UP

- A. Contractor shall keep the premises free at all times from accumulations of waste materials and rubbish.
- B. Contractor shall neatly stack construction materials such as concrete forms, pipe, etc. when not in use. Contractor shall promptly remove spattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.
- C. Volatile wastes shall be properly stored in covered metal containers and removed daily.
- D. Wastes shall not be buried or burned on the site or disposed of into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the site and disposed of in a manner complying with local ordinances and anti-pollution laws.
- E. Adequate cleanup will be a condition for recommendation of progress payment applications.

1.11 REFERENCE STANDARDS

- A. Reference to standards, specifications, manuals or codes of any technical society, organization, or association, or to the laws regulations of any governmental authority, whether such reference be specified or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard, specifications, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner, Contractor, Engineer, or any of their Consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Engineer, or any of Engineer's Consultants, agents, or employees, any duty or authority to supervise or direct the furnishing of performance of the work.

1.12 PRECONSTRUCTION CONFERENCE

- A. Prior to commencement of work at the site, a Preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by:
 - 1. Contractor and his superintendent.
 - 2. Principal Subcontractors.
 - 3. Representatives of principal Suppliers and manufacturers as appropriate.
 - 4. Engineer and his Resident Project Representative.
 - 5. Representative of Owner.
 - 6. Governmental representatives as appropriate.
 - 7. Others as required by Contractor, Owner, or Engineer.

- B. Unless previously submitted to Engineer, Contractor shall bring to the conference a preliminary schedule for each of the following:
 - 1. Progress
 - 2. Shop drawings and other submittals.
- C. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:
 - 1. Contractor's preliminary schedules.
 - 2. Transmittal, review, and distribution of Contractor's submittals.
 - 3. Processing Applications for Payment.
 - 4. Maintaining record documents.
 - 5. Critical work sequencing.
 - 6. Field decisions and Change Orders.
 - 7. Use of premises, storage areas, security, housekeeping, and Owner's needs.
 - 8. Material deliveries and priorities.
 - 9. Contractor's assignments for safety and first aid.
- D. Engineer will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

1.13 PROGRESS MEETINGS

- A. Contractor shall schedule and hold regular progress meetings at least monthly and at other times as requested by Engineer or required by progress of the Work. Contractor, Engineer, and all Subcontractors active on the site shall be represented at each meeting. Contractor may at his discretion request attendance by representatives of his Suppliers, manufacturers, and other subcontractors.
- B. Meeting minutes will be prepared and distributed by the Engineer. The purpose of the meetings will be to review the progress of the work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems, which may develop.

1.14 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed for the 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 margins.
- C. At project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

1.15 TESTING AND INSPECTION

- A. The Owner will be responsible for providing personnel to verify test results performed by the Contractor.
- B. The Contractor shall test all work as specified in the Contract Documents.

- C. When required by the Contract Documents, geotechnical or other independent testing is required, the Owner will pay for said services; however, whenever retesting is required due to failed testing, Contractor will be responsible for payment of retesting fees.

1.16 SITE ADMINISTRATION

- A. Contractor shall be responsible for all areas of the site used by him and all Subcontractors in the performance of the work. Contractor will exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to Owner or others. Contractor has the right to exclude from the site all persons who have no purpose related to the work or its inspection.

1.17 OSHA'S REVISED STANDARD FOR EXCAVATION

- A. Contractor shall be responsible for complying with OSHA'S revised standard for excavation, as amended. See sheets OSHA-1 and OSHA-2.

1.18 STORMWATER INSPECTIONS

- A. Contractor shall inspect all erosion control measures on a weekly basis and within 24 hours of a 0.5-inch rainfall event (within a 24-hour period) and complete the STORMWATER INSPECTIONS FOR GENERAL PERMIT NCG010000 –LAND DISTURBING ACTIVITIES (Form attached at end of Section).
 - 1. Contractor shall maintain a file of said report and submit copies of report to Owner and Engineer on a monthly basis.
- B. Any repairs or required maintenance on erosion control measures noted during inspection are to be made prior to continuing with any construction activities.

END OF SECTION 01015

PROJECT: _____
 MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date Of Rain	Amount (inches)	Initials

By this signature, I certify (in accordance with Part II Section B, 10 of the NCG010000 permit) that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

EROSION AND SEDIMENTATION CONTROL FACILITIES INSPECTED: (At least once [twice, if on 303(d) listed stream for construction related parameters*] per seven calendar days Or within 24 hours of a rainfall of 0.5 inches per 24 hours)

Facility Identification	Date of inspection	Operating Properly (Y/N)	Describe corrective actions taken (may need to attach additional information)

OBSERVATIONS OF RUNOFF AT STORMWATER DISCHARGE OUTFALLS: (At least once [twice, if on 303(d) listed stream for construction related parameters *] per seven calendar days Or within 24 hours of a rainfall of 0.5 inches per 24 hours)

Stormwater Discharge Outfall Identification	Date	Clarity	Floating solids	Suspended Solids	Oil sheen	Other obvious indicators of stormwater pollution (list & describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of the disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy

Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids

Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy

Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N

* 303(d) listed streams for construction related parameters – The latest approved list may be obtained from the Division of Water Quality, or from the following website location:
<http://h2o.enr.state.nc.us/su/construction303d>

SECTION 01025 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Divisions 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

This Section specifies the measurement and payment of the contract unit prices for the project.

Related Sections include the following:

1. “Bid Form” for unit price quantities and bid amounts.
2. Division 1 Section "Application for Payment".
3. Division 2 – all Sections.

1.3 GENERAL

- A. The bid items shown in the Bid Form have been created solely for the purpose of comparison of bids and for use in the preparation of monthly Applications for Payment. Quantities shown thereon must be considered as approximate only.
- B. Basis for payment and unit of measurement for the work under this contract shall be in accordance with the following and shall include furnishing all labor, tools, equipment and materials required to construct the improvements in the manner specified including but not limited to all types of excavation, trenching, shoring, pumping, pipe installation, testing, backfilling, repairs, surface restoration and all other items necessary to complete the work as specified.
- C. All work shown on the plans herein specified or implied in any way on the drawings or specifications shall be done regardless of whether or not the work is specifically defined in any bid item.
- D. The non-utilization or partial utilization of any bid item shall not serve as a claim for any contract or unit price adjustment as the Contractor shall be paid the unit price bid for the number of units actually incorporated and accepted into the work.
- E. Payment and measurement will be based on this Section.
- F. Payment for lump sum items will be paid based on a percent complete basis determined by the Engineer.

1.4 PAY ITEMS

A. Item No. 1 - Mobilization

1. Payment for Mobilization will be paid for at the contract lump sum price for “Mobilization”. No additional payment will be made for insurance, bonds or additional items associated with project start-up, etc. since the work is considered to be included in the lump sum bid for Mobilization.
2. Partial payments for the item of “Mobilization” will be made with the first and second Application for Payments paid on the contract, and will be made at the rate of 50% of the lump sum price for “Mobilization” on each of these Application for Payments, provided the amount bid does not exceed 3% of the total amount bid for the project. Where the amount bid for “Mobilization” exceeds 3% of the total bid, 1-1/2% of the total amount bid will be paid on each of the first two Applications for Payment, and that portion exceeding 3% will be paid on the final Application for Payment.

B. Item No. 2 - Clearing and Grubbing and Debris Removal

1. Payment for clearing and grubbing will be paid for at the contract lump sum price for “Clearing and Grubbing and Debris Removal” and will be full compensation for all work described in the contract documents. Removal and disposal of existing debris located within the proposed right-of-way or easements is considered incidental to the work being paid for at the contract lump sum price for “Clearing and Grubbing and Debris Removal”.

C. Item No. 3-5 – Clean Stone for Erosion Control Devices and Rip-Rap

1. Rip rap and stone used to construct silt basins, silt fence outlets, stone filter outlets, rock silt screens, rip rap donut and gravel pipe inlet protection devices, stone check dams will be paid for at the contract unit price per ton “Clean Stone for Erosion Control Devices” and “Rip-Rap” incorporated and accepted into the work.
2. Payment will be based on the actual number of tons based on quarry tickets. Quarry tickets shall be given to inspector at time of delivery and pay item will be marked on ticket. Tickets not given to inspector will not be paid for. Stone wasted or not used properly in the opinion of the inspector shall be deducted from the quarry tickets.
3. When directed by the Engineer, Contractor shall remove erosion control devices. Rip rap from removed erosion control devices shall be used to stabilize the outlets of storm sewer pipes, and to stabilize areas as shown on the plans or as directed by the Engineer.
4. No additional payment will be made for rip-rap installed at construction entrances as this material will be paid in item Item No. 14 below.
5. No additional payment will be made for excavation of accumulated sediment, filter fabric, maintenance of erosion control devices and removal of erosion control devices since the work is considered incidental to the work and is to be included in the unit price bid.
6. Payment for stone for erosion control devices will be made at the contract unit price per ton for “Clean Stone for Erosion Control Devices” and “Rip-Rap” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

D. Item No. 6 - Silt Fence

1. Payment for silt fence will be based on the actual number of linear feet incorporated and accepted into the work and measured to the nearest 1.0 foot.

2. No additional payment will be made for storage excavation, wire fence, posts, ties, maintenance and removal since the work is considered incidental to the work and is to be included in the unit price bid.
 3. No additional payment for clean stone used to install silt fence outlets will be made as it is considered incidental to the work included in Item No. 9, paragraph E.
 4. Payment for silt fence will be made at the contract unit price per linear foot for "Silt Fence" incorporated and accepted into the work and will be full compensation for all work described in the contract documents.
- E. Item No. 7 – Hardware Cloth
1. Payment for hardware cloth will be based on the actual number of linear feet of hardware cloth installed and accepted into the work.
 2. No additional payment will be made for posts, ties, woven wire fabric, filter fabric, maintenance and removal since the work is considered incidental to the work and is to be included in the unit price bid.
 3. Payment for hardware cloth will be made at the contract unit price per linear foot of "Hardware Cloth" incorporated and accepted into the work and will be full compensation for all work described in the contract documents.
- F. Item No. 8 – Slope Drains
1. Payment for slope drains will be based on the actual number of linear feet incorporated and accepted into the work and measured to the nearest 1.0 foot.
 2. No additional payment will be made for fittings, maintenance, removal, etc, since the work is considered incidental to the work and is to be included in the unit price bid.
 3. Payment for slope drains will be made at the contract unit price for "Slope Drain" incorporated and accepted into the work and will be full compensation for all work described in the contract documents.
- G. Item No. 9 – Silt Basin Type 'B'
1. Payment for silt basin type 'B' will be based on the actual number of basins installed and accepted into the work.
 2. Payment for clean stone will be made at the contract unit price for "Clean Stone for Erosion Control Devices" and "Rip-Rap" as referenced above in Items No. 3-4.
 3. No additional payment will be made for storage excavation, maintenance and removal since the work is considered incidental to the work and is to be included in the unit price bid.
 4. Payment for silt basin will be made at the contract unit price for each "Silt Basin Type 'B'" incorporated and accepted into the work and will be full compensation for all work described in the contract documents.
- H. Item No. 10 - Stabilization Stone
1. Stabilization Stone is defined, as stone installed for pipe installation where in the opinion of the Engineer, the soil is unsuitable and ordered removed.
 2. Payment will be based on the actual number of tons based on quarry tickets. Quarry tickets shall be given to inspector at time of delivery and pay item will be marked on ticket. Tickets not given to inspector will not be paid for. Stone wasted or not used properly in the opinion of the inspector shall be deducted from the quarry tickets.
 3. No additional payment will be made to undercut the proposed storm drain pipe or to dispose of the unsuitable materials since the work is considered incidental to the work and is to be included in the unit price bid.

4. Payment for installation of stabilization stone will be paid for at the contract unit price per ton for “Stabilization Stone” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

I. Item No. 11 - Incidental Stone

1. Incidental stone is defined as stone used for temporary or permanent driveway replacement stone, used in parking lots/areas, roadway shoulder, temporary replacement of roadway pavement or as otherwise directed by the inspector. No direct payment will be made for stone screenings used on roadways. Stone will be ABC stone, #57, or other type stone as needed or directed. Stone replaced on unpaved areas or graveled areas will generally need to be the same type of stone as existing type.
2. Payment will be based on the actual number of tons based on quarry tickets. Quarry tickets shall be given to inspector at time of delivery and pay item will be marked on ticket. Tickets not given to inspector will not be paid for. Stone wasted or not used properly in the opinion of the inspector shall be deducted from the quarry tickets.
3. No additional payment will be made to backfill, compact stone, etc. in NCDOT roadway and driveways or to dispose of the excavated materials since the work is considered incidental to the work and is to be included in the unit price bid. No direct payment will be made for screenings used on the roadway to keep soil or other matter off of the pavement.
4. Payment for installation of incidental stone will be paid for at the contract unit price per ton for “Incidental Stone” incorporated and accepted into the work and will be full compensation for all work described in the contract documents

J. Item No. 12 – Excelsior Matting

1. Payment for excelsior matting installation will be based on the actual number of square yards incorporated and accepted into the work and measured to the nearest 1.0 square yard.
2. No additional payment will be made for staples or other work required to install erosion control blankets since the work is considered incidental to the work and is to be included in the unit price bid.
3. Payment for excelsior matting installation will be made at the contract unit price per square yard for “Excelsior Matting” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

K. Item No. 13 – Wattle

1. Measurement for the installation of wattles for erosion control will be based on the actual number of linear feet of wattle incorporated and accepted into the work and measured to the nearest linear foot.
2. No additional payment will be made for overlapping wattles, wooden stakes, anchor pins, etc. as it is considered incidental to the work and is to be included in the unit price bid.
3. Payment for wattles will be made at the contract unit price per linear foot for “Wattle” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

L. Item No. 14 - Temporary Construction Entrance

1. Payment for temporary construction entrance and will be paid for at the contract unit price for each temporary construction entrance incorporated and accepted into the work. Payment will be full compensation for all work described in the contract documents and as shown on the plans or in the details for “Temporary Construction Entrance”.

2. No additional payment will be made for stone, excavation, filter fabric, storm drain, or any other materials or items necessary to construct the temporary construction entrance since the work is considered incidental to the work and is to be included in the unit price bid.
3. No additional payment will be made for maintenance or removal of temporary construction entrance since the work is to be included in the unit price bid.

M. Item No. 15 – Temporary Stream Crossing

1. Measurement for temporary stream crossing will be based on the actual number of stream crossings incorporated and accepted into the work.
2. No additional payment shall be made for pipe, stone, diversion berms, stream restoration work, stone filter outlets, pump around, sandbags, etc. since the work is considered incidental to the work and is to be included in the unit price bid.
3. Payment for temporary stream crossings will be paid for at the contract price for each “Temporary Stream Crossing,” installed and accepted into the work and will be full compensation for all work described in the contract documents including but not limited to all work specified in the temporary stream crossing notes and stream restoration details.

N. Item No. 16 – Seeding and Mulching

1. Payment for seeding and mulching will be paid for at the contract lump sum price for “Seeding and Mulching” and shall include all landscaping, temporary seeding and stabilization, reseeding, and permanent seeding and stabilization work where required as a result of surface vegetation disturbed during the execution of this Contract. No additional payment will be made for finish grading, the furnishing and spreading of topsoil, seedbed preparation, seed, lime, fertilizer or mulch materials, seeding, fertilizing, planting, mulching, maintenance operations or repair seeding since the work is considered incidental to the work and is to be included in the contract lump sum price.

O. Item No. 17 – Grading

1. Payment for grading work will be paid for at the contract lump sum price for “Grading” and will be full compensation for all work described in the contract documents. No other compensation will be made for borrow material, compacting existing subgrade, hauling material to stockpile site, fine grading, constructing ditches, shoulder construction.
2. Payment for hauling off excess material, if necessary, will be paid according to Item No. 39. No payment shall be made for hauling off material until all onsite wasting options have been exhausted. The contractor shall receive permission from the Engineer prior to hauling material offsite.

P. Item No. 18 – Undercut Excavation

1. Payment for undercut excavation will be based on the actual number of cubic yards removed and suitable backfill material provided and accepted into the work.
2. Measurement will be based on computed volumes from actual field measurements by the Engineer to the nearest 0.1 foot and computed to the nearest 0.1 cubic yard.
3. No additional payment will be made for suitable backfill material or the placement thereof or to dispose of the unsuitable materials since the work is considered incidental to the work and is to be included in the unit price bid.
4. Payment for undercut excavation will be made at the contract unit price per cubic yard for “Undercut Excavation” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.
5. Undercut not measured by and verified by the inspector will not be eligible for payment.

Q. Item No. 19 - Rock Excavation

1. Payment for rock excavation will be based on the actual number of cubic yards incorporated and accepted into the work and measured to the nearest 0.1 cubic yard.
2. The inspector will measure Rock Excavation. Computations will be based on the length multiplied by the average depth (including 6-inches below pipe invert) multiplied by the width (actual average width up to four-feet (4') maximum in trenches).
3. Measurement of manholes and structures will be the average depth (including 6-inches below bottom of manhole) multiplied by the square of the average width (a maximum of 2 feet beyond the outside wall of the structure).
4. No additional payment will be made for pre or post blast survey, monitoring blasting operations and/or trench rock excavation beyond the limits indicated above without written approval of the Engineer since the work is considered incidental to the work being paid for at the contract unit price.
5. No additional payment will be made for providing suitable off-site borrow excavation to backfill trenches where rock has been removed, since the work is to be included in the unit price bid for trench rock excavation.
6. Payment for trench rock excavation will be made at the contract unit price per cubic yard for "Rock Excavation" incorporated and accepted into the work and will be full compensation for all work described in the contract documents. **The Contractor's unit price bid shall not be lower than \$30.00 per cubic yard.**
7. Rock not measured by and verified by the inspector will not be eligible for payment.

R. Item No. 20 – 25 - Storm Sewer Pipe

1. Payment for storm sewer pipe will be based on the actual number of linear feet of storm sewer pipe incorporated and accepted into the work and measured to the nearest linear foot for the size, type and depth of pipe indicated in the bid item.
2. No additional payment will be made for the excavation, backfilling, dewatering, etc, since the work is considered incidental to the work and is to be included in the unit price bid.
3. No additional payment will be made for the haul away or onsite wasting of any excess material left over from the installation of Storm Sewer Pipe or Storm Drainage Structures since the work is considered incidental to the work and is to be included in the unit price bid.

S. Item No. 26 – 30 – Endwalls

1. Payment for endwalls will be based on the actual number of endwalls incorporated and accepted into the work based on the size and type of each structure.
2. No additional payment will be made for excavation, backfilling, dewatering, etc, since the work is considered incidental to the work and is to be included in the unit price bid.
3. Payment for endwalls will be made at the contract unit price for each size and material listed in the Bid Form which is incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

T. Item No. 31 – Open Throat Catch Basin

1. Payment for open throat catch basins will be based on the actual number of catch basins incorporated and accepted into the work based on the size, type and depth of each structure.
2. No separate payment for frames, grates and covers will be made as such are incidental to the drainage structure.
3. No additional payment will be made for excavation, backfilling, dewatering, connection to existing storm drainage, etc, since the work is considered incidental to the work and is to be included in the unit price bid.

4. Payment for open throat catch basins will be made at the contract unit price for “Open Throat Catch Basin” incorporated and accepted into the work and will be full compensation for all work described in the contract documents.

U. Item No. 32 - 34 – Asphalt Pavement & ABC Stone

1. Measurement for asphalt pavement and ABC stone will be based on the actual tons of asphalt or ABC stone placed and accepted into the work. Work includes fine grading, temporary stone, removal of temporary stone, sawcutting existing pavement and placement of new pavement.
2. Payment for asphalt and ABC stone will be based on the actual number of tons of asphalt and ABC stone placed and accepted into the work.
3. Asphalt placement will be paid at the contract unit price per ton for “Asphalt Intermediate Course Type I-19.0C” and “Asphalt Surface Course Type S9.5C” based on tickets provided by the asphalt and ABC supplier to the nearest 0.01 ton.
4. No additional payment will be made for proof roll, tack coat, testing or other work described in the contract documents.

V. Item No. 35 – Pavement Striping

1. Payment for pavement striping will be paid for at the contract lump sum price for “Pavement Striping” and will be full compensation for all work described in the contract documents.
2. No additional payment will be made for cleaning or surface preparation since the work is to be included in the unit price bid.

W. Item No. 36 – Guardrail

1. Payment for guardrail will be based on the actual number of linear feet of guardrail incorporated and accepted into the work and measured to the nearest 1.0 linear foot.
2. Payment for Guardrail will be made at the contract unit price per linear foot for “Guardrail w/GRAU 350 End Treatments” and will be full compensation for all work described in the contract documents.
3. No additional payment will be made for posts, end treatments and installation as the work is considered incidental to the work and is to be included in the unit price bid.

X. Item No. 37 - Traffic Control

1. Payment for traffic control will be paid for at the contract unit price for “Traffic Control” and will be full compensation for all work described in the contract documents. The contractor shall provide new signs or signs in very good and legible condition. The contractor shall provide all necessary personnel and equipment for traffic control.
2. The contractor shall abide by N.C.D.O.T. and MUTCD standards and guidelines. The contractor shall provide and maintain and other devices necessary for traffic control including, but not limited to: stop/slow paddles, vests, cones, barrels, arrow boards as required, and any other resources, equipment or personnel to safely route traffic around the contractors work zone.

Y. Item No. 38 – Borrow Material

1. Payment for borrow material will be based on the actual number of cubic yards of borrow material incorporated and accepted into the work. The volume of borrow material will be established by the Engineer based on measurements of the material brought to the site. A correction factor may be made to account for compaction if the volume of material is measured prior to being installed and compacted.

2. Should rock, screenings or other material from a quarry be approved as borrow material, the volume of borrow material will be established by the engineer based on truck tickets. Truck tickets are to be given to the project inspector at the time of delivery of the borrow material. Material installed without providing truck tickets to the Engineer will not be eligible for payment.
3. Payment will be made at the contract unit price per cubic yard for "Borrow Material" and will be full compensation for all work described in the contract documents.
4. No additional payment will be made for removal and disposal of existing material, placement, compaction, delivery or other work required to complete the work since the work is considered to be included in the contract unit price.
5. Borrow material shall be approved by the geotechnical engineer in advance of delivery to site.

Z. Item No. 39 - Unsuitable Material Offsite Removal

1. Measurement for offsite removal of unsuitable material will be based on the actual cubic yards of waste material hauled off of the project site.
2. Payment for offsite removal of unsuitable material will be made at the contract unit price per cubic yard for "Unsuitable Material Offsite Removal" and will be full compensation for all work described in the contract documents.
3. No additional payment will be made for temporary stockpiling, hauling, loading or onsite wasting of material.
4. No payment shall be made for hauling off material until all onsite wasting options have been exhausted. The contractor shall receive permission from the Engineer prior to hauling material offsite.

AA. Item No. 40 - Geotextile Fabric For Stabilization

1. Measurement for geotextile fabric for stabilization will be based on the actual square yards of geotextile fabric placed and accepted into the work and will be measured to the nearest square yard.
2. Payment for geotextile fabric will be based on the actual number of square yards of geotextile fabric installed and accepted into the work.
3. No additional payment will be made for overlapping geotextiles, sewing seams, wire staples, anchor pins, etc. as it is considered incidental to the work and is to be included in the unit price bid.

BB. Item No. 41 – Fire Hydrant Adjustment

1. Measurement for fire hydrant adjustment will be based on the actual number of vertical feet of adjustment of an existing fire hydrant placed and accepted into the work and will be measured to the nearest 0.25 foot.
2. Payment will be made at the contract unit price for "Fire Hydrant Adjustment" and will be full compensation for all work described in the contract documents.
3. No additional payment will be made for fittings as it is considered incidental to the work and is to be included in the unit price bid.

CC. Item No. 42 – Water Valve Box Adjustment

1. Measurement for water valve box adjustment will be based on the actual number of valve boxes adjusted and accepted into the work.
2. Payment will be made at the contract unit price for "Water Valve Box Adjustment" and will be full compensation for all work described in the contract documents.

DD. Item No. 43 - Manhole Adjustment

1. Measurement for manhole adjustment will be based on the actual number of manholes adjusted and accepted into the work.
2. Payment will be made at the contract unit price for "Manhole Adjustment" and will be full compensation for all work described in the contract documents.
3. No additional payment will be made for excavation, shoring, mortar installation, etc. as it is considered incidental to the work and is to be included in the unit price bid.

EE. Item No. 44 – Contingency Allowance

1. A contingency allowance of \$50,000 is included in the bid. This allowance may be used at the discretion of the owner to pay for additional work items, if necessary. Use of the contingency allowance will require a signed work order or a change order.

PART 2 - PRODUCT (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01025

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Divisions 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
 - 1. "Bid Form" for unit price quantities and bid amounts.
 - 2. Division 1 Section "Application for Payment".
 - 3. Division 1 Section "Alternates".
 - 4. SPECIFICATIONS – All Divisions

1.3 SCHEDULE OF VALUES

- A. The estimated quantities and unit prices established on the Bid Form shall be the basis for the schedule of values, except that a detailed itemized cost breakdown shall be provided for the lump sum price for the pump station in Contract 1.
- B. Format and Content: The Application for Payment shall consist of two (2) components. The first shall be a summary sheet and the second will be an itemized quantity and value sheet.
 - 1. The following information shall be on the summary sheet:
 - a. Identification:
 - 1) Project name and location
 - 2) Name and address of Engineer
 - 3) Project number
 - 4) Contractor's name and address
 - 5) Date of submittal
 - 6) Application for Payment Number and Period Covered
 - b. Summary of Payment Request
 - 1) Contract sum
 - 2) Construction to date
 - 3) Less retainage
 - 4) Amount construction to date
 - 5) Plus material inventory
 - 6) Gross amount due

- 7) Percent complete
- c. Certification Statements
 - 1) Contractor to certify that work has been completed in accordance with Contract Documents, that all amounts have been paid for items which previous Applications for Payments were issued and payments received, and that the current payment is now due. Funds hereby received will be used to pay herein listed items to the extent needed.
 - 2) Certification statement is to be notarized.
 - 3) Engineers certification statement.
 - a) In our opinion, the above application for payment by the contractor is a substantially correct statement of performance in accordance with the Contract Documents and the contractor is entitled to payment as requested.
2. The following information shall be on the itemized quantity sheet:
 - a. Identification:
 - 1) Project name and location
 - 2) Name of Engineer
 - 3) Project number
 - 4) Contractor's name
 - 5) Application for payment number and period covered.
 - b. Arrange the scheduled values in tabular form with separate columns to indicate the following information:
 - 1) Item number
 - 2) Description of work
 - 3) Scheduled quantity and unit
 - 4) Unit price and scheduled value
 - 5) Previous quantity and amount
 - 6) Current quantity and amount
 - 7) To date quantity and amount
 - 8) Remaining quantity and amount
 - 9) Totals for previous, current, to date and remaining amounts
 - c. A material inventory statement is to be provided for which payment request includes stored materials not incorporated into the work. The following information is to be provided.
 - 1) Project name and location
 - 2) Date
 - 3) Item description
 - 4) Previous on hand quantity
 - 5) Delivered quantity
 - 6) Quantity incorporated into work
 - 7) Quantity on hand this application
 - 8) Unit price
 - 9) Amount due
 - 10) Copies of statements or invoices from suppliers shall be submitted.
 - d. See Sample Application for Payment Sheet # 01027 – 6 & 7.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by the Owner.
 - 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment-Application Times: The date for each progress payment is the 25th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period.
- C. Payment-Application Forms: Use forms approved by the Engineer for Applications for Payment which includes the information described in Section 1.3.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. Verify quantities with inspector. The Engineer will return incomplete applications without action.
 - 1. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit 4 signed and notarized original copies of each Application for Payment to the Engineer. One copy shall be complete, including waivers of lien and similar attachments, when required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Engineer.
- F. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
 - 1. List of subcontractors.
 - 2. List of principal suppliers.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. Certificates of insurance and insurance policies.
 - 5. Performance and payment bonds.
 - 6. Shop drawings and product data sheets.
- G. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
 - 1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 - 2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Warranties (guarantees) and maintenance agreements.
 - b. Final cleaning.
 - c. Application for consent of surety.
 - d. List of incomplete Work, recognized as exceptions to Engineer's Certificate of Substantial Completion.

- H. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Substantial Completion.
 3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction records to the Owner.
 6. Proof that taxes, fees, and similar obligations were paid.
 7. Removal of temporary facilities and services.
 8. Removal of surplus materials, rubbish, and similar elements.

1.5 RETAINAGE

- A. An amount equal to 5% of the total contract due on the application for payment will be deducted and retained by the Owner until the work is complete.

1.6 STORED MATERIALS

- A. Materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.2 of the General Conditions) will be paid for at the rate of 90% of its value (with the balance being retainage), as shown by manufacturer's invoices with the amount not to exceed any applicable Bid price or schedule of values amount for the material or equipment.
- B. See paragraph 1.3B subparagraph 2c. of this section for information to be submitted with Applications for Payment.

1.7 SALES TAX STATEMENT

- A. Sales tax statement shall accompany all Applications for Payment. If no sales tax was paid during the application period, contractor shall submit sales tax statement stating no sales tax was paid. Sales tax statement shall have the following information:
1. Identification:
 - a. Project name and location
 - b. Name of engineer
 - c. Project number
 - d. Contractor's name and address
 - e. Date
 - f. Period covered
 2. Sales Tax Information:
 - a. Invoice date and number
 - b. Supplier
 - c. County material purchased
 - d. Net cost
 - e. State tax amount
 - f. County tax amount

3. Certification Statement

- a. I hereby certify that the above listed materials have been or will be used on the subject project and that the information provided is correct to the best of my knowledge.

4. See sample sales tax sheet Page 01027-8 & 9

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

APPLICATION FOR PAYMENT NO. _____

For the period _____ to _____

PROJECT No. _____

DATE: _____

PROJECT: _____

CONTRACTOR: _____

LOCATION: _____

CONTRACT FOR: _____

CONTRACT DATE: _____

TO (Owner):

┌ _____ ┐
 └ _____ ┘

Application is made for Payment, as shown below, and as itemized in the attached pages in connection with this Contract.

CONTRACT SUM.....	\$ _____
Construction to Date.....	\$ _____
Less: _____ % Retainage.....	\$ _____
Total Construction to Date.....	\$ _____
Plus: _____ % Material Inventory...	\$ _____
GROSS AMOUNT DUE.....	\$ _____
Less: Previous Payments.....	\$ _____
NET AMOUNT DUE.....	\$ _____

Percentage Complete _____ %

In our opinion, the above application for payment by the contractor is a substantially correct statement of performance in accordance with the contract documents and the contractor is entitled to payment as requested.

City of Burlington

By _____ Date _____

State of:
 County of:

The undersigned certifies that the Work herein has been completed in accordance with the Contract Documents, that all amounts have been paid for items for which previous Applications for Payment were issued and payments received, and that the current payment is now due. Funds hereby received will be used to pay herein listed items to the extent needed.

 Contractor

 Address

 By _____ Date _____

Subscribed and sworn to before me this

_____ day of _____, 2005

Notary Public:

My Commission Expires:

This document is not negotiable. It is payable only to the payee named herein and its issuance, payment and acceptance are without prejudice to any rights of the Owner or Contractor under their Contract.

STATE OF NORTH CAROLINA
 COUNTY SALES AND USE TAX REPORT
 SUMMARY TOTALS AND CERTIFICATION

CONTRACTOR: _____

Page 1 of _____

PROJECT: _____

FOR PERIOD: _____

	TOTAL FOR COUNTY OF:	TOTAL FOR COUNTY OF:	TOTAL FOR COUNTY OF:	TOTAL FOR COUNTY OF:	TOTAL FOR COUNTY OF:	TOTAL FOR COUNTY OF:	TOTAL ALL COUNTIES
CONTRACTOR							
SUBCONTRACTOR(S)*							
COUNTY TOTAL							

* Attach subcontractor(s) report(s)
 ** Must balance with Detail Sheet(s)

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of _____, 20____

 Signed

 Notary Public

My Commission Expires: _____

 Print or Type Name of Above

Seal

NOTE:
 This certified statement may be subject to audit.

SECTION 01039 - COORDINATION AND MEETINGS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and other Division 1 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Staking.
- C. Preconstruction conference.
- D. Progress meetings.
- E. Equipment electrical characteristics and components.
- F. Cutting and Patching.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various Sections of the Specifications in compliance with the requirements of the General Conditions to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing to, and placing in service, such equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 STAKING

- A. Engineer has provided base line reference control and staking plan and bench mark at the site. Engineer will stake one time some centerline alignments, all manholes, catch basins, clearing limits, erosion control and provide offset hubs and cut sheets. At the end of the project, the Engineer will provide as-builts.
- B. Confirm drawing dimensions and elevations.
- C. Establish elevations, lines, and levels from reference points, utilizing recognized engineering survey practices.

- D. During construction, furnish stakes and competent Engineer's helpers for checking elevations, lines, and levels deemed necessary by Engineer.

1.5 PRECONSTRUCTION CONFERENCE

- A. Owner will schedule a conference after Notice of Award.
- B. Attendance Required: Owner, Engineer, Contractor, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
 - 1. Submission of insurance certificates.
 - 2. Distribution of Contract Documents.
 - 3. Submission of list of Subcontractors, schedule of values, schedule of Shop Drawings and Sample Submittals, and progress schedule.
 - 4. Designation of personnel representing the parties in Contract, Engineer, and others as appropriate.
 - 5. Procedures and processing of field decisions, submittals, substitute and "or equals", applications for payments, Change Orders, and Contract closeout procedures.
 - 6. Scheduling.
 - 7. Use of premises by Owner and Contractor.
 - 8. Baseline staking and building offset layout.
 - 9. Security and housekeeping procedures.
 - 10. Procedures for testing.
 - 11. Procedures for maintaining record documents.
 - 12. Requirements for start-up of equipment.
 - 13. Inspection and acceptance of equipment put into service during construction period.
 - 14. Contractor's safety representative.
 - 15. Owner's safety policies and training.
- D. Engineer will record minutes and distribute copies within three working days after meeting to participants, and those affected by decisions made.

1.6 PROGRESS MEETINGS

- A. Engineer to schedule and administer meetings throughout progress of the Work at maximum monthly intervals or as otherwise deemed necessary by Owner or Engineer.
- B. Engineer to make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, give 72 hours prior notice.
- C. Attendance Required: Contract 1: Contractor's job superintendent and office representative managing job, major subcontractors and suppliers, Owner, Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.

13. Other business related to Work.

PART 2 EXECUTION

2.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new materials in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
- J. Identify hazardous substances or conditions exposed during the Work to the Engineer for decision or remedy.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and other Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Shop drawings
- D. Samples.
- E. Certificates.
- F. Manufacturer's instructions.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer accepted form.
- B. Identify Project, Contractor, Subcontractor or Supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- C. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of materials and equipment required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- D. Schedule submittals to expedite the Project, and deliver to Engineer at business address. Coordinate submission of related items.
- E. For each submittal for review, allow a minimum of 15 working days excluding delivery time to and from the Contractor.
- F. Identify variations from Contract Documents and material, equipment or system limitations which may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Engineer review stamps.
- H. When revised for resubmission, identify all changes made since previous submission.
- I. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Each Contractor to develop and maintain progress schedule in compliance with all of the General Conditions, and the following:
 - 1. Submit four copies of preliminary progress schedule at preconstruction conference.
 - 2. Revise and resubmit as required.
 - 3. Submit revised schedule with each Application for Payment, identifying changes since previous version.

4. Submit network analysis diagram using the critical path method, as outlined in Associated General Contractors of America (AGC) publication "The Use of CPM in Construction – A Manual for General Contractors and the Construction Industry".
5. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
6. Indicate estimated percentage of completion for each item of Work at each submission.

1.5 SHOP DRAWINGS

- A. Submit working drawings of piping; detail drawings of steel reinforcing, both bars and mesh, showing size and arrangement; details of machinery, apparatus and materials; dimensional drawings, ladder-type schematic diagrams, connection diagrams and other data for all electrically operated equipment, and all communication, instrumentation, control and related equipment; and layout drawings of the complete electrical work. Drawings shall designate the complete installation and shall be suitable for coordinating work of the various trades. As a minimum, Shop Drawings are required for those items as indicated in the Equipment and Material Shop Drawing List included at the end of Section 01600. Shop Drawings for additional items shall be submitted when deemed necessary by Engineer.
- B. Layout drawings for electrical work shall include all underground, concealed, and exposed conduits, and shall show locations and sizes of conduit runs, sizes and number of wires, pull and junction boxes, outlets, lighting fixtures, panelboards, motor starter switchboards, motor controls, switches, control stations, disconnects, etc., and will be used by Engineer to verify the location and size of conduit, wire and equipment. Layout drawings shall be submitted early. No work shall proceed until such drawings have been returned (with review stamp affixed) by Engineer.
- C. Shop Drawings shall include all information on electrical components and characteristics, appropriate curve data at various operating and efficiency levels, manufacturer's motor data sheets, hardware accessories. Electrical characteristics include electrical power supply required and electrical loading information. Shop Drawings will not be reviewed and returned until all such information is received.
- D. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Engineer. Shop Drawing submittals in the form of prints, such as piping layouts, steel reinforcing, structural steel, miscellaneous metals, electrical layouts, etc., at Contractor's option, may include two copies – one reproducible transparency and one opaque reproduction. The reproducible transparency will be returned with Engineer's comments noted. The use of reproducible transparencies is encouraged whenever possible.
- E. Contractor may utilize contract Drawings with necessary details marked thereon for electrical conduit layout drawings. However, the drawings must have Contractor's title block in lieu of Engineer's title block.
- F. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information specific to this Project.
- G. For factory primed and factory finished materials and equipment to be field painted, indicate coatings manufacturer and type; for completely factory finished materials and equipment not to be field painted, indicate coatings manufacturer and type, and include full range of manufacturer's standard colors for finish color selection by Owner.
- H. After review, distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 – Contract Closeout.

1.6 SAMPLES

- A. Submit Samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices, and, for finishes, submit Samples from the full range of

manufacturer's standard colors, textures, and patterns for Owner selection. Coordinate Sample submittals for interfacing work.

- B. Include identification on each Sample, with full Project information.
- C. Submit the number of Samples which the Contractor requires, plus two which will be retained by Engineer. Samples are required for those items as specified in individual Specifications Sections. Samples for additional items shall be submitted when deemed necessary by Engineer.
- D. Reviewed Samples which may be used in the Work are indicated in individual specification sections.
- E. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.7 CERTIFICATES

- A. When specified in individual specification section, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Engineer, in quantities specified for Shop Drawings.
- B. Indicate material or equipment conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or equipment but must be acceptable to Engineer.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. Submit one copy of manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing as received by Contractor to Engineer and a duplicate copy to the Owner.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01400 - QUALITY CONTROL

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and other Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Quality assurance – control of installation.
- B. Tolerances.
- C. References and standards.
- D. Testing services.
- E. Manufacturer's field services.
- F. Examination.
- G. Preparation.

1.3 QUALITY ASSURANCE – CONTROL OF INSTALLATION

- A. Monitor quality control over Suppliers, manufacturers, materials, equipment, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturer's instructions, including each step in sequence.
- C. Should manufacturer's instructions conflict with Contract Documents, manufacturer's instructions shall take precedence.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure materials and equipment in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of materials and equipment to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust materials and equipment to appropriate dimensions; position before securing in place.

1.5 REFERENCES AND STANDARDS

- A. For materials, equipment, or workmanship specified by association, trade, or other consensus standards, complies with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

- B. Conform to reference standard by date of issue current on date for receiving bids, except where a specific date is established by code.
- C. Obtain copies of standards where required by specification sections.
- D. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract nor those of the Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries.

1.6 TESTING SERVICES

- A. The Owner will appoint, employ, and pay for specified services of an independent firm to perform testing.
- B. The independent firm will perform tests and other services specified in design documents, individual specification sections and as required by the Engineer.
- C. Testing and source quality control may occur on or off the project site.
- D. Reports will be submitted by the independent firm to the Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm prior to expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- F. Contractor shall be responsible for, and shall pay for:
 - 1. Additional testing expenses resulting from Contractor's failure to advise Engineer and independent firm hours in advance of operations.
 - 2. Additional testing expenses resulting from changes in Contractor's schedule after independent firm has been notified that testing is required, canceled, or modified.
- G. Testing does not relieve Contractor to perform Work to contract requirements.
- H. Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Engineer. Payment for re-testing will be charged to the Contractor.

1.7 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual Specifications Sections, require material or equipment suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, and quality of workmanship as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- C. Prior to leaving the Project and for each visit, complete a Manufacturer's Service Representative's Report as included at the end of this Section. Copies of the Report will be available for use on the Project.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Divisions 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Temporary electric power and light.
 - 2. Telephone service.
 - 3. Sanitary facilities, including drinking water.
 - 4. Storm drainage.
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds. (Optional).
 - 2. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - 3. Environmental protection.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department, and rescue squad rules.
 - 5. Environmental protection regulations.
 - 6. Manual Uniform Traffic Control Devices
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.4 PROJECT CONDITIONS

- A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- B. Traffic Control: Contractor shall provide traffic control measures in accordance with NCDOT standard details, as shown on Construction Drawings, and in accordance with NCDOT regulations. All traffic control devices shall be in condition satisfactory to NCDOT personnel and Engineer for the intended use of the device.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the Engineer, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Water: Provide potable water approved by local health authorities.

2.2 EQUIPMENT

- A. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- B. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 - 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Engineer. Neither the Owner nor Engineer will accept cost or use charges as a basis of claims for Change Orders.
- B. Temporary Telephones: Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities.
 - 1. Provide mobile telephone for construction crew foreman.
- C. Sanitary facilities include temporary toilets and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
 - 1. Provide toilet tissue, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.
- D. Drinking-Water Facilities: Provide containerized, tap-dispenser, bottled-water drinking-water units, including paper supply.
- E. Temporary Drainage Provisions: Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Field Offices: Not required.
- B. Temporary Paving: Not required for temporary facilities.
- C. Construction Aids: Contractor for each Section shall furnish, install, maintain, and operate all construction aids required by him and his Subcontractors in the performance of the work, except as otherwise provided herein.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 - 1. Locate fire extinguishers where convenient and effective for their intended purpose.
 - 2. Maintain unobstructed access to fire extinguishers and other access routes for fighting fires.
- B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Security Enclosure and Lockup: Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
 - 1. Contractor shall take responsible measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the work.
 - 2. Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. When practicable, dusty materials in piles or in transit shall be covered to prevent blowing.
 - 3. Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No

- sediment, debris, or other substance will be permitted to enter sanitary sewers, and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.
- E. Traffic Control: Provide traffic control protection to traveling public and workers in accordance with NCDOT, and OSHA requirements. All traffic control operations shall be conducted in a method that will minimize impacts to the traveling public.
1. Contractor will be allowed to close the lane adjacent to the curb when work operations require work within the shoulder area.
 2. Contractor shall relocate temporary traffic control devices as work progresses along shoulder.
 3. Contractor shall remove temporary traffic control devices at the end of each days work operations. Temporary signs are to be laid face down or removed when not in use.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Unless the Engineer requests that it be maintained longer, remove each temporary facility when the need has ended, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the Contractor's property.
 2. Remove temporary roads not intended for or acceptable for integration into permanent use. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.

END OF SECTION 01500

SECTION 01600 - MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and other Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutes and “or equal” items.
- F. Equipment and Material Checklist.

1.3 PRODUCTS

- A. Do not use secondhand or salvaged materials and equipment whether removed from existing premises or from another source.
- B. Provide interchangeable components of the same manufacture for components being replaced.

1.4 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer’s instructions.
- B. Promptly inspect shipments to insure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer’s instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior of storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

- I. Provide lubricants and perform initial lubrication and all subsequent lubrication until Substantial Completion. Lubricants and lubrication shall be in accordance with equipment manufacturer's instructions.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming Manufacturers: Products of manufacturers named in the Specifications or included by Addenda as an "or equal" prior to receipt of Bids, no options or substitutions allowed except as permitted under following Article 1.7.

1.7 SUBSTITUTES AND "OR EQUAL" ITEMS

- A. Engineer will consider requests for substitute and "or equal" items after date of Owner-Contractor Agreement only if the specified item becomes unavailable through no fault of Contractor.
- B. Submit written application for use of substitute and "or equal" items. Written application shall be by completion of an APPLICATION FOR USE OF "OR EQUAL" ITEM or an APPLICATION FOR USE OF SUBSTITUTE ITEM, as applicable and as included at the end of this Section.

1.8 EQUIPMENT AND MATERIAL CHECKLIST

- A. Refer to EQUIPMENT AND MATERIAL SHOP DRAWING LIST below for items requiring shop drawings, manufacturer's start-up services, spare parts, and operation and maintenance manuals. Requirements over and above those included in the General Conditions and this and other Sections of Division 1 shall be as included in the individual specification sections.
- B. Equipment and Material Shop Drawing List:
 - a. Reinforced Concrete Pipe
 - b. Corrugated Aluminum Pipe
 - c. Precast Concrete Structures
 - d. Precast Concrete End Treatments
 - e. Frame, Grates, Ring & Cover
 - f. Asphalt Job Mix Formulas
 - g. Excelsior Matting
 - h. Guardrail
 - i. Guardrail End Treatments
 - j. Guardrail Anchor Units
 - k. Geotextile Fabric for Stabilization

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

PART 1 - Project Special Provisions

1. Section 01039 Page 2 1.4 Staking.

The Engineer will stake one time some centerline alignments, all catch basins, clearing limits, erosion control and provide offset hubs and cut sheets. Additional or restaking will be paid for or provided by the contractor.

2. N.C.D.O.T. Bond for Encroachment

The contractor shall post and pay for the necessary bonds for the project.

3. Section 03410 Precast Concrete Structures – Part 2 2.1 9.

The contractors precaster shall provide design, buoyancy calculations and shop drawings for each precast structure. The precast design shall be sealed by a North Carolina Registered Engineer.

4. General Provisions

North Carolina Department of Transportation Standard Specifications and Details shall be used should any items not be covered in these specifications. Should any item appear to be in conflict the more restrictive shall be used. The Engineer will make the final determination on any discrepancy.

5. E-Verify Background Checks

“Background Checks. The Contractor shall conduct or arrange to have conducted, at its own expense, checks on each of its employees, agents, ownership personnel, contract employees, subcontractors, materials suppliers or others who will engage in any service on or delivery of goods for this Project, to verify that those individuals may legally work in the United States and that they are not registered sex offenders. For the Contractor’s convenience, the required registry checks may be completed by accessing the United States Citizenship and Immigration Services ‘E-Verify’ website at <http://www.uscis.gov>. The Contractor shall provide certification that the registry checks were conducted on each of its contractual personnel providing services or delivering goods prior to commencement of such services or the delivery of such goods. The Contractor shall conduct a current initial check of the registries not more than 30 days prior to the start of Work. In addition, the Contractor agrees to conduct the registry checks and provide a supplemental certification before any additional contractual personnel are used to deliver goods or provide services pursuant to this Project. The Contractor further agrees to conduct annual registry checks of all contractual personnel and provide annual certifications at each Contract anniversary date. The Contractor shall not assign any individual to deliver goods or provide services for this Project if said individual is not legally eligible to work in the United States. The Contractor agrees that it will maintain all records and documents necessary to demonstrate that it has conducted a thorough check of the registries as to each contractual person, and agrees to provide such records and documents upon school system request. The Contractor specifically acknowledges that the Owner retains the right to audit these records to ensure compliance with this section at any time, at the Owner’s sole discretion. The Owner reserves the right to prohibit any contractual personnel of the Contractor from delivering goods or providing services relative to this Project if the Owner determines, in its sole discretion, that such contractual personnel may pose a threat to the safety or well-being of the public. Failure to comply with the terms of this provision shall be deemed a material breach of the Agreement.”

6. Guardrail

Contractor shall install guardrail at locations indicated on the design drawings. Guardrails shall conform to NCDOT standard detail 662.

8. Earthwork

1.1 EXCAVATION AND EMBANKMENTS

1. All areas shall be graded/filled to subgrade elevations as shown on the plans. Payment for excavation will be made at the contract lump sum price for Grading and will include all costs associated with the excavation, placement and hauling of the excavated material to the lines and grades as shown on the plans.
2. Embankment soils below subgrade shall be compacted to 95% maximum dry density as determined by a standard Proctor test (AASHTO T99). Embankment soils at subgrade shall be compacted to 100% maximum dry density as determined by a standard Proctor test.
3. Aggregate Base Course (ABC) shall be compacted to 100% maximum dry density as determined by AASHTO T180.
4. Only suitable material approved by the Engineer shall be used in the formation of embankments. Material shall be inorganic, free of debris, topsoil, weeds, sod and other unsuitable materials and shall be approved by Engineer. Fill material shall have a Plasticity Index of 25 or less.
5. All material placed in embankments shall be within 3% of the optimum moisture content for the soil. The contractor shall provide measures to dry or moisten the soil to within this range at no additional cost to the Owner.
6. All surfaces upon which an embankment is to be placed shall be thoroughly scarified prior to its placement. Embankment materials shall be deposited and spread in uniform horizontal layers not more than 8-inches deep. Each layer shall be thoroughly compacted by rolling with approved equipment before starting the next layer. All embankments shall be protected to prevent runoff from eroding the embankment. All slopes shall be track packed prior to seeding.

1.2 UNDERCUT EXCAVATION

1. Undercut excavation shall be defined as any excavation required by the Engineer to be removed below the subgrade elevation.
2. Should any areas require undercut excavation, the Contractor shall undercut such areas to a depth as directed by the Engineer. Such excavated material shall be measured by the Engineer and the volume determined by the average end method. Payment will be made at the contract unit price per cubic yard for all undercut excavation removed as directed by the Engineer. Undercut not verified by the Engineer is not eligible for payment.
3. No additional payment will be made for the fill material replacing the excavated area.
4. No additional payment will be made to dispose of the excavated materials off-site.
5. Payment for undercut will be made only one time. Any previously undercut area requiring additional undercutting or any area of fill previously placed by the contractor that requires undercutting shall be done so at the Contractor's expense.

1.3 PROOFROLLING

1. After the clearing, grubbing, stripping and excavation to grade has been completed and prior to placing new fill, the exposed subgrade shall be proofrolled with a loaded dump truck or similar pneumatic tire vehicle (minimum loaded weight of 30 tons to identify areas requiring surface repair).
2. The proofrolling shall consist of 2 complete passes of the equipment over the subgrade, with the second pass perpendicular to the first. Areas of the subgrade that rut or deflect excessively in the opinion of the Engineer shall be repaired.
3. The subgrade prior to placing ABC stone in all drive and parking areas shall be proofrolled as described in 1 & 2 above. After ABC stone has been placed, the stone base shall also be proofrolled. Any areas of the subgrade or stone base that run or excessively deflect shall be repaired.
4. Contractor shall proofroll the areas as many times as necessary to produce acceptable results. No additional payment will be made for proofrolling, since the work is considered incidental to the work being paid for under "Grading" and or "ABC Stone Base".

1.4 GEOTECHNICAL TESTING

1. The Owner will be responsible for testing of site during grading. The Owner may obtain the services of a geotechnical testing firm to monitor earthwork operations.

1.5 EROSION CONTROL

1. Erosion control measures shall be provided in accordance with the Erosion Control Plan. The Contractor shall be responsible for maintaining all temporary erosion control devices until the project is accepted by the Owner or the devices authorized to be removed by the Engineer.
2. Payment for erosion control devices will be paid for at the contract unit prices stated on the Bid Form for the actual number of units incorporated and accepted into the work.
3. Rip rap and stone used to construct silt basins, silt fence outlets, stone filter outlets, rock silt screens, temporary culvert equipment crossings, rip rap donut and gravel pipe inlet protection devices, stone check dams will be paid for at the contract unit price per ton "Clean Stone for Erosion Control Devices" and "Rip-Rap" incorporated and accepted into the work.
4. No additional payment for rip rap and clean stone installation at construction entrances as this material will be paid for as part of the bid item "Temporary Construction Entrance".
5. No additional payment will be made for excavation of accumulated sediment, filter fabric, maintenance of erosion control devices and removal of erosion control devices since the work is considered incidental to the work and is to be included in the unit price bid.
6. No additional payment will be made for the maintenance and removal of erosion control devices.
7. Any additional erosion control devices required to be implemented to prevent off-site sedimentation shall be immediately installed by the Contractor. Payment will be made at the contract unit prices or in accordance with an approved change order.

8. Any erosion control devices required to be installed to contain excess fill material disposed of on-site at a location authorized and approved by the Owner and Engineer, will be paid for under this paragraph.
9. Any erosion control devices required to be installed to contain excess fill material or other materials disposed of off-site will be at the Contractor's expense.
10. Any authorized representative of the NCDENR, Land Quality Section shall be granted entry or access to the site for the purposes of inspecting the site. In addition, the person shall not be obstructed, hampered or interfered with while he is in the process of carrying out his official duties.
11. Permanent vegetative cover shall be provided on all remaining disturbed areas and shall be planted in accordance with the seeding schedule shown on detail sheets.
12. The Contractor shall guarantee a stand of adequate ground cover (90% stand of grass planted) for 12 months upon completion of the project.
13. Any fines or penalties resulting from noncompliance with the erosion control plan shall be the responsibility of the Contractor and the Owner shall retain the funds from the Application for Payment to cover the cost of said fines or penalties.

9. Paving

1.1 ABC STONE BASE AND ASPHALT

1. ABC stone base and asphalt shall be installed in accordance with the NCDOT Standard Specifications for Roads and Structures.
2. Payment will be made at the contract unit price per ton for "ABC Stone Base", "Asphalt Intermediate Course Type I-19.0C" and "Asphalt Surface Course Type S9.5C" and will be full compensation for all work described in the NCDOT standard specifications.
3. Copies of all delivery tickets will be given to the Engineer and the Contractor will certify that the materials have been incorporated into the work. Payment will not be provided for stone without delivery tickets.
4. In the event quantities exceed the actual calculated tonnage by 10%, excluding undercut areas, Payment will not exceed 110% of the calculated tonnage.
5. Compaction shall meet NCDOT specifications and shall be field verified by the geotechnical engineer.

1.2 PAVEMENT MARKINGS

1. All pavement markings shall be installed in accordance with the NCDOT Standard Specifications for Roads and Structures and/or MUTCD.
2. Payment for pavement markings shall be paid for at the contract lump sum price bid and will be full compensation for all work described in the specifications.

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Divisions 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 3. Submit record drawings, damage or settlement surveys, property surveys, and similar final record information.
 - 4. Discontinue and remove temporary facilities from the site, along with construction tools, and similar elements.
 - 5. Complete final cleanup requirements.

- B. Inspection Procedures: On receipt of a request for inspection, the Engineer will either proceed with inspection or advise the Contractor of unfilled requirements. The Engineer will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Engineer will repeat inspection when requested and assured that the Work is substantially complete.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, endorsed and dated by the Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Engineer.
 - 4. Submit consent of surety to final payment (see attached sample at end of Section).
 - 5. Submit Contractor's Affidavit of Payment of Debts and Claims (see attached sample at end of Section).
 - 6. Submit Contractor's Affidavit of Release of Liens (see attached sample at end of Section).
 - 7. Submit a final liquidated damages settlement statement, if any.
 - 8. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Engineer.
 - 1. Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance. If the Work is incomplete, the Engineer will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 - 2. If necessary, reinspection will be repeated.

1.5 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 Engineer's reference during normal working hours.

- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints 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.
 - a. Show distance between centers of manholes to the nearest tenth of a foot.
 - b. Show centerline invert elevations to the nearest hundredth of a foot.
 - c. Show top elevation of manhole to nearest tenth of a foot.
 - d. Show vent elevation to nearest tenth of a foot.
 - e. Show correct stationing for manholes.
 - f. Show horizontal angles between manholes to the nearest quarter of a minute.
 2. Note related change-order numbers where applicable.
 3. 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 Engineer for the Owner's records.
- 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 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 Substantial 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 Engineer for the Owner's records.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. Remove waste, surplus materials, excess spoil, rubbish, erosion control measures and construction facilities from the site.
- B. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not waste excess unsuitable/suitable soil on the site without the permission of the Owner and Engineer. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

END OF SECTION 01700

**CONSENT OF
SURETY COMPANY
TO FINAL PAYMENT**

OWNER
ENGINEER
CONTRACTOR
SURETY
OTHER

PROJECT:
(name, address)

TO (Owner)

Γ

⌋

ENGINEER'S PROJECT NO.:

CONTRACT FOR:

L

J

CONTRACT DATE:

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(here insert name and address of Surety Company)

on bond of (here insert name and address of Contractor)

, SURETY COMPANY

, CONTRACTOR

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not
relieve the Surety Company of any of its obligations to (here insert name and address of Owner)

, OWNER,

as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
the Surety Company has hereunto set its hand this _____ day of _____ 20____

Surety Company

Signature of Authorized Representative

Title

Attest:
(Seal):

**CONTRACTOR’S
AFFIDAVIT OF
PAYMENT OF
DEBTS AND CLAIMS**

OWNER
ENGINEER
CONTRACTOR
SURETY
OTHER

TO (Owner)

┌

┐

ENGINEER’S PROJECT NO.:

CONTRACT FOR:

CONTRACT DATE:

└

┘

PROJECT:
(name, address)

State of:

County of:

The undersigned, pursuant to the General Conditions of the Construction Contract; hereby certifies that, except as listed below, Contractor has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write “None”. If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

SUPPORTING DOCUMENTS ATTACHED HERETO:

- 1. Consent of Surety to Final Payment.
- 2. Contractor’s Affidavit of Release of Liens.

The following supporting documents should be attached hereto if required by the Owner:

- 1. Contractor’s Release or Waiver of Liens, conditional upon receipt of final payment.

CONTRACTOR:

Address

BY:

Subscribed and sworn to before me this
day of , 20

Notary Public:

My Commission Expires:

**CONTRACTOR’S
AFFIDAVIT OF
RELEASE OF LIENS**

OWNER
ENGINEER
CONTRACTOR
SURETY
OTHER

PROJECT:
(name, address)

TO (Owner)

┌

┐

ENGINEER’S PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

└

┘

State of:

County of:

The undersigned, pursuant to the General Conditions of the Construction Contract; hereby certifies that to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of work, labor or services who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write “None”. If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

SUPPORTING DOCUMENTS ATTACHED HERETO:

- 1. Contractor’s Release or Waiver of Liens, conditional upon receipt of final payment.

CONTRACTOR:

Address:

BY:

Subscribed and sworn to before me this
day of 20

Notary Public:

My Commission Expires:

SECTION 02010 - SUBSURFACE INVESTIGATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Soils investigation report.
 - 1. **No report has been prepared.**
- B. Use of data:
 - 1. Bidders should visit the site and acquaint themselves with existing conditions.
 - 2. Prior to bidding, bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but such investigations may be performed only under time schedules and arrangements approved in advance by the Owner and Engineer.

1.2 QUALITY ASSURANCE

- A. A soil engineer will be retained by the Owner to observe performance of work in connection with excavating, trenching, filling, backfilling, and grading, and to perform compaction tests.
- B. Contractor will be responsible for costs associated with retesting by the Soil Engineer.
- C. Readjust work performed that does not meet technical or design requirements, but make no deviation from the Contract Documents without specific and written approval from the Engineer.

END SUBSURFACE INVESTIGATION

SECTION 02230 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Existing Utilities.
 - 2. Clearing and grubbing.
 - 3. Pavement removal.

- B. Related Sections include the following:
 - 1. Division 1 Section "Measurement and Payment" for schedule of unit prices.
 - 2. Division 1 Section "Construction Facilities and Temporary Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
 - 3. Division 2 Section "Trenching for Utilities" for soil materials, excavating, backfilling, trenches and grading the easement areas.
 - 4. Division 2 Section "Lawns and Grasses" for finish grading, including placing and preparing topsoil for lawns and planting.
 - 5. Division 2 Section "Erosion Control" for temporary erosion control measures.

1.3 MATERIALS OWNERSHIP

- A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.

- B. Locate and clearly flag trees and vegetation to remain.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Engineer or Owner of property if damage occurs outside easements shown on drawings.

3.2 EXISTING UTILITIES

- A. The contractor shall be responsible for making a field inspection of existing utilities prior to the bid opening. The Contractor shall be responsible for any damage to existing utilities resulting from his work. Approximate locations are shown on the plan view of each sheet.
- B. The contractor shall excavate and expose all existing underground lines in advance of trenching operations to assure that there will be no conflicts with the proposed grade and alignment. All water and sewer connections damaged during construction shall be repaired by the Contractor at no additional cost to the Owner.
- C. The contractor shall comply with the Underground Damage Prevention Act, G.S. Chapter 87.

3.3 CLEARING AND GRUBBING

- A. The work of clearing and grubbing shall consist of the cutting, removal and satisfactory disposal of all vegetation and surface debris within the temporary easement as shown on the plans.
 - 1. Trees inside the temporary construction easement but outside the permanent easement will not be required to be removed. The contractor may at his option leave in place a tree which in contractor's opinion will not interfere with trench excavation or backfilling operations. If tree is damaged to an extent as to destroy the value for shade or other landscaping purposes the tree shall be removed and disposed of by contractor without additional compensation, when so directed by the Engineer.
- B. Clearing and grubbing operations shall be completed sufficiently in advance of trenching operations as may be necessary to prevent any of the debris from clearing and grubbing operations from interfering with the trench excavation or backfilling operations.
- C. All work shall be performed in a manner which will cause a minimum of soil erosion. The contractor shall perform such erosion control work, temporary or permanent as may be directed by the Engineer, in order to satisfactorily minimize erosion resulting from clearing and grubbing operations.
- D. The contractor shall conduct his operations in a manner to prevent limb, bark, or root injuries to trees, shrubs, or other types of vegetation that are to remain growing and also to prevent damage to adjacent property. When any such injuries unavoidably occur, all rough edges of scarred areas shall first be made reasonably smooth in accordance with generally accepted horticultural practice, and the scars then thoroughly covered with an asphaltum base tree paint. Any such plants that are damaged by any construction operations to such an extent as to destroy their

value for shade or other landscape purposes shall be cut and disposed of by the contractor, without extra compensation, when so directed by the Engineer.

- E. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding 8-inch loose depth, and compact each layer to a density equal to adjacent original ground.

3.4 PAVEMENT REMOVAL

- A. Remove existing above- and below-grade improvements as directed and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. All pavement to be removed shall be marked for cutting by chalk line or other acceptable method. After marking, bituminous pavement shall be cut to its full depth to a neat and true line along the mark. Concrete pavement shall be sawed to a minimum depth necessary for a smooth cut when broken out. Saw-cut faces vertically.

3.5 DISPOSAL

- A. Disposal: Surplus soil material, unsuitable soil and excess topsoil shall be wasted onsite until all onsite wasting options have been exhausted. The contractor shall receive permission from the Engineer prior to hauling material offsite. Obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's easement at no additional cost to the Owner.

END OF SECTION 02230

SECTION 02240 - DEWATERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes construction dewatering.
- B. Related Sections include the following:
 - 1. Division 1 Section "Construction Facilities and Temporary Controls."
 - 2. Division 2 Section "Trenching for Utilities" for excavating, backfilling, and site grading.
 - 3. Division 2 Section "Excavation Support and Protection."

1.3 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, provide, test, operate, monitor, and maintain a dewatering system of sufficient scope, size, and capacity to control ground-water flow into excavations and permit construction to proceed on dry, stable subgrades.
 - 1. Work includes removing dewatering system when no longer needed.
 - 2. Maintain dewatering operations to ensure erosion is controlled, stability of excavations and constructed slopes is maintained, and flooding of excavation and damage to structures are prevented.
 - 3. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 4. Accomplish dewatering without damaging existing buildings adjacent to excavation.

1.4 PROJECT CONDITIONS

- A. Regulatory Requirements: Comply with water disposal requirements of authorities having jurisdiction.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by the Owner or others unless permitted in writing by the Engineer and then only after arranging to provide temporary utility services according to requirements indicated.

PART 2 PRODUCTS (Not Applicable)

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 created by earthwork operations.
 - 1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
 - 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

3.2 DEWATERING

- A. Provide an adequate system to lower and control ground water to permit excavation, pipe installation, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of sewers, and other excavations.
 - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
- B. Dispose of water removed from excavations in a manner to avoid endangering public health, property, and portions of work under construction or completed. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- C. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

END OF SECTION 02240

SECTION 02260 - 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 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes excavation support and protection systems.
- B. Related Sections include the following:
 - 1. Division 1 Section "Construction Facilities and Temporary Controls."
 - 2. Division 2 Section "Trenching for Utilities" for excavating and backfilling.

1.3 PERFORMANCE REQUIREMENTS

- A. Design, provide, monitor, and maintain an anchored and braced excavation support and protection system capable of resisting soil and hydrostatic pressure and supporting sidewalls of excavations.
 - 1. Work includes removing excavation support and protection systems when no longer needed.
 - 2. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 3. Install excavation support and protection systems without damaging existing buildings, pavements, and other improvements adjacent to excavation.

1.4 SUBMITTALS

- A. Shop Drawings: An excavation support and protection system for excavations which exceed Fifteen (15') feet in depth shall be prepared by or under the supervision of a qualified professional engineer. System design and calculations must be acceptable to authorities having jurisdiction.

1.5 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by the Owner or others unless permitted in writing by the Engineer and then only after arranging to provide temporary utility services according to requirements indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials need not be new but must be in serviceable condition.
- B. Structural Steel: ASTM A 36 (ASTM A 36M).
- C. Steel Sheet Piling: ASTM A 328 (ASTM A 328M) or ASTM A 572 (ASTM A 572M)
- D. Wood Lagging: Lumber, mixed hardwood, nominal rough thickness of 3 inches.

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.
- C. Locate excavation support and protection systems clear of permanent construction and to permit forming and finishing of concrete surfaces.
- D. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure excavation support and protection systems remain stable.
- E. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.2 REMOVAL AND REPAIRS

- A. Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils and 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.
 - 2. Repair or replace, as approved by Engineer, adjacent work damaged or displaced by removing excavation support and protection systems.

END OF SECTION 02260

SECTION 02321 – TRENCHING AND EXCAVATING FOR UTILITIES AND STRUCTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Excavating and backfilling for trenches and/or structures.
- B. Related Sections include the following:
 - 1. Division 1 Section "Measurement and Payment" for a schedule of unit prices.
 - 2. Division 1 Section "Construction Facilities and Temporary Controls."
 - 3. Division 2 Section "Site Clearing" for site stripping, grubbing, removing topsoil, and protecting trees to remain.
 - 4. Division 2 Section "Dewatering" for lowering and disposing of ground water during construction.
 - 5. Division 2 Section "Excavation Support and Protection."
 - 6. Division 2 Section "Rock Excavation" for removal of rock and backfilling trench.
 - 7. Division 2 Section "Lawns and Grasses" for seeding and mulching disturbed areas.
 - 8. Division 3 Section "Cast-in-Place Concrete" for concrete placement.

1.3 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe, or beside a structure to 3 ft. above bottom of excavation.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench or pit.
- B. Bedding Course: No bedding course shall be required for this project.
- C. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
- D. Classification of Excavated Materials: No classifications of excavated materials will be made except for Rock Excavation as defined in Division 2 of these specifications. Excavation and trenching work shall include the removal and subsequent handling of all materials excavated or otherwise removed in the performance of the contract work, regardless of the type, character, composition, or condition thereof.

- E. Fill: Soil materials used to raise existing grades.

1.4 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than five days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Traffic: Do not interfere with or close public or private roadways or driveways without permission of governing authorities. Work within the rights-of-way of public roadways shall be done in accordance with requirements and provisions of the permits issued by the agencies for the construction within their respective rights-of-way.
- C. If materials are encountered that are suspected of being hazardous or toxic, the Contractor shall notify the Engineer immediately. If hazardous or toxic materials are present, the Engineer will issue a work change directive in accordance with Division 1 "Modification Procedure".

PART 2 - PRODUCTS

2.1 FILL MATERIALS

- A. Earth Backfill: Excavated earth material free of cinders, frozen materials, ashes, refuse, boulders, rocks or organic materials. Rocks three (3") inches or larger shall be excluded from the backfill for at least three (3') feet above the top of pipe. Boulders and stone with a dimension of eight (8") inches shall be excluded from all backfill.
- B. Granular Backfill: Gravel or crushed stone meeting the requirements of Section 1005 of the North Carolina Department of Transportation Standard Specifications for Roads and Structures, latest edition. Standard size shall be #57 unless otherwise noted on the plans or contract documents.

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 created by trenching operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways. Comply with approved erosion control plan and make necessary repairs, corrections, etc. within 5 days after each rainfall event. Should the site come under any order of the Land Quality Section, the

contractor shall take all immediate efforts to put the site into full compliance within the time period specified in such order.

- C. Provide barricades, warning signs, and warning lights around open excavations as necessary to prevent injury to persons.
- D. The Contractor is solely responsible for determining the potential for injury to persons and damage to property and for executing the work to prevent injury and damage.
- E. Do not allow excavation subgrades and soil to be subjected to freezing temperatures, frost or excessive water.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding within easement limits, and from flooding Project site and surrounding areas.
- B. Protect work area 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. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.
- C. If trench bottom soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with stabilization stone. No separate payment will be made for stabilization stone.
- D. Water shall be disposed of in a manner as not to be a menace to the public health and in accordance with applicable local regulations and State Environmental Protection Division standards and permits.

3.3 EXPLOSIVES

- A. Explosives: The Contractor shall assume sole responsibility for the effects of explosives and comply with the requirements of "Rock Excavation" of these specifications.

3.4 EXCAVATION, GENERAL

- A. General: Excavation includes the removal of any materials necessary to achieve the required elevations and includes:
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Unnecessary Excavation: The expense of materials outside of limits indicated shall be borne by the Contractor.

3. Approval of Subgrade: The adequacy of the subgrade shall be subject to the inspection and approval of the Engineer before installation of the pipeline or structures.

3.5 EXCAVATION FOR STRUCTURES

- A. 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.
 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

3.6 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide a working 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 on each side of pipe or conduit.
- C. Trench Bottoms: Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade. Hand excavate for bell of pipe.
 1. Unsuitable Subgrade: Where unsuitable materials are encountered below the excavation limits, they shall be removed and disposed of to the level of suitable material. Areas so excavated shall be backfilled with stabilization stone.
 2. Trench Length: The Contractor shall not have open in excess of two hundred (200') feet of trench at any one time.

3.7 STORAGE OF SOIL MATERIALS

- A. Contractor may stockpile excess backfill material in areas acceptable to the engineer and Contractor provided stockpile has adequate erosion control devices to prevent off-site sedimentation. The stockpile is to be located such that surface water will drain away from stockpile. Contractor shall be responsible for removing any excess soil from stockpile not incorporated into the project at no additional cost to the Owner. If soil is placed on pavement, provide 2" of rock dust over pavement prior to placing soil. No additional payment will be made for this material.

3.8 UTILITY TRENCH BACKFILL

- A. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- B. After the pipe is installed, earth backfill shall be placed evenly and carefully around and over the pipe to assure that backfill material is distributed properly and to maintain the proper grade and alignment. Rocks three (3") inches or larger shall be excluded from backfill for at least three (3') feet above the top of pipe. Boulders and stone with dimensions greater than eight (8") inches shall be excluded from the backfill.
- C. Fill voids with approved backfill materials while shoring and bracing, and as sheeting is removed.
- D. Place and compact final backfill of satisfactory soil material to match existing grade on either side of trench.

3.9 COMPACTION OF BACKFILLS AND FILLS

- A. Place backfill and fill materials in uniform 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.
- B. Compact soil to not less than the following percentages of maximum dry unit weight according to AASHTO T99 and AASHTO T180, as appropriate:
 - 1. Embankments below subgrade: Compact to at least 95% of the maximum dry density. Twelve (12") inches of pipe subgrade and subsequent lifts: 90 percent.
 - 2. Embankment Subgrade: Compact to at least 100% of the maximum dry density.
 - 3. Aggregate Base Course (ABC): Compact to at least 100% of the maximum dry density.
- C. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within ± 3 percent of optimum moisture content in sidewalk and all other paved areas.
- D. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

3.10 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes and to prevent ponding. Comply with compaction requirements and grade to provide a smooth transition between adjacent existing grades.

3.11 FIELD QUALITY CONTROL

- A. The Engineer, or a representative of his choosing, will observe compaction methods and techniques while backfilling is in progress.
- B. The Contractor will allow the testing agency to inspect backfill layers. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved Areas or around structures: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of paved area, but in no case fewer than three tests.
 - 2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 500 feet or less of trench length, but no fewer than two tests.
- D. When testing agency reports that fills or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
- E. The Owner will pay for all initial tests and proctors; however, cost of retests will be paid by the Contractor.

3.12 PROTECTION AND MAINTENANCE

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- 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 Engineer; reshape and recompact.
- C. Where settling occurs before Project warranty period elapses, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.13 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's easement at no additional cost to the Owner.
- B. Contractor shall dispose of excess waste material to a site having an approved erosion control plan and current permit from either a local agency having jurisdiction or from NCDENR, Land Quality Section. If site does not have an approved plan and current permit, then Contractor shall be responsible for preparing plan and obtaining permit. Payment of any fees will be paid by the Contractor.

END OF SECTION 02321

SECTION 02322 - ROCK EXCAVATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the drilling, blasting, excavating, removing and disposing of rock from trenches or pits and includes the backfill replacement material.
- B. Related Sections include the following:
 - 1. Division 1 Section "Measurement and Payment" for a schedule of unit prices.
 - 2. Division 2 Section "Trenching For Utilities" for excavating, backfilling and shaping.
 - 3. Division 2 Section "Dewatering" for lowering and disposing of ground water during construction.
 - 4. Division 2 Section "Excavation Support and Protection."

1.3 DEFINITIONS

- A. Rock Excavation: Solid, ledge rock in place which in the opinion of the Engineer, cannot be removed practically without the use of drilling and blasting.
 - 1. Rock excavation includes removal and disposal of solid rock, boulders over 1/2 cu. yd., ledge rock, rock-hard cementitious deposits and other materials or obstructions which cannot be dislodged and excavated with modern, heavy-duty, track-mounting excavating equipment defined as follows:
 - a. For trenches less than 10' in width or pits in excess of 20' in either length or width: Caterpillar Model 335 or equivalent hydraulic excavator.
 - b. Materials which can be removed with the above specified equipment will not be considered as rock and no extra payment will be allowed for such removal.
- B. Replacement Material: Soil material to be used to replace excavated rock material.
 - 1. Material stockpiled from utility trench operations suitable for use as backfill material.
 - 2. Satisfactory soil material imported from off-site for use as backfill material.

1.4 PROJECT CONDITIONS

- A. The Contractor will select an independent, qualified blasting consultant to inspect the blast site and any structures within a 1,000-foot radius of the blasting location. The consultant shall provide sufficient written and photographic documentation to accurately reflect the pre-blast condition of the structure.
- B. Provide vibration-recording instruments to record peak particle velocity (2.0 inches per second maximum allowable), air overpressure (133 decibels maximum allowable) and frequency (15-hertz minimum allowable).
- C. A post-blast inspection shall be performed upon the completion of blasting.

1.5 CONSTRUCTION REQUIREMENTS

- A. The Contractor shall obtain a blasting permit, prior to performing any blasting operations.
- B. The approval of the Engineer shall be obtained before any blasting of rock takes place. The Engineer may fix the hours of blasting if he deems it necessary. The Contractor shall conduct a pre-blast survey and provide the report to the City of Graham and the Engineer.
- C. All applicable Federal, State, and Local regulations pertaining to transporting, storing, and using explosives shall be met.
- D. The Contractor shall take all necessary precautions to protect life and property while engaged in blasting operations. Where there exists the danger of rock or overburden being thrown by a blast, an approved type of blasting mat shall be used. The Engineer will approve the blasting mat for type of construction but not for adequacy. No blasting will be allowed unless a galvanometer is used to check cap circuits.
- E. The blasting consultant shall provide vibration recording instruments for use on the initial shots and any other places within one thousand feet (1,000') of a utility, structure, or property which could be damaged by vibration, concussion, or falling rock, the Contractor shall be required to keep a blasting log containing the items listed in Item "G" below in order to determine/verify proper blasting procedures. The Contractor shall provide the Engineer a copy of the monitoring report for the Engineer's file. These instruments shall be of the type which records on direct reading tape the three components of velocity.
- F. Overpressure (concussion) shall be recorded on direct recording tape on equipment specifically designed for impact-type overpressure from blasting.
- G. The blasting consultant shall maintain an accurate log of each shot, listing as a minimum the following data:
 - 1. Date.
 - 2. Time.
 - 3. Weather conditions including temperature and humidity.
 - 4. Station number or other reference to base line survey data.
 - 5. Manufacturer and type of explosive.
 - 6. Method of detonation.
 - 7. Total weight of explosive per shot.
 - 8. Number of delays.
 - 9. Number of holes.

10. Hole depth.
11. Depth to surface of rock (if unexposed during drilling).
12. Amount of explosive per hole number.
13. Total weight of explosive per delay.
14. Amount of stemming.
15. Type and amount of blast matting.
16. A sketch of the hole pattern, with hole numbers for each shot.

This blasting log shall be made available to the Engineer upon request and shall be kept in an orderly manner. Compliance of the contractor with these specifications does in no way relieve him of legal liabilities relative to blasting operation. All blasting operations will be conducted in strict accordance with existing ordinances and accepted safe practices relative to the storage and use of explosives.

- H. All blasting operations will be conducted in such a manner to control the effect on the surrounding area. The following limits will be used for all blasting:

Maximum Allowable Peak Particle Velocity:	2.0 inches per second
Maximum Allowable Air Overpressure:	133 decibels
Minimum Allowable Frequency:	15 hertz

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TRENCH OR PIT WIDTH

- A. Pipe or structure clearance in rock shall be a minimum of 6 inches below the grade line of the pipe or structure and 12 inches on each side of the nominal diameter of the pipe or structure. Additional excavation outside these limits for excavation required to comply with OSHA regulations or to install shoring, bracing or trench box shall not be considered in computation of rock quantities.

3.2 REPLACEMENT MATERIAL

- A. The Contractor shall provide replacement material either from previously stockpiled trench excavation materials or borrow material to bring the trench to grade as well as backfill over and around the pipe or structures as specified in Division 2, Section "Trenching for Utilities" and such cost will be included in the unit price bid for rock excavation.

PART 4 – BASIS OF PAYMENT

- A. Measurement of rock will be on a cubic yards basis as verified by the engineer.
- B. Underruns or overruns of estimated contract quantities shall not be the basis for any claims made by the contractor against the owner or Engineer and the contract unit price and payment will be full compensation for all work covered by this article regardless of the quantity of actual rock excavation encountered, including replacement material.

END OF SECTION 02322

SECTION 02511 – ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Hot-mix asphalt paving.
- B. Related Sections include the following:
 - 1. Division 2 Section "Trenching for Utilities" for aggregate subbase and base courses and aggregate pavement shoulders.

1.3 SUBMITTALS

- A. The Contractor shall, upon request from the Owner, submit the job mix formula to be used on the project, along with documentation from the asphalt supplier certifying that the materials used in the asphaltic concrete conform to the applicable NCDOT standards.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed hot-mix asphalt paving similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Manufacturer Qualifications: Engage a firm experienced in manufacturing hot-mix asphalt similar to that indicated for this Project and with a record of successful in-service performance.
 - 1. Firm shall be a registered and approved paving mix manufacturer with NCDOT.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall conform to the requirements of NCDOT Standard Specifications for Roads and Structures, latest edition.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed

loads.

- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

3.2 PATCHING AND REPAIRS

Patching: Saw cut perimeter of patch and excavate existing pavement section to sound base. Recompact new subgrade. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically.

1. Tack coat faces of excavation and allow to cure before paving.
2. Fill excavation with dense-graded, hot-mix asphalt base mix and, while still hot, compact flush with adjacent surface.
3. Partially fill excavation with dense-graded, hot-mix asphalt base mix and compact while still hot. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

3.3 SURFACE PREPARATION

General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

3.4 PAVEMENT THICKNESS

- A. Hot-mix asphalt mix shall be placed as follows:

1. Asphalt Pavement:
 - a. Base Course: I19.0C base = 4.0 inches
 - b. Surface Course: S9.5C surface = 3.0 inches

3.5 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted.

1. Place hot-mix asphalt base course in single lift.
2. Place hot-mix asphalt surface course in two 1.5" lifts.

- B. Place hot-mix asphalt in accordance with applicable NCDOT Standard Specifications for Roads and Structures, latest edition.

3.6 COMPACTION

- A. Compact hot-mix asphalt in accordance with applicable NCDOT Standard Specifications for Roads and Structures, latest edition.
- B. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

3.7 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Base Course: Plus or minus 1/2 inch.
 - 2. Surface Course: Plus 1/4 inch, no minus.

- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: Plus or minus 1/2 inch.
 - 2. Surface Course: Plus 1/4 inch, no minus.

3.8 FIELD QUALITY CONTROL

- A. The Engineer will observe paving installation while in progress. If in the opinion of the Engineer the paving and/or patching installation is not in compliance with these specifications, then the Engineer may engage the services of a qualified independent testing agency to perform compaction testing.
 - 1. If testing meets or exceeds specifications, the Owner will pay for testing.
 - 2. If testing fails to meet specifications, then Contractor will pay for any additional tests to confirm project compliance.

- B. All testing will be in accordance with applicable NCDOT requirements.

- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.

- D. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 02511

SECTION 02630 - STORM DRAINAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes storm drainage piping for culvert crossings.
- B. Related Sections include the following:
 - 1. Division 1 Section "Measurement and Payment" for a schedule of unit prices.
 - 2. Division 2 Section "Trenching for Utilities".
 - 3. Division 2 "Dewatering".
 - 4. Division 2 "Excavation Support and Protection".

1.3 SUBMITTALS

- A. Product Data: Reinforced Concrete Pipe (RCP)
PreCast Concrete Storm Drainage Structures
Corrugated Aluminum Pipe (CAP)
Rip-Rap

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect pipe and seals from dirt and damage.

PART 2 - PRODUCTS

2.1 REINFORCED CONCRETE PIPE (RCP)

- A. All reinforced concrete pipe and shall meet the requirements of AASHTO M170 for Class III RCP, unless otherwise noted.
- B. Joint materials shall be flexible plastic and meet the requirements of AASHTO M198 for Type B flexible plastic gaskets.

2.2 PRECAST CONCRETE STORM DRAINAGE STRUCTURES

- A. Precast concrete storm drainage structures shall comply with current NCDOT standards and Section 03410 – Precast Concrete Structures.

2.3 CORRUGATED ALUMINUM PIPE (CAP)

- A. Corrugated aluminum pipe shall be made of aluminum alloy in accordance with AASHTO M197 or ASTM B744. The pipe shall be a minimum of 8 gage pipe manufactured in accordance with applicable requirements of AASHTO M196 or ASTM B745 for Type 1 pipe.

2.4 RIP RAP

Stone for Rip Rap shall be of a hard, durable nature and shall be placed as shown on the drawings or as directed by the Engineer. All stone shall meet the approval of the Engineer and shall be of the following classes:

- (1) Class A Rip Rap. Stone shall vary in size from 2" to 6".
- (2) Class B Rip Rap. Stone shall vary in size from 5" to 15".
- (3) Class 1 Rip Rap. Stone shall vary in weight from 5 to 200 pounds and 30% shall weigh a minimum of 60 pounds and no more than 10% shall weigh less than 15 pounds.
- (4) Class 2 Rip Rap. Stone shall vary in weight from 25 pounds to 250 pounds. 60% shall weigh a minimum of 100 pounds and no more than 5% shall weigh less than 50 pounds.

All rip rap shall be in accordance with NCDOT specifications.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavating, trenching, and backfilling are specified in Division 2 Section "Trenching for Utilities."

3.2 INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take design considerations into account. Install piping as indicated, to extent practical.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals according to manufacturer's written instructions and other installation requirements.
- C. Comply with Division 2 "Trenching for Utilities" requirements for excavating and backfilling storm sewer pipes.
- D. Pipe installation shall comply with NCDOT Standard Specifications for Roads and Structures, latest edition.
- E. Install rip rap at inlet and outlet of storm sewer pipes to the lengths, depths and widths indicated on the plan or as directed by the Engineer.

3.3 FIELD QUALITY CONTROL

- A. Clear interior of piping and structures of dirt and superfluous material as work progresses.
 - 1. In large, accessible piping, brushes and brooms may be used for cleaning.
 - 2. Flush piping between manholes and other structures to remove collected debris, if required by authorities having jurisdiction.
- B. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after backfill is in place, and again at completion of Project.
 - 1. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Crushed, broken, cracked, or otherwise damaged piping.
 - 2. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 - 3. Reinspect and repeat procedure until results are satisfactory.

END OF SECTION 02630

SECTION 02825 - LAWNS AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Ground Preparation.
 - 2. Furnishing and applying lime and fertilizer.
 - 3. Seeding and mulching.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Measurement and Payment" for schedule of unit prices.
 - 2. Division 2 Section "Site Clearing" for protection of existing trees and planting, topsoil stripping and stockpiling, and site clearing.
 - 3. Division 2 Section "Trenching for Utilities".

1.3 SUBMITTALS

- A. Certification of grass seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver seed, limestone and fertilizer in original sealed, labeled, and undamaged containers. Store in dry containers and in accordance with manufacturer's recommendations.

1.5 COORDINATION AND SCHEDULING

- A. The Contractor shall seed and mulch all disturbed areas within 2 weeks after the trench has been installed and the trench backfilled. Where ingress and egress routes require utilization of an area where the trench has been backfilled a ten (10') foot wide strip on the high side of the easement may remain unseeded. Once the ingress and egress location is no longer required for access, unseeded strip shall be seeded and mulched within 14 calendar days.
- B. 3H:1V slopes longer than 50' and slopes steeper than 3H:1V shall be seeded and mulched within 1 week after grading is completed, or when work is interrupted for 30 working days or more.

PART 2 – PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with the Association of Official Seed Analysts' "Rules for Testing Seeds" for purity and germination tolerances.

2.2 LIME

- A. Lime: Commercial grade agricultural limestone in the form of dolomitic limestone.

2.3 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-form, phosphorous, and potassium in the following composition:

- 1. Composition: 10 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

2.4 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat.
- B. Fiber Mulch: Biodegradable dyed-wood cellulose-fiber mulch, nontoxic, free of plant growth- or germination-inhibitors, with maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application, nontoxic and free of plant growth- or germination-inhibitors. Minimum tack rate is 10#/1,000 sq. ft.

2.5 EROSION-CONTROL MATERIALS

- A. Blankets: Biodegradable wood or straw, or fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.
 - 1. North American Green S150 or equal.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive seeding for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 GROUND PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

- B. Limit subgrade preparation to areas that will be planted in the immediate future.
- C. Loosen subgrade to a minimum depth of 4 inches by plowing, disking and harrowing until these areas are friable and well pulverized. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter detrimental to final grading, proper bonding or the proper growth of the planting. If the prepared surface becomes eroded as a result of rain or for any other reason, or becomes crusted before the seed is sown, the surface shall again be placed in a condition suitable for seeding.

3.3 LIME APPLICATION

- A. After the area to be seeded has been brought to finished grade, lime shall be uniformly distributed at a rate of 4,000 pounds per acre over the seeding area with a mechanical spreader.

3.4 FERTILIZER APPLICATION

- A. Commercial fertilizer grade 10-10-10 shall then be distributed uniformly at the rate of 1,000 pounds per acre and shall be uniformly mixed with the soil to a depth of at least 4 inches by disking, harrowing or by other methods acceptable to the Engineer.
- B. Fertilizer shall not be applied when the wind makes it difficult to get satisfactory distribution.

3.6 SEEDING

- A. The seed shall be a mixture as shown in the table below, and shall be applied at the rates shown in the table:

<u>Season</u>	<u>Kinds of Seed</u>	<u>Pounds Per Acre</u>
November 1 - January 31	Tall Fescue	100
	Rye (Grain)	50
February 1 - April 30	Tall Fescue	80
	Bluegrass	60
May 1 - July 31	Tall Fescue	70
	Weeping Lovegrass	20
August 1 - October 31	Tall Fescue	100
	Sudan Hybrid	50

The seed shall be uniformly sown by approved mechanical power drain drills, or in small areas, by mechanical hand seeders. The seeds shall be covered and compacted to a depth of 1/8 to 1/2 inch by means of a cultipacker and an empty traffic roller or another roller weighing less than 3 tons. Broadcast seeding shall not be done when the wind makes it difficult to get satisfactory distribution.

3.6 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Mix slurry with nonasphaltic tackifier.
 - 2. Apply slurry uniformly to all areas to be seeded in a 1-step process. Apply mulch at the minimum rate of 1500 lb per acre (16.5 kg per 100 sq. m) dry weight but not less than the rate required to obtain specified seed-sowing rate.
 - 3. Apply slurry uniformly to all areas to be seeded in a 2-step process. Apply first slurry application at the minimum rate of 500 lb per acre (5.5 kg per 100 sq. m) dry weight but not less than the rate required to obtain specified seed-sowing rate. Apply slurry cover coat of fiber mulch at a rate of 1000 lb per acre (11 kg per 100 sq. m).

3.7 MOISTURE

Seed shall not be sown unless the soil has the optimum moisture content or more through a depth of at least 4 inches, nor shall it be sown when there is frost in the ground. The Owner has the authority to postpone seeding at any time when weather and moisture conditions are not favorable.

3.8 MULCH

All areas to be seeded shall be uniformly mulched in a continuous blanket immediately after seeding using Wheat straw at a minimum of 2 1/2 tons per acre. The rate of application will correspond to a depth of at least one inch and not more than one and one half inches, according to the texture and moisture content of the mulch material. It is intended that mulch shall allow some sunlight to penetrate and air to circulate, at the same time shading the ground, reducing erosion and conserving soil moisture. The Contractor shall take steps necessary to prevent loss of mulch or bunching of mulch as caused by the wind. All mulch shall be tacked per DOT standards.

3.9 MAINTENANCE

- A. The Contractor shall maintain all seeded and mulched areas in a satisfactory condition until final acceptance of the work. This includes repairing washes that occur, and the application of additional seed, installation of additional lime, and/or fertilizing and watering as needed.

3.10 STAND OF GRASS

- A. If, after a suitable growth period, a satisfactory stand of grass is not evident, the unsatisfactory areas shall be reseeded, including any additional ground preparation, liming and fertilizing necessary, using the type of seed specified. A stand of grass is defined as a full cover, over the areas seeded and mulched, with grass that is alive and growing.

END OF SECTION 02930

SECTION 03100 - CONCRETE FORMWORK

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.
- B. Openings for other work.
- C. Form accessories.
- D. Form stripping.

1.3 PRODUCTS INSTALLED BUT NOT SUPPLIED UNDER THIS SECTION

- A. Embedded items including, but not limited to, inserts, sleeves, wall castings, wall thimbles, gate guides, anchors, and anchor bolts, as shown or specified to be embedded.

1.4 DESIGN REQUIREMENTS

- A. Design, engineer and construct formwork, shoring and bracing to comply with code requirements; resultant concrete to conform to required shape, line and dimension.

1.5 QUALITY ASSURANCE

- A. Comply with ACI 301, ACI 318, and ACI 347.

PART 2 PRODUCTS

2.1 FORM MATERIALS

- A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faces, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimum number of form marks.
 - 1. Plywood: U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood", Class 1, Exterior Grade or better, mill-oiled and edge sealed, with each piece bearing legible inspection trademark.
- B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 FORMWORK ACCESSORIES

- A. Form Ties: Factory fabricated removable or snap-off metal type, designed to prevent form deflection and to prevent spalling concrete upon removal. Units to leave no metal closer than 1-1/2 inches to surface.

- B. Form Release Agent: Colorless mineral oil which will not stain concrete, or absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete including curing compound, sealer, or waterproofing.
- C. Corners: Chamfered strip type, 3/4 x 3/4 inch size; maximum possible lengths.
- D. Dovetail Anchor Slot: Galvanized steel, 22 gage thick, foam filled slots, nail holes for securing to concrete formwork.
- E. Waterstop: Polyvinyl chloride, minimum 1,750 psi tensile strength, minimum -40 degrees F working temperature, 6 inch wide, 3/16 inch thick, maximum possible lengths, ribbed profile, preformed corner sections, heat welded jointing.
- F. Special Waterstop: Polyvinyl chloride, minimum 1,750 psi tensile strength, minimum -40 degrees F working temperature, 9 inch wide, 3/8 inch thick, 1/2 inch I.D. minimum center bulb, maximum possible lengths, ribbed profile, heat welded jointing.
- G. Preformed Plastic Adhesive Waterstop (PPAWS): Federal Specification SS-SS-210A; single component self-sealing plastic adhesive type, extruded rope form between two protective silicone treated papers, 1 inch square cross section, 1 inch lap slice, furnish with primer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with Drawings.

3.2 EARTH FORMS

- A. Hand trim sides and bottom of earth forms. Remove loose soil prior to placing concrete. Earth forms subject to Engineer's approval.

3.3 ERECTION - FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements; comply with ACI 301. Use selected materials to obtain required finishes.
- B. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances; comply with ACI 347.
- C. Align joints and make watertight.
- D. Obtain approval before framing openings in structural members which are not indicated on Drawings.
- E. Provide chamfer strips on all external corners, and on other edges as indicated.
- F. Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before concrete is placed. Retighten forms and bracing after concrete placement, if required.
- G. Set edge forms or bulkheads and intermediate screed pins or strips for slabs to obtain required elevations and contours in finished slab surface.

3.4 APPLICATION – FORM RELEASE AGENT

- A. Clean reused forms of concrete residue. Repair and patch as required returning forms to acceptable surface condition.
- B. Apply form release agent on formwork prior to placement of reinforcing steel, anchoring devices, and embedded items.

- C. Do not apply form release agent where concrete surfaces will receive special finishes which are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.5 JOINTS, INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to pass through concrete work.
- B. Locate and set in place items which will be cast directly into concrete.
- C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.
- D. Install accessories straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Install waterstops continuous without displacing reinforcement. Install waterstop a minimum of 2 inches clear of reinforcing steel.
- F. Provide waterstop at all joints where shown; at all joints in tank, flume and building bottom slabs; at all joints in walls and in slabs with water or earth on one side and a dry work area or an exposed surface on the other; at all vertical joints in walls (except those with earth on both sides).
- G. Locate and install construction joints to not impair strength and appearance of the structure as indicated or as approved by Engineer.
- H. Provide keyways at least 1-1/2 inches deep in construction joints in walls, slabs, and between walls and footings.
- I. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints, except as otherwise indicated.

3.6 FORMWORK TOLERANCES

- A. Comply with ACI 301, Table 4.3.1, and ACI 347.

3.7 FORM REMOVAL

- A. Fabricate form for easy removal without hammering or prying against concrete surfaces.
- B. Forms not supporting weight of concrete such as sides of beams, walls, and columns, and similar parts may be removed after curing for 24 hours at not less than 50 degrees F. Concrete shall be sufficiently hard to not be damaged by form removal operations.
- C. Do not remove forms or bracing which support slabs and beams until field cured cylinder strength has reached 3,000 psi.

END OF SECTION

SECTION 03200 - CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Reinforcing steel bars, wire fabric and accessories for cast-in-place concrete and precast concrete.

1.3 SHOP DRAWINGS

- A. Submit original shop drawings prepared for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

1.4 QUALITY ASSURANCE

- A. Comply with ACI 301.
- B. Provide Engineer with access to precast plant to facilitate inspection of reinforcement. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection.
- C. Design reinforcement for precast under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of North Carolina.

PART 2 PRODUCTS

2.1 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade, deformed billet steel bars, unfinished; or ASTM A616, 60 ksi yield grade, deformed rail steel bars, unfinished.
- B. Dowel Bar Replacement (D.B.R.): Threaded bars and couplers to develop at least 125 percent of the yield strength of the bar; unified coarse threads, no tapered threads; flanged coupler with nail holes for form attachment; Dayton Superior, Williams Form Engineering, or as approved.
- C. Welded Wire Fabric: ASTM A185, plain wire.

2.2 ACCESSORIES

- A. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.

2.3 FABRICATION

- A. Comply with CRSI Manual of Practice and ACI SP-66. No welding of reinforced bars unless authorized in writing by Engineer.

PART 3 EXECUTATION

3.1 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position. Comply with CRSI's recommended practice for placing reinforcing bars.
- B. Do not displace or damage vapor barrier.
- C. Accommodate placement of formed openings. Provide additional reinforcement as required.
- D. Unless noted otherwise, maintain concrete cover for reinforcement as follows:

<u>Item</u>	<u>Coverage</u>
Beams	1-1/2 inch
Supported Slabs and Joists	1-1/2 inch
Column Ties	1-1/2 inch
Walls (exposed to weather or backfill)	2 inch
Footings and Concrete Formed Against Earth	3 inch
Slabs on Fill	3 inch
Footings or Slabs on Mud Mat	2 inch

- E. On mud mat, use steel bar chairs or other approved supports.
- F. Do not field cut reinforcement without Engineer's permission.
- G. Do not bend reinforcement after embedment in hardened concrete.
- H. Clean reinforcement of loose rust, mill scale, ice, earth, and other material which affect bond with concrete.

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Cast-in-place concrete.
- B. Control, expansion and contraction joint devices associated with concrete work, including joint sealants.
- C. Grouts.

1.3 COORDINATION OF CONCRETE SUPPORTS FOR EQUIPMENT AND PIPING

- A. The Contractor for Section 1 shall be responsible for providing concrete pipe supports, equipment pads, housekeeping pads, and concrete pads in new structures to accommodate work under Sections 1, 2, 3, 4 and 5.

1.4 QUALITY ASSURANCE

- A. Comply with ACI 301 unless specifically noted otherwise.
- B. Maintain one copy of ACI 301 on site.
- C. Acquire cement and aggregate from same source for all work.
- D. Comply with ACI 305R when concreting during hot weather.
- E. Comply with ACI 306R when concreting during cold weather.

1.5 DEFINITIONS

- A. Exposed: Exposed to view by persons responsible for operation or maintenance of the structure, including, but not limited to, all tank and flume interior wall surfaces.

1.6 SUBMITTALS

- A. Laboratory Test Results: Submit laboratory test reports for concrete materials and mix design test.
- B. Materials Certificates: Provide materials certificates signed by manufacturer and Contractor, certifying that each material item complies with, or exceed, specified requirements in lieu of materials laboratory test reports when permitted by Engineer.
- C. Submit in quantities specified for Shop Drawings; follow Section 01300.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type 1 – Normal Portland type. Use one brand of cement throughout project, unless approved by Engineer.

- B. Fine and Coarse Aggregates: ASTM C33 (normal weight aggregate); materials containing deleterious substances (spalling causing) are not acceptable.
- C. Water: Clean and not detrimental to concrete.

2.2 ADMIXTURES

- A. Air Entrainment: ASTM C260; Master Builders Micro-Air, or as approved.
- B. Chemical: ASTM C494 Type A – Water Reducing, Type B – Retarding, Type C – Accelerating, Type D – Water Reducing and Retarding, Type E – Water Reducing and Accelerating, Type F – Water Reducing, High Range, Type G – Water Reducing, High Range and Retarding; containing no chlorides.
- C. Fly Ash: ASTM C618 Class F; loss on ignition less than 6 percent.

2.3 ACCESSORIES

- A. Bonding Agent: Latex emulsion.
- B. Special Bonding Agent: Water-based epoxy resin/Portland cement.
- C. Vapor Retarder: 6 mil thick clear polyethylene film.
- D. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 5000 psi in 28 days.
- E. Epoxy Grout: 2-component epoxy resin bonding system capable of developing a minimum bond strength of 1100 psi in 48 hours; ASTM C881, Type N, Grade 3, Class B and C.

2.4 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler Type A: ASTM D994; Asphalt impregnated fiberboard or felt.
- B. Joint Filler Type B: ASTM D1752; Premolded sponge rubber fully compressible with recovery rate of minimum 95 percent.
- C. Sealant: Follow Section 07900.

2.5 CONCRETE MIX

- A. Concrete Proportions: Comply with ACI 301, 3.9.
- B. Class I Concrete: Provide concrete to the following criteria:
 - 1. Compressive Strength (7 day): 3200 psi.
 - 2. Compressive Strength (28 day): 4000 psi.
 - 3. Water/Cement Ratio (maximum): 0.50 by weight.
 - 4. Air Entrained: 6 percent, ± 1 percent.
 - 5. Fly Ash Content: Maximum 25 percent of cement content.
 - 6. Slump (maximum): 3 inches (due to water).
 - 7. High Range Water Reducer: Add at site to increase slump to 6 inches, $\pm 1-1/2$ inches.
 - 8. Grout for leveling or to start wall lifts shall be of similar proportions to the mortar in the Class 1 concrete as approved by Engineer.
- C. Class II Concrete: Provide concrete to the following criteria:
 - 1. Compressive Strength (28 day): 2500 psi.
 - 2. Fly Ash Content: Maximum 25 percent of cement content
 - 3. Slump (maximum): 6 inches
- D. Mudmat Concrete: Provide concrete to the following criteria:
 - 1. Compressive Strength (28 day): 1000 psi.
 - 2. Fly Ash Content: Maximum 25 percent of cement content
- E. Grout: Provide concrete to the following criteria:

1. Compressive Strength (28 day): 4000 psi.
2. Proportions similar to Class I concrete.
3. 100 percent of coarse aggregate must pass 1/2 inch sieve.

2.6 CEMENT-BASE AGGREGATE TYPE COATING

- A. Federal Spec. TT-P0035 (ARMY-CE); use with bonding agent.

PART 3 EXECUTION

3.1 GENERAL

- A. Use Class I concrete for structural concrete and concrete for pavements, sidewalks and equipment bases; use Class II concrete for fillets and fills, and where indicated.
- B. Install vapor retarder under interior building slabs on grade. Lap joints minimum 6 inches and seal watertight by taping edges and ends.
- C. Cut contraction joints within 18 hours after placing. Cut 1/4 depth of slab thickness. If joint pattern not shown, provide joints not exceeding 15 feet in either direction and located to provide uniform slabs.
- D. Slope positively floors containing sumps, gutters, or floor drains.
- E. Provide 3 inch thick mudmats under all foundations and base slabs unless noted otherwise.
- F. Construct isolation joints in slabs on grade at points of contact between slabs on grade and vertical surfaces such as column pedestals, foundation walls, or as indicated. Use joint filler B and a sealant as specified in Section 07900 unless noted otherwise.
- G. Verify construction joints, waterstop, and reinforcement are acceptable.

3.2 PLACING CONCRETE

- A. Comply with ACI 301 and the following:
 1. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation.
 2. Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
 3. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Comply with ACI 309 for equipment and procedures for consolidation of concrete.
 4. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators 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 set. At insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.
- B. When Class I concrete arrives at the Project with slump below 3 inches, water may be added only if neither the maximum permissible water-cement ratio nor the maximum slump is exceeded. Slump adjustment, with water, shall be made only one time.
- C. Start wall lifts with 2 to 3 inches of grout.
- D. Placement of concrete under water is not permitted.
- E. Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.

1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Bring slab surfaces to correct level with straight edge and strikeoff. Use bullfloats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
 3. Maintain reinforcing in proper position during concrete placement operations.
- F. Cold Weather Placing: Comply with ACI 305 and the following to protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures:
1. When air temperature has fallen to or is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at point of placement.
 - a. Maintain concrete within this temperature range for not less than 7 days.
 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 or against cold reinforcing steel.
 3. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators, unless otherwise accepted in mix designs.
- G. Hot Weather Placing: Comply with ACI 305 and the following when hot weather conditions exist that would seriously impair quality and strength of concrete:
1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.
 2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
 3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
 4. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity, or other adverse placing conditions.

3.3 REPAIR OF DEFECTIVE AREAS

- A. Use manufactured non-shrink cementitious materials specifically formulated for patching concrete in conjunction with a compatible bonding material. The complete repair procedure along with a list of all materials to be used must be submitted to and approved by Engineer before any repair work is started.
- B. Preparation of defective areas to be approved by Engineer prior to patching.
- C. Tie Holes: Thoroughly and liberally coat with a bonding agent and then thoroughly fill with a non-shrink cementitious material using a plunger type or other mechanical injecting device to force mortar through holes passing through walls.
- D. Repair surface defects, including tie holes, immediately after form removal.
- E. Remove honeycombed and other defective concrete down to sound concrete.

3.4 CONCRETE FINISHING

- A. Concrete Floor Surfaces: Follow Section 03346.
- B. Formed Concrete Surfaces: Smooth form finish as described in ACI 301, 10.2.2, and no form marks greater than 1/16 inch in relief, unless otherwise specified.

- C. Formed Concrete Surfaces Not Exposed and Not to be Waterproofed as Specified in Section 07110: Rough form finish, at Contractor's option.
- D. Exposed Formed Surfaces of Slabs: Smooth form finish with all offsets and unevenness due to form arrangement ground smooth.
- E. Prepare concrete surfaces to be waterproofed as specified in Section 07100 in strict accordance with the waterproofing manufacturer's instructions. On surfaces to be waterproofed, defects shall include, but not be limited to, voids, air holes and honeycomb that the normal application of waterproofing will not fill or otherwise seal effectively.
- F. Exposed Interior Concrete Surfaces: Applied finish of cement-base aggregate type coating; applied to concrete with a smooth form finish; first coat to be by heavy brush at two pounds per square yard, second coat at same rate and sponge floated.
- G. Exposed Exterior Concrete Surfaces, Including Tank Interiors From Top to Two Feet Below Normal Water Surface: Cork floated finish as described in ACI 301, 10.3.3, or an applied finish of cement-base aggregate type coating.
- H. Related Unformed Surfaces, Including Tops of Walls: Strike smooth after concrete is placed and float to a texture consistent with that of the formed surfaces.

3.5 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Concrete Surfaces: Follow Section 03370.

3.6 FIELD QUALITY CONTROL

- A. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.
- B. Tests of concrete slump, air content and strength will be made at the direction of Engineer.
- C. Tests of soil compaction will be made at the direction of Engineer.
- D. Advise the designated testing agency sufficiently in advance of, but not less than 24 hours before, operations to allow for completion of quality tests and for the assignment of personnel.
- E. Contractor responsible for additional testing expenses incurred for the purpose of making, transporting, or testing field cured cylinders.
- F. In addition to the requirements of Chapter 18 of ACI 301, those parts of a structure which will contain water during service shall be substantially watertight. Before the units are placed in service, repair all cracks and defects which impair watertightness and eliminate any leakage into or out of the structure. After proper cleaning and disinfecting, if required, fill the water containment structures with water to their maximum level, and allow the water to remain for 24 hours with associated valves and appurtenances tightly closed. During this time, the water level, as measured by a hook gage or other approved measuring device, shall not drop vertically more than a distance of 1/2 inch. If this test fails, pump out the structure and make such repairs as required to achieve the desired watertightness. Upon completion of repairs, thoroughly clean and disinfect, if required, the affected areas. Repeat watertightness test until the above specified watertightness is achieved or Engineer's approval is obtained.

END OF SECTION

SECTION 03370 - CONCRETE CURING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and Division 1-16 Specifications Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Initial and final curing of horizontal and vertical concrete surfaces.

1.3 SUBMITTALS

- A. Submit proposed method of curing if differently than subsequently specified methods.

1.4 QUALITY ASSURANCE

- A. Comply with ACI 301 and ACI 302.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Membrane Curing Compound: ASTM C309, Type 1-D, Class B, clear with fugitive dye which disappears approximately 24 hours after exposure to sunlight; Spray-Cure Safe Cure Clear, Euclid Chemical Company Durez DR, or as approved. Curing compound shall be compatible with coatings (including sealer, waterproofing, bonded cementitious topping, or floor tile) which are to be applied to the concrete surface.
- B. Absorptive Mats: Burlap-polyethylene, minimum 8 oz/sq yd bonded to prevent separation during handling and placing.
- C. Water: Potable, not detrimental to concrete.

PART 3 EXECUTION

3.1 HORIZONTAL SURFACES

- A. Cure floor surfaces in accordance with ACI 301 using any of the following accepted procedures.
 - 1. Spraying: Spray water over floor slab areas and maintain wet for 7 days.
 - 2. Absorptive Mat: Saturate burlap-polyethylene and place burlap-side down over floor slab areas, lapping ends and sides; maintain in place for 7 days.
 - 3. Membrane Curing Compound: Pavement, walks, and curbs only.

3.2 VERTICAL SURFACES

- A. Cure surfaces using any of the following accepted procedures.
 - 1. Formwork: Keep forms in place for 7 days.
 - 2. Spraying: Spray water over surfaces and maintain wet for 7 days.
 - 3. Membrane Curing Compound.

3.3 PROTECTION OF FINISHED WORK

- A. Do not permit traffic over unprotected floor surface.
- B. When the mean daily outdoor temperature is less than 40 degrees F, Contractor shall, not less than 24 hours prior to placement, submit to Engineer for review arrangements for heating, covering, insulating or housing the concrete work, in accordance with ACI 301, 12.3.1.
- C. When the rate of evaporation of surface moisture from concrete as estimated from Figure 2.1.4 of ACI 305R-91, "Recommended Practice for Hot Weather Concreting", exceeds 0.15 lb/sq ft/hr, the measure of ACI 301, 12.3.2 shall be put into practice.

END OF SECTION

SECTION 03410 - PRECAST CONCRETE STRUCTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-16 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes precast concrete structures and necessary appurtenances for the precast concrete structure installation.
- B. Related Sections include the following:
 - 1. Division 1 Section "Measurement and Payment" for schedule of unit prices.
 - 2. Division 2 Section "Trenching for Utilities" for excavating, backfilling and shaping.
 - 3. Division 2 Section "Storm Drainage" for storm sewer installation.

1.3 SUBMITTALS

- A. Product Data: For the following:
 - 1. Precast Concrete Structures
 - 2. Manhole Rings and Covers
- B. Design Mix Reports and Calculations: For each class of concrete used to fabricate the precast concrete structures.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Precast sections may be provided with lifting notches on the inside face of walls to facilitate handling. Lifting notches shall not be more than 3 inches deep; holes extending through the wall will not be acceptable.
- B. Precast sections shall be handled carefully and shall not be bumped or dropped. Hooks shall not come in contact with joint surfaces.
- C. Precast sections shall not be delivered to the project site until the sections have attained a minimum strength of at least 80 percent of the specified design strength or a minimum of seven days whichever is greater.
- D. The date of manufacture shall be identified on all precast sections.

PART 2 - PRODUCTS

2.1 PRECAST STRUCTURES

A. Materials:

1. Concrete shall conform to ASTM C478 and the following:
 - a. Compressive Strength: 4,000 psi minimum at 28 days
 - b. Air Content: 4 percent minimum
 - c. Alkalinity: Adequate to provide a Life Factor, $A_z = \text{Calcium}$
 - d. Cementitious Materials: Minimum of 564 pounds per C.Y.
 - e. Coarse Aggregates: ASTM C33. Sound, crushed, angular granitic stone only. Smooth or rounded stone shall not be used.
 - f. Fine Aggregates: ASTM C33. Free from organic impurities.
 - g. Chemical Admixtures: ASTM C494. Calcium chloride or admixtures containing calcium chloride shall not be used.
 - h. Air Entraining Admixtures: ASTM C260
2. Reinforcing steel shall be ASTM A615 Grade 60 deformed bar, ASTM A82 wire or ASTM A185 welded wire fabric.
3. Lift loops shall be ASTM A416 steel strand. Lifting loops made from deformed bars are not allowed.
4. Flexible joint sealants shall be butyl rubber based conforming to Federal Specification SS-S-210A, AASHTO M-198, Type B - Butyl Rubber and as follows: maximum of 1% volatile matter and suitable for application temperatures between 10 and 100 degrees F.
5. Nonshrink grout interior patching of all penetrations shall be as follows:
 - a.) Cormix Supreme
 - b.) L & M "Crystex"
 - c.) Masterbuilders "Masterflow 713 Grout"
 - d.) Masterbuilders "Set Grout"
 - e.) Savereisen Cements "F-100 Level Fill Grout"
 - f.) UPCO "Upcon Super Flow"
 - g.) U.S. Grout "Five Star Grout"
6. Manhole rings and covers shall be equal to those shown on the plans and will conform to ASTM A48, Class 30B for gray cast iron materials. All castings shall be watertight and thoroughly coated with an asphaltic varnish and be as manufactured by:
 - a.) Dewey Brothers, Inc.
 - b.) Vulcan Foundry, Inc.
 - c.) U.S. Foundry and Manufacturing Corporation
7. Manhole steps shall conform to OSHA standards and shall be resistant to corrosion by hydrogen sulfide and other sewer gases. Steps shall be provided in bases, risers, cones, transition cones, and transition top sections aligned vertically on 16" centers. Steps shall be secured to the wall with a compression fit in tapered holes or cast in place. Steps shall not be vibrated or driven into

freshly cast concrete or grouted in place. The steps shall be Copolymer Polypropylene Plastic reinforced with a 1/2" diameter grade 60 bar and have serrated tread and tall end lugs. Step pullout strength shall be 2000 lbs. minimum when tested according to ASTM C497.

B. Fabrication and Manufacturing:

1. Precast component fabrication and manufacturers shall conform to the following:
 - a.) Precast manufacturing shall be in conformance with ASTM C478. Inside slab finishes resulting from casting against forms shall be free of any defects and honey comb. Exterior slab surfaces shall have a float finish. Small surface holes, normal color variations, normal form joint marks, and minor depressions, chips and spalls may be tolerated. Dimensional tolerance shall be those set forth in the appropriate references and specified below.
 - b.) Joint surfaces between bases, risers, and cones shall be manufactured to the joint surface design and tolerance requirements of ASTM C361. The maximum slope of the vertical surface shall be 2 degrees. The maximum annular space at the base of the joint shall be 0.10". The minimum height of the joint shall be 4". Joint shall be smooth, uniform, and sharp edged.
 - c.) Lift inserts shall be sized for a precision fit with the lift devices, shall comply with OSHA 1926.704, and shall not penetrate through the manhole wall.
 - d.) Step holes shall be cast or drilled in the bases, risers, and cones to provide a uniform step spacing of 16" with the first step being 16" from the top of the cones. Cast step holes shall be tapered to match the taper of the steps.
2. Precast base sections shall be cast monolithically without construction joints.
3. Precuts riser sections shall have a minimum lay length of 16".
4. Precast flat slab top sections shall have a manhole access with an inside diameter of 24" and shall be designed for HS-20 traffic loadings as defined in ASTM C890. Items to be cast into special flat slab tops shall be sized to fit within the manhole ID and the top and bottom surfaces.
5. Precast grade rings may be used to adjust ring and covers to finished grade. No more than 8 vertical inches of grade rings will be allowed per manhole. Grade rings shall conform to ASTM C478 and shall be no less than 4 inches in height.
6. Pipe to manhole connectors shall conform to ASTM C923.
7. Joints between precast components shall be sealed internally between the tongue and the groove and the following:
 - a.) Internal seals shall consist of an o-ring gasket conforming to ASTM C443, installed according to the manufacturer's recommendation.
 - b.) Internal seals may consist of a profile gasket conforming to ASTM C-443 and C-361, installed according to manufacturer's recommendation. Note: The Contractors may, at his option, use butyl rubber in addition to o-ring or profile gasket along the bottom groove of each section to help in sealing.

8. Lifting devices for handling precast components shall be provided by the precast manufacturer and shall comply with OSHA Standard 1926.704.

PART 3 - EXECUTION

3.1 GENERAL

- A. Care shall be taken in loading, transporting and unloading precast concrete structures. Structures shall be subjected to a careful inspection prior to installation. Any damaged area shall be repaired to the satisfaction of the engineer or removed from the project if damaged beyond repair at no additional cost to the owner.
- B. All precast structures shall be thoroughly cleaned before installation and kept clean until placed into service.
- C. Precast structures shall be installed where indicated on the construction drawings and in accordance with field staking cut sheets provided by the engineer.
- D. Contractor shall exercise extreme care when installing precast structures to protect existing underground utilities and existing structures from damage.

3.2 INSTALLATION

- A. All precast structures shall be provided with a uniform bed of granular backfill material, No. 57 stone, a minimum of 6" inches deep to fully support the precast structure. The bedding shall extend a minimum of 6 inches beyond the outside dimensions of the precast structure.
- B. Precast structures shall be set to be vertical and with sections in true alignment with a 1 inch maximum tolerance.
- C. Interior lift holes shall be plugged and grouted with materials specified in Part 2.
- D. Non shrink grout shall be provided around pipe ends such that a uniform flow and constant grade through structures will be provided.
- E. Butyl rubber sealant shall be provided at all joints to provide a flexible watertight joint.

END OF SECTION 03410



ADDENDUM NO. 1

Owner: City of Graham
201 South Main Street
Graham, NC 27253

Project: Senator Ralph Scott Parkway Extension
AWCK Project No. 15104

Bid Opening: Friday, October 2nd, 2015 at 11:00 AM
City of Graham
201 South Main Street
Graham, NC 27253

Date: September 29, 2015

General

The following changes, additions, interpretations and corrections are herewith made a part of the referenced project and shall take precedence over previous requirements. Contractors shall familiarize themselves with the content of this addendum, as it is a part of the contract documents.

Item No. 1 – Minority Business Enterprise Provisions

Clarification: Minority Business Enterprise is defined in the contract documents. Please see page MBE-1 for minority and minority business definitions.

Item No. 2 – Water and Sewer to the LIDL Site

Clarification: Water and sewer to the LIDL Site are scheduled to begin construction as soon as easements are obtained and is anticipated to be completed prior to roadway construction. Easements are expected any day. See attached plans for LIDL water and sewer.

Item No. 3 – Pipe Installation

Clarification: Temporary pump around, dewatering, and all other items associated with the installation of pipes will be considered incidental to the work and is to be included in the unit price bid.

Item No. 4 – Coordination

Clarification: Coordination with the NCDOT, Wal-Mart, and LIDL, and their selected contractors will be required throughout the duration of this project. Outside contractors may be permitted to access the stockpile area to remove material for their needs.

Item No. 5 – Proposed Waste Site

Addition: A waste site has been added and is being permitted. Waste site is located on the existing section of Sen. Ralph Scott Parkway. See attached exhibit maps.

Item No. 6 – Bid Item No. 2 – Clearing & Grubbing and Debris Removal

Clarification: Bid Item No. 2 – Portions of the site are across an area where timber has previously been harvested. Debris removal was added to the clearing and grubbing to address any material left on the site after the timber harvesting operation.

Item No. 7 – Bid Item No. 3 – Clean Stone for Erosion Control

Revision: Erosion control for the waste site has been added to the quantities. Revision to erosion control on plan sheets have been made per NCDENR. Quantities for Clean Stone for Erosion Control have been revised accordingly. See attached exhibit maps, revised plan sheets, and bid form.

Item No. 8 – Bid Item No. 5 – Class B Rip Rap

Revision: Erosion control for the waste site has been added to the quantities. Revision to erosion control on plan sheets have been made per NCDENR. Quantities for Class B Rip Rap have been revised accordingly. See attached exhibit maps, revised plan sheets, and bid form.

Item No. 9 – Bid Item No. 6 – Silt Fence

Revision: Erosion control for the waste site has been added to the quantities. Revision to erosion control on plan sheets have been made per NCDENR. Quantities for Silt Fence have been revised accordingly. See attached exhibit maps, revised plan sheets, and bid form.

Item No. 10 – Bid Item No. 7 – Hardware Cloth

Revision: Erosion control for the waste site has been added to the quantities. Revision to erosion control on plan sheets have been made per NCDENR. Quantities for Hardware Cloth have been revised accordingly. See attached exhibit maps, revised plan sheets, and bid form.

Item No. 11 – Bid Item No. 9 – Silt Basin Type ‘B’

Revision: Quantities on bid form for Silt Basin Type ‘B’ have been revised to the correct quantity. See attached bid form.

Item No. 12 – Bid Item No. 12 – Excelsior Matting

Clarification: Excelsior matting shall be at a minimum North American Green S150 or equivalent.

Item No. 13 – Bid Item No. 14 – Temporary Construction Entrance

Revision: Erosion control for the waste site has been added to the quantities. Quantities for Temporary Construction Entrance have been revised accordingly. See attached exhibit maps and bid form.

Item No. 14 – Bid Item No. 15 – Temporary Stream Crossing

Revision/Clarification: Temporary Stream Crossing will be at stream SG. Crossing has been called out on the revised plan sheet. See attached plan sheets.

Item No. 15 – Bid Item No. 16 – Seeding and Mulching

Revision/Clarification: Seeding and mulching lump sum quantity shall now include any seeding needed at the proposed waste site. See attached exhibit maps.

Item No. 16 – Bid Item No. 17 - Grading

Clarification: Grading is to include all earthwork associated with the construction of the roadway with the exception of Bid Items No. 18 and 19. The current grading plan is for fill slopes to be graded in at a 3:1 slope in all areas outside of stream SG and SF buffers. At the current 3:1 slope grading plan, there will be an excess of approximately 11,000 CY of material depending upon soil conditions. In order to reduce the amount of excess material to be hauled offsite, waste material may be placed in the fill slopes outside of the structural fill (see revised Typical Section Sheet 2). Slopes may be flattened out to the temporary construction easements or permanent drainage easements to waste material. Payment for Item No. 39 will only be made with the approval of engineer after all on-site waste options have been exhausted.

Item No. 17 – Bid Item No. 18 – Undercut Excavation

Clarification: If there is available suitable material onsite within the easements and outside the buffer zones, it may be used for the replacement material for Undercut Excavation. Space permitting waste material may be wasted onsite within the easements and outside of buffer zones.

Item No. 18 – Bid Item No. 19 – Rock Excavation

Clarification: Rock Excavation shall involve both trench rock and mass rock excavation. Rock excavation is defined in Section 02322 – Rock Excavation.

Item No. 19 – Bid Item No. 33 – Asphalt Surface Course

Clarification: Bid form is revised to show Asphalt Surface Course Type S 9.5C in lieu of SF 9.5C. See attached bid form.

Item No. 20 – Bid Item No. 34 – ABC Stone Base

Revision/Clarification: 10" of ABC Stone Base shall be used in pavement section. See attached typical section sheet 2 for correct pavement section. Sone access/haul road has been added around the stockpile area. Quantities have been revised on bid form. See attached plan sheet 3 and bid form.

Item No. 21 – Bid Item No. 35 – Pavement Markings

Revision/Clarification: Bid Item No. 35 – Pavement Striping shall now be referred to as Pavement Markings. Pavement markings shall include all striping, arrows, stop bars and any other pavement

markings shown on plan sheets. All pavement markings shall be thermoplastic. Reflectors are not required.

Item No. 22 – Bid Item No. 44 – Contingency Allowance

Clarification: Contingency Allowance shall be included in the total bid amount and should be included in total amount for bond and MBE percentage.

Item No. 23 – Bid Item No. 45 – Lime Stabilization

Addition: Lime Stabilization shall be added as Bid Item No. 45. Lime Stabilization shall be only be used with the permission of the engineer. Lime stabilization will be measured and paid for as the number of square yards of each layer of lime-treated soil that has been completed and accepted. In determining this quantity, the width of the lime-treated soil will be measured across the top surface of the treated layer. The length will be the actual length constructed, measured along the centerline of the surface of the treated layer. See attached Lime Soil Drying or Stabilization specification.

Item No. 24 – Bid Item No. 46 – Stone Reconditioning

Addition: Stone Reconditioning shall be added as Bid Item No. 46. Stone Reconditioning shall be used to maintain, recondition and/or replace stone that has been installed from station 72+00± to station 94+00± for access to the LIDL Site. Stone Reconditioning will involve the repair and/or replacement of damaged stone base caused by wintering the stone and traffic from concrete trucks. The stone for Stone Reconditioning may only be used with the permission of the engineer. Payment will be made per ton.

Item No. 25 – Quantities and Unit Prices

Revision: Revise the Instructions to Bidders – Section 19. Quantities and Unit Prices – Paragraph 3 to read as follows: The non-utilization, partial utilization, or overrun of any bid item shall not serve as a claim for any contract or unit price adjustment at the Contractor shall be paid the unit price bid for the number of units actually installed.

Bidders are instructed to initial that Addendum No. 1 was received at the appropriate location on Page BF-1 of the Bid Form.

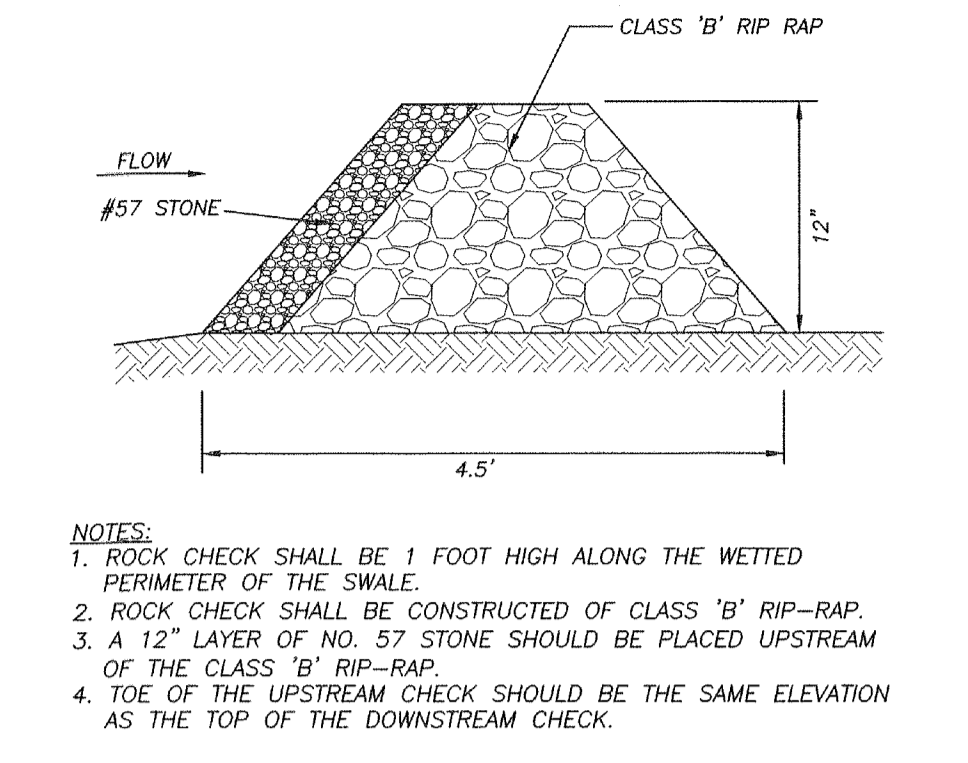
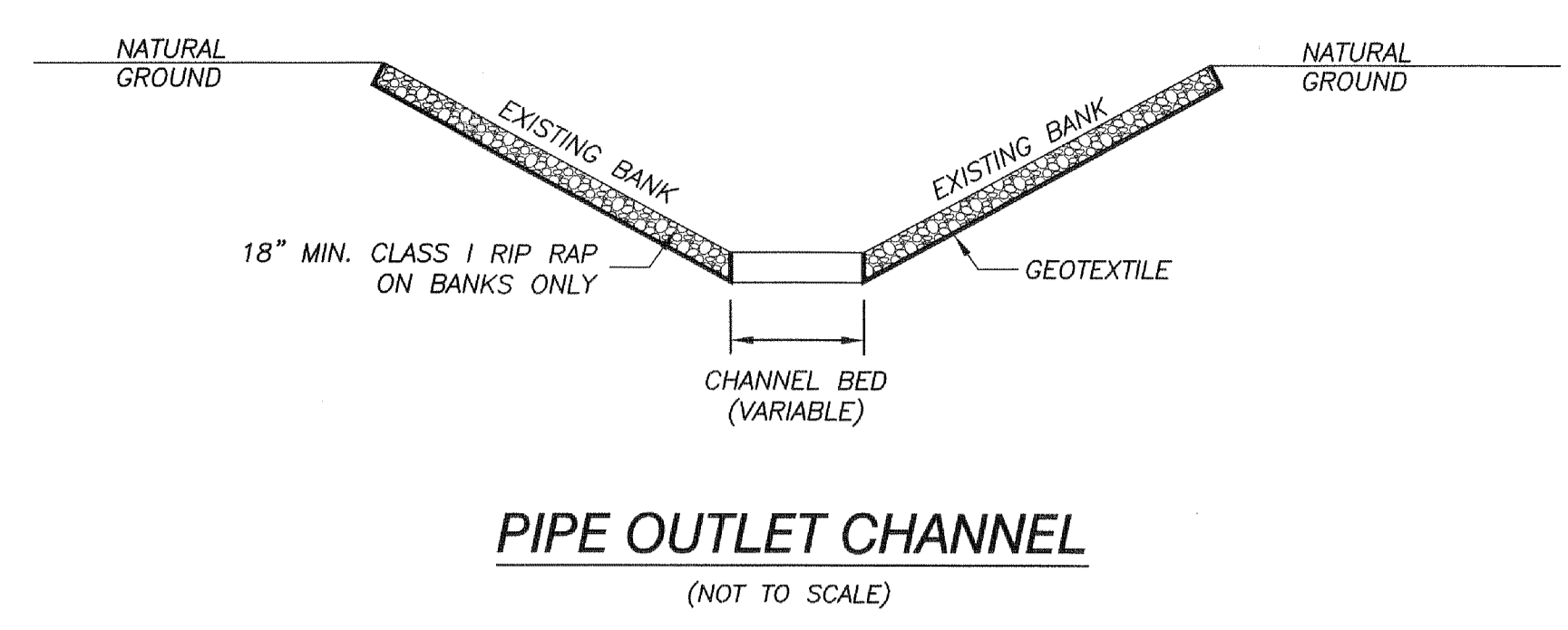
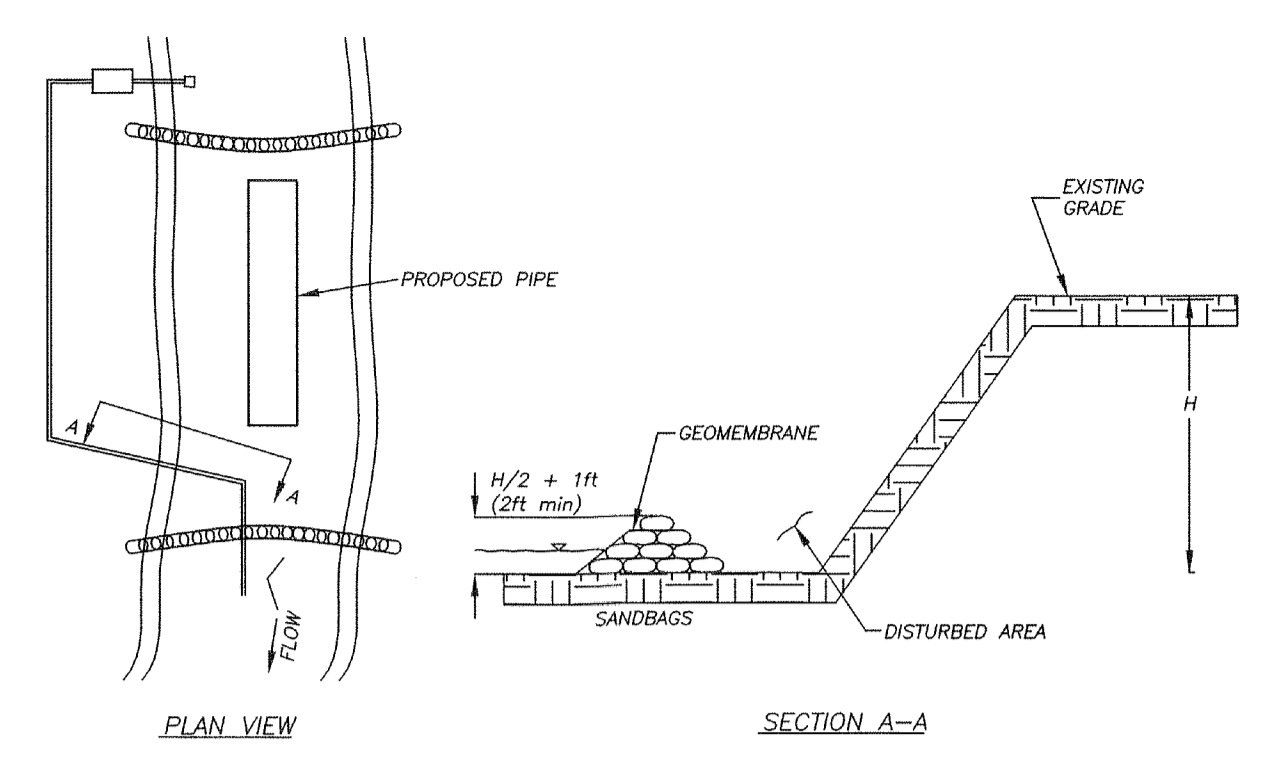
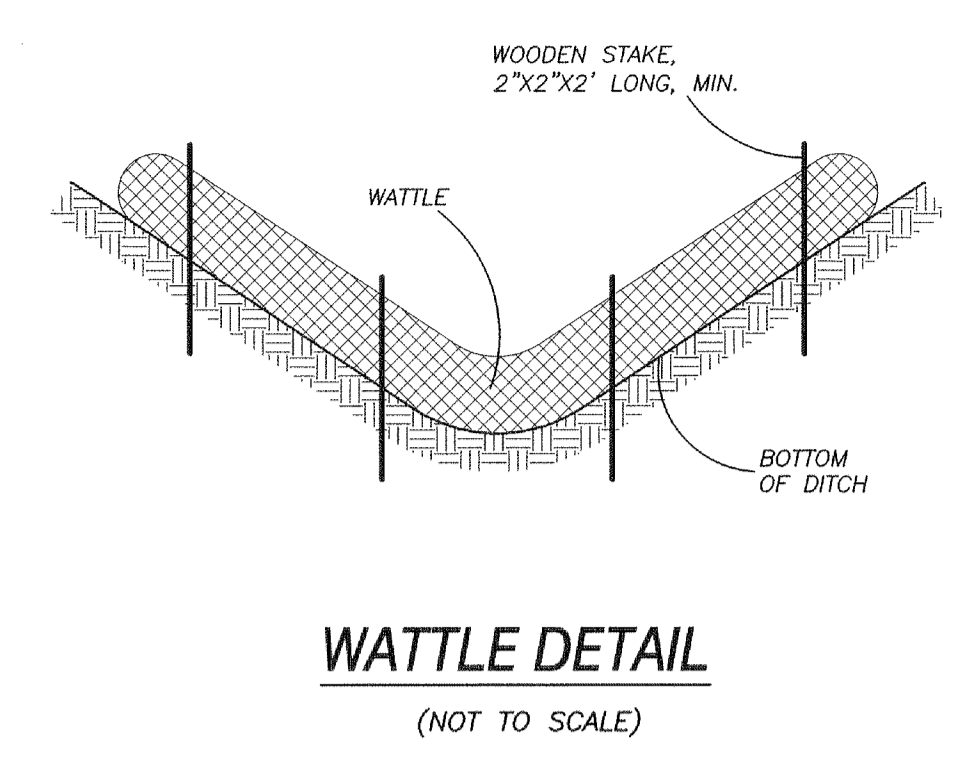
END OF ADDENDUM No. 1



S. Kyle Smith, P.E.

Alley, Williams, Carmen & King, Inc.
Firm License No. F-0203

Attachments: Plan Sheets 2-7 and 20, Bid Form, Waste Site Exhibit Maps, LIDL water and sewer plan sheets, and Lime Soil Drying or Stabilization Specification.



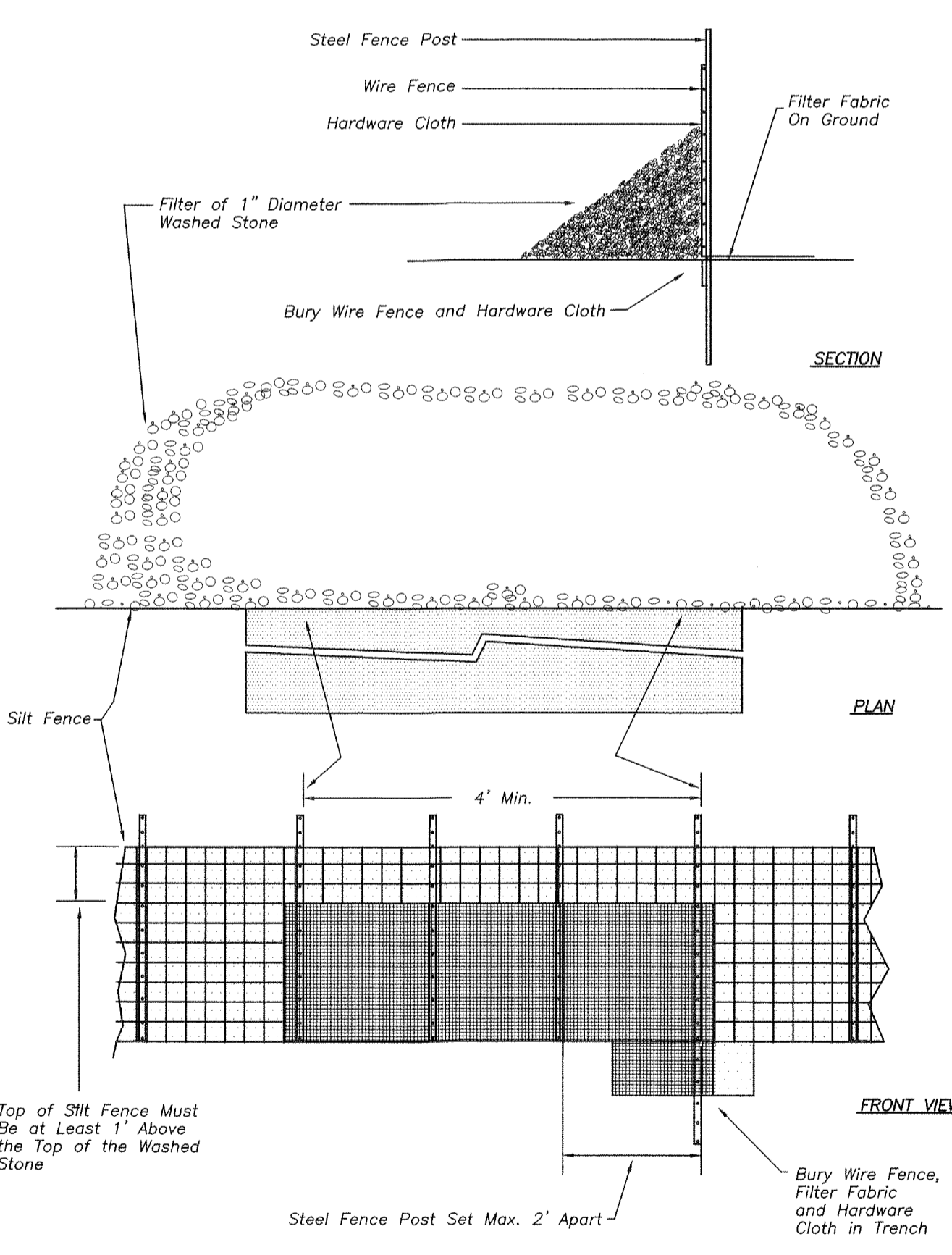
2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 8 - INCIDENTALS	
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.02	Sheet 3 Temporary Lane Closures
1101.03	Sheet 8 Temporary Road Closures
1101.05	Work Zone Vehicle Accesses
1101.06	Warning Signs for Blasting Zones
1101.11	Sheet 1 Traffic Control Design Tables
1101.11	Sheet 2 Traffic Control Design Tables
1101.11	Sheet 4 Traffic Control Design Tables
1110.01	Sheet 1 Stationary Work Zone Signs
1110.02	Portable Work Zone Signs
1115.01	Flashing Arrow Boards
1130.01	Drums
1150.01	Flagging Devices
1170.01	Positive Protection
1180.01	Skinny-Drum
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1605.01	Temporary Silt Fence
1607.01	Gravel Construction Entrance
1622.01	Guide for Temporary Berms and Slope Drains
1630.02	Silt Basin Type B
1630.06	Special Stilling Basin
1631.01	Matting Installation
1632.03	Rock Inlet Sediment Trap Type C
1635.01	Rock Pipe Inlet Sediment Trap Type A
1635.02	Rock Pipe Inlet Sediment Trap Type B
1645.01	Temporary Steam Crossing

- I. DESCRIPTION**
THE WORK SHALL CONSIST OF INSTALLING A PUMP AROUND WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL.
- II. MATERIAL SPECIFICATIONS**
SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRAVIOLET RADIATION, TEARING AND PUNCTURE, AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (I.E. SAND, FINE GRAVEL, ETC.)
- III. CONSTRUCTION REQUIREMENTS**
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 - THE HEIGHT OF THE SANDBAGS SHALL BE AS INDICATED IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH PREPARED SURFACE.
 - ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF OUTSIDE THE 100 YEAR FLOOD PLAIN UNLESS APPROVED ON THE PLANS.
 - ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A DEWATERING PUMP DISCHARGE FILTER BAG OR SILT BASIN.
 - THE PUMP SHALL BE OF SUFFICIENT SIZE TO CONVEY NORMAL STREAM FLOW.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE CITY ENGINEERING DEPT APPROVES THEIR REMOVAL.

TEMPORARY PUMP AROUND
(NOT TO SCALE)



SILT FENCE OUTLET
(NOT TO SCALE)

PERMANENT SEEDING SPECIFICATIONS

PREPARATION
PREPARE SEEDBED BY RIPPING, CHESELING, HARROWING OR PLOWING TO DEPTH OF SIX INCHES SO AS TO PRODUCE A LOOSE, FRABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS OR DEBRIS FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OR PLANT GROWTH.

INCORPORATED INTO THE SOIL 800 TO 1,000 POUNDS OF 10-10-10 FERTILIZER PLUS 500 POUNDS OF TWENTY PERCENT (20%) SUPERPHOSPHATE PER ACRE AND TWO TONS OF DOLOMITIC LIME PER ACRE UNLESS SOIL TESTS INDICATE THAT A LOWER RATE OF LIME CAN BE USED.

MULCH AFTER SEEDING WITH 2.0 TONS OF GRAIN STRAW PER ACRE AND EITHER CRIMP STRAW INTO SOIL OR TACK WITH LIQUID ASPHALT AT 400 GALLONS PER ACRE OR EMULSIFIED ASPHALT AT 300 GALLONS PER ACRE.

PERMANENT SEEDINGS PLANTS & MIXTURE	PLANTING RATE/ACRE	PLANTING DATES
TALL FESCUE (LOW MAINTENANCE)	100-150 LBS.	AUG. 15 - OCT. 15 FEB. 15 - MAY 1
TALL FESCUE WATERWAYS AND LAWNS (HIGH MAINTENANCE)	200-250 LBS.	AUG. 15 - OCT. 15 FEB. 15 - MAY 1
BLEND OF TWO TURF-TYPE TALL FESCUES (80%) AND TWO OR MORE IMPROVED KENTUCKY BLUEGRASS VARIETIES (10%) (HIGH MAINTENANCE)	200-250 LBS.	AUG. 15 - OCT. 15 FEB. 15 - MAY 1
TALL FESCUE AND KOBE OR KOREAN LESPEDEZA	100 LBS. AND 20-25 LBS.	FEB. 15 - MAY 1 AUG. 15 - OCT. 15
TALL FESCUE AND SERJEA LESPEDEZA	50 LBS./ACRE	NOV. 1 - FEB. 1 (UNSCARRIFIED)
TALL FESCUE AND GERMAN MILLET OR SUNDANGRASS	70 LBS. AND 40 LBS.	JULY AND AUGUST
TALL FESCUE AND RYEGRASS	70 LBS. AND 25 LBS.	NOV. 1 - JAN. 30
COMMON BERMUDAGRASS	8 LBS. (HULLED) 15-20 LBS. (UNHULLED)	APRIL 15 - JUNE 30 FEB. 1 - MARCH 30

PERMANENT SEEDING NOTES:

- FOR SPRING SEEDINGS, USE SCARRIFIED LESPEDEZA SEED. FOR LATE FALL AND WINTER SEEDINGS, USE UNSCARRIFIED SEED.
- ANNUALS SUCH AS MILLET, SUNDANGRASS AND RYEGRASS MUST BE KEPT AT 10-12" MAXIMUM HEIGHT. THE USE OF ANNUAL RYE GRASS IS NOT PERMITTED.

TEMPORARY SEEDING SPECIFICATIONS

CONDITIONS WHERE PRACTICE APPLIES
WHERE BARE SOIL HAS BEEN EXPOSED BY GRADING, AND VEGETATIVE COVER IS NEEDED FOR ONE YEAR OR LESS, MAY INCLUDE SUCH AREAS AS TEMPORARY SEDIMENT POND, DIVERSIONS, SOIL STOCKPILES, BUILDING PADS, ROUGH-GRADED ROAD BANKS, ETC. IT IS ALSO USED TO PROVIDE A TEMPORARY PERIMETER BUFFER.

PREPARATION
PREPARE SEEDBED BY RIPPING, CHESELING, HARROWING OR PLOWING TO DEPTH OF AT LEAST SIX INCHES SO AS TO PRODUCE A LOOSE, FRABLE SURFACE. INCORPORATE 750 - 1,000 POUNDS 10-10-10 FERTILIZER AND UP TO TWO TONS OF DOLOMITIC LIME PER ACRE (NOTE: LIME MAY NOT BE NEEDED IF A SOIL TEST INDICATES A PH OF 6.5 OR HIGHER). MULCHING IS REQUIRED ACCORDING TO THE SAME SPECIFICATIONS AS FOR PERMANENT SEEDING UNLESS WAIVED BY SOIL SCIENTIST.

TEMPORARY SEEDINGS SEEDING MIXTURE	SEEDING RATE/ACRE	PLANTING DATES
RYE GRASS AND KOBE LESPEDEZA	120 LBS. 50 LBS.	JAN. 1 - MAY 1 MAY 1 - AUG. 15
RYE (GRASS)	120 LBS.	AUG. 15 - DEC. 30 (MAY SUBSTITUTE OATS BEFORE OCT. 1 OR WHEAT FROM OCT. 1 - NOV. 15)

NOTE:
THE USE OF ANNUAL RYE GRASS AND WEEPING LOVE GRASS IS NOT PERMITTED.

GENERAL EROSION CONTROL NOTES:

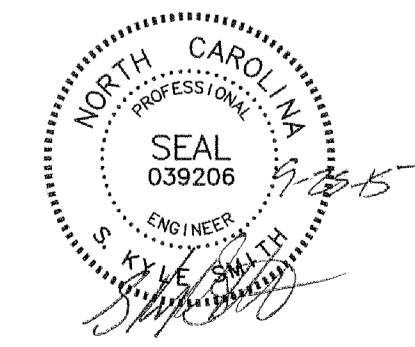
- ALL EROSION CONTROL MEASURES AND DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NCDOT & NCDNR - LAND QUALITY SECTION "EROSION AND SEDIMENT CONTROL MANUAL" REQUIREMENTS.
- ALL SLOPES SHALL BE SEEDED AND MULCHED WITHIN AT LEAST 14 CALENDAR DAYS OF COMPLETION OF GRADING PHASE. SEE NEW STABILIZATION TIME FRAMES FOR ADDITIONAL INFORMATION.
- REMOVE ANY MUD OR SOIL MATERIALS TRACKED ONTO ADJOINING ROADS IMMEDIATELY.
- PROVIDE ADDITIONAL MEASURES AS NEEDED TO DIRECT RUNOFF TO EROSION CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
- INSPECT ALL EROSION CONTROL MEASURES ON A WEEKLY BASIS AND WITHIN 24 HOURS OF A 0.5 IN. RAINFALL EVENT (WITHIN A 24 HOUR PERIOD). CONTRACTOR SHALL REPAIR OR PROVIDE ANY REQUIRED MAINTENANCE NOTED DURING INSPECTION AND PRIOR TO CONTINUING WITH ANY CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL PROVIDE A RAIN GAUGE ON SITE AND SHALL COMPLETE "STORMWATER INSPECTIONS FOR GENERAL PERMIT NCG010000 - LAND DISTURBING ACTIVITIES" FORM ON A WEEKLY BASIS. PROVIDE COPIES OF REPORT TO OWNER/ENGINEER ON A MONTHLY BASIS.
- ANY WASTE MATERIAL DISPOSED OF OFF-SITE SHALL BE DISPOSED OF TO A SITE APPROVED BY NCDNR, LQS.
- ANY BORROW MATERIAL SHALL BE OBTAINED FROM AN NCDNR, LQS APPROVED SITE.
- PROVIDE COPIES OF APPROVAL LETTERS FOR WASTE/BORROW SITES TO ENGINEER PRIOR TO DISPOSING OF OR OBTAINING MATERIAL FROM SITES.
- CONTRACTOR SHALL PROVIDE ENGINEER WITH A COPY OF THE CERTIFICATION OF ALL EMPLOYEES MAINTAINING AND INSTALLING EROSION CONTROL DEVICES.

GENERAL EROSION CONTROL SEQUENCE:

- OBTAIN PLAN APPROVAL FROM LAND QUALITY SECTION.
- HOLD PRECONSTRUCTION CONFERENCE AT LEAST THREE DAYS PRIOR TO CONSTRUCTION.
- CLEAR ONLY ENOUGH TO INSTALL PERIMETER EROSION CONTROL MEASURES. INSTALL PERIMETER EROSION CONTROL MEASURES BEFORE BEGINNING ANY ADDITIONAL CLEARING OR DISTURBING ANY ADDITIONAL AREA.
- ONCE THE PERIMETER EROSION CONTROL MEASURES ARE IN PLACE, CLEAR AS NECESSARY. COMMENCE GRADING AND CONTINUE INSTALLING INTERNAL EROSION CONTROL MEASURES TO THE END OF THE PROPOSED PROJECT. SEED EVERY WEEK AS CONSTRUCTION PROGRESSES.
- ONCE THE ROADWAY CONSTRUCTION IS COMPLETE, RESEED ANY DISTURBED AREAS.
- ONCE THE SITE IS STABILIZED, OBTAIN PERMISSION FROM THE N.C. EROSION CONTROL INSPECTOR AND THEN REMOVE EROSION CONTROL MEASURES AND STABILIZE THE AREAS LEFT BY THE REMOVAL OF THE DEVICES.

NEW STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Expectations
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.



REV. 9/24/15 REVISED PUMP AROUND DETAIL & STD. DRAWINGS CHART

alvey, williams, carmen & king, inc.
ENGINEERS, ARCHITECTS & SURVEYORS
740 chapel hill road p.o. box 1179
burlington, n.c. 27215 336/226-5534
Firm's Engineering License No. F-0203

SEN. RALPH SCOTT PARKWAY EXTENSION
MELVILLE TOWNSHIP - MEBANE, NORTH CAROLINA

NEW ROADWAY IMPROVEMENTS
MEBANE, NORTH CAROLINA

BOOK NO. 412A	DATE: 09/10/15	JOB NO.: 15104
COMP. FILE: 15104 Details.DWG	DRAWN BY: WDF	SHEET NO.: 20
CHECKED BY: SKS		OF: 23

BID FORMS FOR CONTRACT 1
City of Graham
Senator Ralph Scott Parkway Extension

PROJECT IDENTIFICATION:

City of Graham
Contract 1: Senator Ralph Scott Parkway Extension

THIS BID IS SUBMITTED TO:

City of Graham
201 South Main Street
Graham, NC 27253

1. The undersigned bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents within the specified time and for the amount indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement For Bids and the Instructions to Bidders, including without limitation those dealing with the disposition of bid security. This Bid will remain subject to acceptance for 45 days after the day of bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Documents within 20 days after the date of Owner’s Notice of Award.
3. In submitting this Bid, Bidder represents that:
 - a. Bidder has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
 - b. Bidder has visited the site and become familiar with and satisfied itself as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
 - c. Bidder is familiar with and has satisfied itself as to all Federal, State and Local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

- d. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site.
 - e. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
 - f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
 - g. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
 - h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to obtain for itself any advantage over any other Bidder or over Owner.
4. Bidder will complete the Work for the following prices:

Contract 1: Senator Ralph Scott Parkway Extension

Owner: City of Graham

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
1.	Mobilization	1	LS	\$	\$
2.	Clearing & Grubbing and Debris Removal	1	LS	\$	\$
3.	Clean Stone for Erosion Control Devices	110	Tons	\$	\$
4.	Class 1 Rip-Rap	75	Tons	\$	\$
5.	Class B Rip-Rap	380	Tons	\$	\$
6.	Silt Fence	6,560	LF	\$	\$
7.	Hardware Cloth	190	LF	\$	\$
8.	Slope Drains	410	LF	\$	\$
9.	Silt Basin Type 'B'	10	EA	\$	\$
10.	Stabilization Stone	100	Tons	\$	\$
11.	Incidental Stone	100	Tons	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
12.	Excelsior Matting	10,000	SY	\$	\$
13.	Wattles	470	LF	\$	\$
14.	Temporary Construction Entrance	3	EA	\$	\$
15.	Temporary Stream Crossing	1	EA	\$	\$
16.	Seeding and Mulching	1	LS	\$	\$
17.	Grading	1	LS	\$	\$
18.	Undercut Excavation	1,000	CY	\$	\$
19.	Rock Excavation	2,000	CY	\$	\$
20.	15" RCP Storm Sewer Pipe, Class III	264	LF	\$	\$
21.	18" RCP Storm Sewer Pipe, Class III	88	LF	\$	\$
22.	36" RCP Storm Sewer Pipe, Class III	120	LF	\$	\$
23.	42" RCP Storm Sewer Pipe, Class III	64	LF	\$	\$
24.	48" RCP Storm Sewer Pipe, Class III	232	LF	\$	\$
25.	72" CAP Storm Sewer Pipe, 8 GA	90	LF	\$	\$
26.	15" Concrete Endwall – NCDOT Std. 838.80	1	EA	\$	\$
27.	36" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
28.	42" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
29.	48" Concrete Endwall – NCDOT Std. 838.80	3	EA	\$	\$
30.	72" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
31.	Open Throat Catch Basin – NCDOT Std. 840.04	1	EA	\$	\$
32.	Asphalt Intermediate Course Type I-19.0C	3,260	Tons	\$	\$
33.	Asphalt Surface Course Type SF-9.5C	2,300	Tons	\$	\$
34.	ABC Stone Base	9,120	Tons	\$	\$
35.	Pavement Markings	1	LS	\$	\$
36.	Guardrail w/GRU350 End Treatments, Complete in Place	2,700	LF	\$	\$
37.	Traffic Control	1	LS	\$	\$
38.	Borrow Material	10,000	CY	\$	\$
39.	Unsuitable Material Offsite Removal	10,000	CY	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
40.	Geotextile Fabric For Stabilization	2,500	SY	\$	\$
41.	Fire Hydrant Adjustment	2	EA	\$	\$
42.	Water Valve Box Adjustment	2	EA	\$	\$
43.	Manhole Adjustment	2	EA	\$	\$
44.	Contingency Allowance	1	EA	\$ 50,000.00	\$ 50,000.00
45.	Lime Stabilization	20,000	SY	\$	\$
46.	Stone Reconditioning	800	TN	\$	\$

Total Bid – Contract 1

5. Bidder agrees that the Work covered by the section or sections included in the contract award will be completed by the completion dates listed below. Contract time commences to run as provided in Paragraph 14.04 of the General Conditions. Completion shall mean completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions.

Completion Date

Stone Base Complete to Sta: 94+00± December 31st, 2015
Contract 1 Completion: June 30st, 2016

Bidder also agrees that should the bidder fail to accept a contract if awarded to them, or default on any other provisions of a contract award, the cash, certified check, or bid bond attached hereto shall become the property of the City of Graham as ascertained as liquidating damages for such default.

6. Communications concerning this Bid shall be sent to Bidder at the following address:

7. The terms used in this Bid, which are defined in the General Conditions included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.

8. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the contract documents.

9. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified above, which shall be stated in the Agreement. Bidder agrees that as liquidated damages for delay (but not as a penalty), Bidder shall pay Owner **Four Hundred Dollars (\$400.00)** for each day that expires after the time specified and in accordance with the Agreement.
10. The Owner reserves the right to add or delete bid items and add to or deduct from the estimated quantities as necessary to complete the project with no change in the unit price bid.
11. *The following documents are attached to and made a condition of the Bid:*
 - A. **Required Bid security in the form of Bid Bond – Certified Check (circle type of security provided);**
 - B. **Bidder is instructed to complete the Contractor’s Qualification Statement; see pages CQS-1 to CQS-3;**
 - C. **Bidder is instructed to complete either Affidavit A (pages MBE 10 and 11) or Affidavit B (page MBE-12).**
 - D. **Bidder is instructed to complete the Affidavit of Compliance with N.C. E-Verify Statutes; see page 000500-1.**

SIGNATURE OF BIDDER

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(Signature of Individual)

doing business as _____

Business address _____

Phone No. _____ Date _____, 20_____

If a Partnership

By _____
(Firm Name)

(signature of general partner)

Business address _____

Phone No. _____ Date _____, 20_____

If a Corporation

By _____
(Corporation Name)

(signature of authorized person)

(title)

Business address _____

Phone No. _____ Date _____, 20_____

Fax No. _____

END OF SECTION

T:\2015\15104 City of Graham - Melville Commerce Parkway Extension\dwg\ACAD-15104 - Mebane Property.dwg, 9/16/2015 11:36:46 AM, pwright, 1:1



alley, williams, carmen & king, inc.
 ENGINEERS, ARCHITECTS & SURVEYORS
 740 chapel hill road p.o. box 1179
 burlington, n.c. 27215 336/226-5534
 Firm's Engineering License No. F-0203

CITY OF GRAHAM
**SEN. RALPH SCOTT
 PARKWAY EXTENSION**
 MELVILLE TOWNSHIP, ALAMANCE COUNTY, NORTH CAROLINA

**POSSIBLE STOCKPILE
 EXHIBIT MAP**

SCALE: 1" = 300' DATE: 9-9-2015 DWG. BY PLW PROJECT NO.: 15104

SHEET NO.:
1
 OF 2

T:\2015\15104 City of Graham - Melville Commerce Parkway Extension\dwg\ACAD-15104 - Mebane Property.dwg, 9/16/2015 1:11:14 PM, pwright, 1:1



alley, williams, carmen & king, inc.
ENGINEERS, ARCHITECTS & SURVEYORS

740 chapel hill road p.o. box 1179
 burlington, n.c. 27215 336/226-5534

Firm's Engineering License No. F-0203

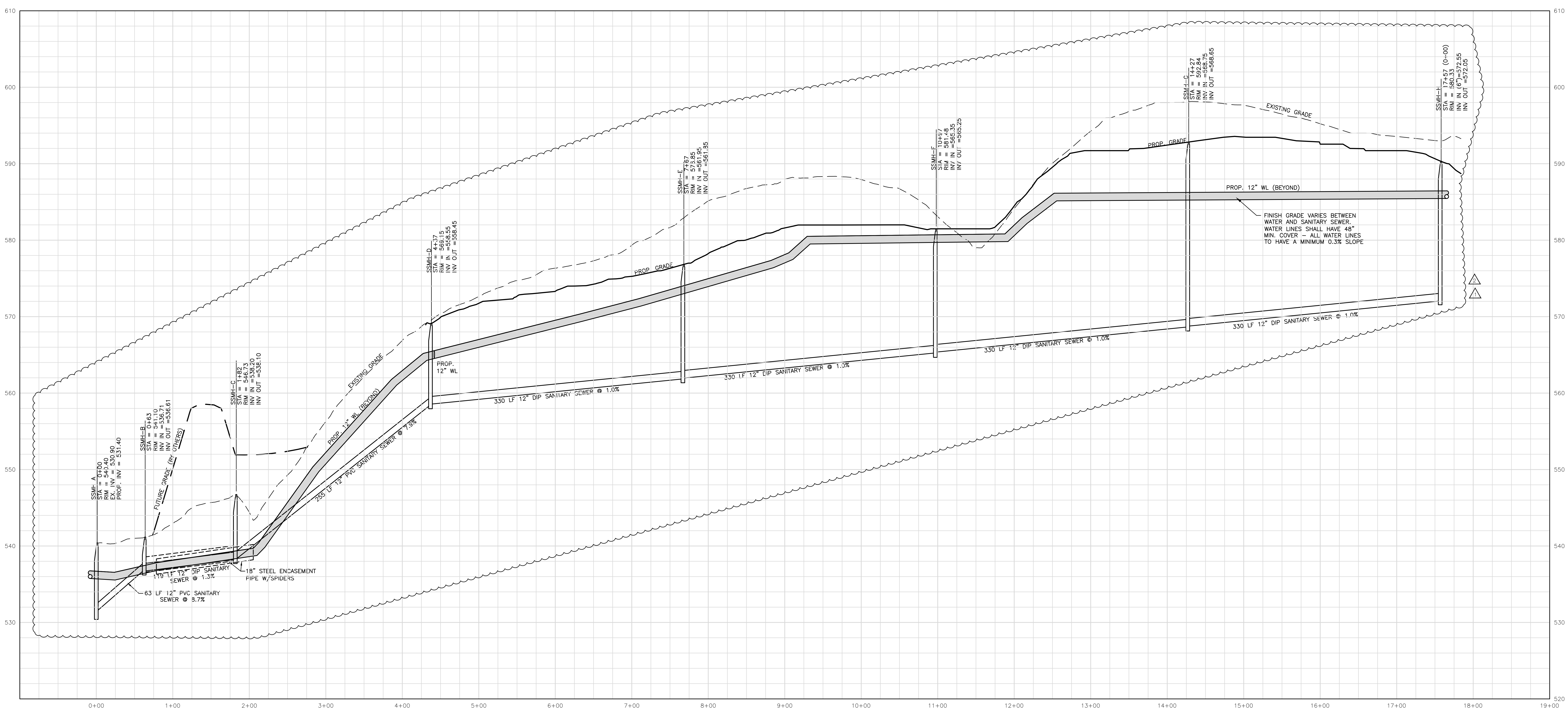
CITY OF GRAHAM
SEN. RALPH SCOTT
PARKWAY EXTENSION

MELVILLE TOWNSHIP, ALAMANCE COUNTY, NORTH CAROLINA

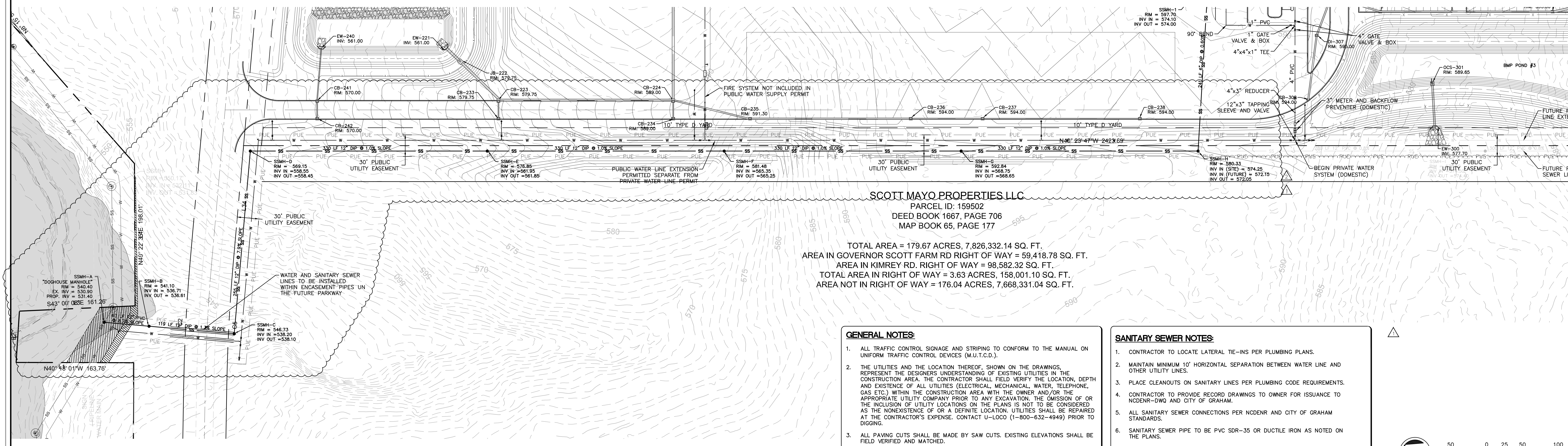
POSSIBLE STOCKPILE
EXHIBIT MAP

SCALE: 1" = 40' DATE: 9-9-2015 DWG. BY: PLW PROJECT NO.: 15104

SHEET NO. **2**
 OF 2



SCALE: H: 1" = 50'
V: 1" = 5'



SCOTT MAYO PROPERTIES LLC
PARCEL ID: 159502
DEED BOOK 1667, PAGE 706
MAP BOOK 65, PAGE 177

TOTAL AREA = 179.67 ACRES, 7,826,332.14 SQ. FT.
AREA IN GOVERNOR SCOTT FARM RD RIGHT OF WAY = 59,418.78 SQ. FT.
AREA IN KIMREY RD, RIGHT OF WAY = 98,582.32 SQ. FT.
TOTAL AREA IN RIGHT OF WAY = 3.63 ACRES, 158,001.10 SQ. FT.
AREA NOT IN RIGHT OF WAY = 176.04 ACRES, 7,668,331.04 SQ. FT.

- GENERAL NOTES:**
- ALL TRAFFIC CONTROL SIGNAGE AND STRIPING TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
 - THE UTILITIES AND THE LOCATION THEREOF, SHOWN ON THE DRAWINGS, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION. UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTACT U-LOCO (1-800-632-4949) PRIOR TO DIGGING.
 - ALL PAVING CUTS SHALL BE MADE BY SAW CUTS. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
 - CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVISE THE DESIGN WITH ARCHITECT / ENGINEER PRIOR TO PROCEEDING.
 - ANY UNSUITABLE MATERIAL ON SITE IS TO BE QUANTIFIED BY A GEOTECHNICAL ENGINEER, PRIOR TO REMOVING. CONTRACTOR MUST NOTIFY OWNER, OR OWNER'S REPRESENTATIVE, IN CASE UNSUITABLE MATERIAL IS UNCOVERED.

- SANITARY SEWER NOTES:**
- CONTRACTOR TO LOCATE LATERAL TIE-INS PER PLUMBING PLANS.
 - MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN WATER LINE AND OTHER UTILITY LINES.
 - PLACE CLEANOUTS ON SANITARY LINES PER PLUMBING CODE REQUIREMENTS.
 - CONTRACTOR TO PROVIDE RECORD DRAWINGS TO OWNER FOR ISSUANCE TO NCDENR-DWQ AND CITY OF GRAHAM.
 - ALL SANITARY SEWER CONNECTIONS PER NCDENR AND CITY OF GRAHAM STANDARDS.
 - SANITARY SEWER PIPE TO BE PVC SDR-35 OR DUCTILE IRON AS NOTED ON THE PLANS.
 - SANITARY SEWER PIPE UNDER FUTURE PARKWAY IS TO BE RESTRAINED JOINT DIP WITHIN ENCASEMENT PIPE.



THE INFORMATION PRESENTED ON THIS PLAN IS PRELIMINARY IN NATURE AND SHOULD NOT BE RELIED UPON FOR FINAL PRICING OR CONSTRUCTION. THE USER MUST RECOGNIZE THAT THE INFORMATION PRESENTED ON THIS DRAWING MAY CHANGE AS THE FINAL CONSTRUCTION PLANS ARE DEVELOPED. PROPOSED PROJECT COSTS OR DELAYS IN EXECUTION OF THIS PROJECT DUE TO FUTURE DESIGN CHANGES ARE NOT THE RESPONSIBILITY OF AEB ENGINEERS OR ITS SUB-CONTRACTORS.



CONSTRUCTION DOCUMENTS
MAY 12, 2015

NO.	REVISION	DATE
1	PER CITY REVIEW	08.08.15
2	PER CITY REVIEW	08.18.15

PROJECT MANAGER
David C. Powlen, RLA
PROJECT MANAGER
MARK S. VAN SICKLE, RLA
PROJECT MANAGER
MVS/FME/J

RETAIL DISTRIBUTION FACILITY
2180 KIMREY RD
ALAMANCE COUNTY
GRAHAM, NC

101.3580.00
PUBLIC SANITARY SEWER SYSTEM PLAN & PROFILE

Lime Soil Drying or Stabilization

1. Scarification

After the soil has been brought to line and grade, the subgrade can be scarified to the specified depth and width. It is desirable to remove non-soil materials larger than 3 inches, such as stumps, roots, turf, and aggregates. A scarified or pulverized subgrade offers more soil surface contact area for the lime at the time of lime application. If the contractor can show soil drying can be accomplished without scarifying the soils, or without severe dust loss, the scarification process can be eliminated. Because of the availability of superior mixers, lime is often applied without scarification. Lime trucks can also negotiate the roadway more readily if it is compacted, rather than scarified, particularly on wet soils. The main disadvantage of this procedure, however, pertains to weather conditions; when lime is placed on a smooth surface, there is greater chance for loss due to wind and runoff, particularly if mixing is not started immediately.

2. Lime Spreading

Quicklime

There are two ways that dry quicklime can be applied. First, self-unloading trucks or trailers can distribute quicklime pneumatically or mechanically the full width of the truck. Because granular and pebble quicklime flow is more controllable than hydrated lime, it is a common practice to use trucks with built in aggregate-type spreaders. For use of a pneumatic spread bar, the quicklime is typically fine sized ($\frac{1}{4}$ " by 0) to flow freely. A mechanical spread auger on the end of a truck, trailer, or a separate spread box can handle larger sized quicklime--typically up to $\frac{1}{2}$ " size. The subbase can be uneven or scarified for this type of application. This application works well in very wet soil conditions. The amount of lime applied to a site should not exceed the amount that can be mixed into the soil during the day of application. For drying soils, the use of 3% quicklime by weight should be used. This amount may be reduced depending on the moisture content of the soils to be dried.

3. Mixing and Watering

Mixing is required to distribute the lime throughout the soil and to pulverize the soil to prepare for the addition of water (depending on existing moisture content) to initiate the chemical reaction. This mixing can begin with scarification. Scarification may not be necessary for some modern mixers, however. During this process or immediately after, water should be added (when necessary). Rotary mixers should be employed to ensure thorough mixing of the lime, soil, and water. Regardless of the method used for water addition, it is essential that adequate water be added before final mixing to ensure complete hydration before compaction. A key requirement when using quicklime is to ensure complete hydration before mixing is completed and compaction starts.

4. Mellowing Period

The lime-soil mixture should mellow sufficiently to allow the chemical reaction to dry the material. The duration of this mellowing period should be based on engineering judgment and is dependent on soil type and existing moisture content. It may take up to 2 hours for the soils to be at the proper moisture content for compaction.

5. Compaction

The lime-soil mixture should be compacted to the density required by specification, typically at least 95 percent of the maximum density obtained in the AASHTO T 99 (Standard Proctor) test. The density value should be based on the Proctor curve from a representative field sample of the lime-soil mixture – not the untreated (raw) soil.



ADDENDUM NO. 2

Owner: City of Graham
201 South Main Street
Graham, NC 27253

Project: Senator Ralph Scott Parkway Extension
AWCK Project No. 15104

Bid Opening: Friday, October 2nd, 2015 at 11:00 AM
City of Graham
201 South Main Street
Graham, NC 27253

Date: September 30, 2015

General

The following changes, additions, interpretations and corrections are herewith made a part of the referenced project and shall take precedence over previous requirements. Contractors shall familiarize themselves with the content of this addendum, as it is a part of the contract documents.

Item No. 1 – Bid Item No. 25 – 72” CAP Storm Sewer Pipe, 8 GA

Clarification: Bid Item No. 25 – 72” RCP (Class III) Storm Sewer Pipe may be bid in lieu of 72” CAP Storm Sewer Pipe at the discretion of the bidder. If the bidder chooses to submit their bid with 72” RCP, bidder shall strike through “CAP Storm Sewer Pipe, 8 GA” and shall write in “RCP, Class III” and initial beside the change.

Item No. 2 – Bid Item No. 45 – Lime Stabilization

Revision: Bid Item No. 45 – Quantity and unit of measure on bid form for Lime Stabilization have been revised. See attached bid form.

Bidders are instructed to initial that Addendum No. 2 was received at the appropriate location on Page BF-1 of the Bid Form.

END OF ADDENDUM No. 2

S. Kyle Smith, P.E.

Alley, Williams, Carmen & King, Inc.
Firm License No. F-0203

Attachments: Bid Form

BID FORMS FOR CONTRACT 1
City of Graham
Senator Ralph Scott Parkway Extension

PROJECT IDENTIFICATION:

City of Graham
Contract 1: Senator Ralph Scott Parkway Extension

THIS BID IS SUBMITTED TO:

City of Graham
201 South Main Street
Graham, NC 27253

1. The undersigned bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents within the specified time and for the amount indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement For Bids and the Instructions to Bidders, including without limitation those dealing with the disposition of bid security. This Bid will remain subject to acceptance for 45 days after the day of bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Documents within 20 days after the date of Owner's Notice of Award.
3. In submitting this Bid, Bidder represents that:
 - a. Bidder has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
 - b. Bidder has visited the site and become familiar with and satisfied itself as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
 - c. Bidder is familiar with and has satisfied itself as to all Federal, State and Local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

- d. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site.
- e. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- g. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to obtain for itself any advantage over any other Bidder or over Owner.

4. Bidder will complete the Work for the following prices:

Contract 1: Senator Ralph Scott Parkway Extension

Owner: City of Graham

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
1.	Mobilization	1	LS	\$	\$
2.	Clearing & Grubbing and Debris Removal	1	LS	\$	\$
3.	Clean Stone for Erosion Control Devices	110	Tons	\$	\$
4.	Class 1 Rip-Rap	75	Tons	\$	\$
5.	Class B Rip-Rap	380	Tons	\$	\$
6.	Silt Fence	6,560	LF	\$	\$
7.	Hardware Cloth	190	LF	\$	\$
8.	Slope Drains	410	LF	\$	\$
9.	Silt Basin Type 'B'	10	EA	\$	\$
10.	Stabilization Stone	100	Tons	\$	\$
11.	Incidental Stone	100	Tons	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
12.	Excelsior Matting	10,000	SY	\$	\$
13.	Wattles	470	LF	\$	\$
14.	Temporary Construction Entrance	3	EA	\$	\$
15.	Temporary Stream Crossing	1	EA	\$	\$
16.	Seeding and Mulching	1	LS	\$	\$
17.	Grading	1	LS	\$	\$
18.	Undercut Excavation	1,000	CY	\$	\$
19.	Rock Excavation	2,000	CY	\$	\$
20.	15" RCP Storm Sewer Pipe, Class III	264	LF	\$	\$
21.	18" RCP Storm Sewer Pipe, Class III	88	LF	\$	\$
22.	36" RCP Storm Sewer Pipe, Class III	120	LF	\$	\$
23.	42" RCP Storm Sewer Pipe, Class III	64	LF	\$	\$
24.	48" RCP Storm Sewer Pipe, Class III	232	LF	\$	\$
25.	72" CAP Storm Sewer Pipe, 8 GA	90	LF	\$	\$
26.	15" Concrete Endwall – NCDOT Std. 838.80	1	EA	\$	\$
27.	36" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
28.	42" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
29.	48" Concrete Endwall – NCDOT Std. 838.80	3	EA	\$	\$
30.	72" Concrete Endwall – NCDOT Std. 838.80	2	EA	\$	\$
31.	Open Throat Catch Basin – NCDOT Std. 840.04	1	EA	\$	\$
32.	Asphalt Intermediate Course Type I-19.0C	3,260	Tons	\$	\$
33.	Asphalt Surface Course Type SF-9.5C	2,300	Tons	\$	\$
34.	ABC Stone Base	9,120	Tons	\$	\$
35.	Pavement Markings	1	LS	\$	\$
36.	Guardrail w/GRU350 End Treatments, Complete in Place	2,700	LF	\$	\$
37.	Traffic Control	1	LS	\$	\$
38.	Borrow Material	10,000	CY	\$	\$
39.	Unsuitable Material Offsite Removal	10,000	CY	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Amount
40.	Geotextile Fabric For Stabilization	2,500	SY	\$	\$
41.	Fire Hydrant Adjustment	2	EA	\$	\$
42.	Water Valve Box Adjustment	2	EA	\$	\$
43.	Manhole Adjustment	2	EA	\$	\$
44.	Contingency Allowance	1	EA	\$ 50,000.00	\$ 50,000.00
45.	Lime Stabilization	300	TN	\$	\$
46.	Stone Reconditioning	800	TN	\$	\$

Total Bid – Contract 1

5. Bidder agrees that the Work covered by the section or sections included in the contract award will be completed by the completion dates listed below. Contract time commences to run as provided in Paragraph 14.04 of the General Conditions. Completion shall mean completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions.

Completion Date

Stone Base Complete to Sta: 94+00±
 Contract 1 Completion:

December 31st, 2015
 June 30st, 2016

Bidder also agrees that should the bidder fail to accept a contract if awarded to them, or default on any other provisions of a contract award, the cash, certified check, or bid bond attached hereto shall become the property of the City of Graham as ascertained as liquidating damages for such default.

6. Communications concerning this Bid shall be sent to Bidder at the following address:

7. The terms used in this Bid, which are defined in the General Conditions included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.
8. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the contract documents.

9. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified above, which shall be stated in the Agreement. Bidder agrees that as liquidated damages for delay (but not as a penalty), Bidder shall pay Owner **Four Hundred Dollars (\$400.00)** for each day that expires after the time specified and in accordance with the Agreement.
10. The Owner reserves the right to add or delete bid items and add to or deduct from the estimated quantities as necessary to complete the project with no change in the unit price bid.
11. *The following documents are attached to and made a condition of the Bid:*
 - A. **Required Bid security in the form of Bid Bond – Certified Check (circle type of security provided);**
 - B. **Bidder is instructed to complete the Contractor’s Qualification Statement; see pages CQS-1 to CQS-3;**
 - C. **Bidder is instructed to complete either Affidavit A (pages MBE 10 and 11) or Affidavit B (page MBE-12).**
 - D. **Bidder is instructed to complete the Affidavit of Compliance with N.C. E-Verify Statues; see page 000500-1.**

SIGNATURE OF BIDDER

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(Signature of Individual)

doing business as _____

Business address _____

Phone No. _____ Date _____, 20_____

If a Partnership

By _____
(Firm Name)

(signature of general partner)

Business address _____

Phone No. _____ Date _____, 20_____

If a Corporation

By _____
(Corporation Name)

(signature of authorized person)

(title)

Business address _____

Phone No. _____ Date _____, 20_____

Fax No. _____

END OF SECTION



STAFF REPORT

SUBJECT:	LINK TRANSIT SYSTEM
PREPARED BY:	FRANKIE MANESS, CITY MANAGER

REQUESTED ACTION:

Decide whether or not to participate with other local agencies in developing and supporting a Graham Route through the Link Transit fixed route bus system.



BACKGROUND/SUMMARY:

The City Council considered participation in the fixed route bus system that included a Graham route in early 2014 and indicated its intentions to forgo participation. Since that time other community partners and local governments have been working to investigate a route to include Graham destinations in the overall system. The particular destinations being considered are ACC, the S. Main St. Park & Ride lot, and downtown court and governmental offices. Alamance County, ACC, United Way, the Hayden-Harman Foundation and the City of Burlington are among those expressing interest in participating as partners in a Graham route. The City of Graham is being afforded an opportunity to reconsider through a partnership with the aforementioned agencies so that service may be expanded to additional citizens and areas of Graham. Partnership will afford the City membership on the Public Transit Advisory Commission where decisions such as the number and placement of bus stops will be considered.

Many questions regarding the potential ridership and service area of a Graham route have been voiced. While it's impossible to predict the exact outcome and utilization of the service, consider these estimates:

- If a fixed route bus system were implemented through Link Transit, staff estimates that roughly a third of our residents and over 400 businesses would be within walking distance of a potential bus stop (see map).
- An anecdotal review of Graham's demographics suggests potential need and ridership among citizens in two categories: persons living below the poverty level and persons under the age of 18. Graham has a greater percentage of citizens in these two categories than Burlington, Alamance County and the State.

	Graham	Burlington	Alamance County	North Carolina
Population	14,479	51,812	155,792	9,943,964
Persons Below Poverty Level	3,518	11,347	28,510	1,740,194
% Below Poverty Level	24.30	21.90	18.30	17.50
Persons Under 18	3,649	12,539	35,676	2,376,607
% Under 18	25.2	24.2	22.9	23.9

FISCAL IMPACT:

Estimates for initial annual operating costs to the partners for a Graham route are \$120,000, with Graham's share being approximately \$25,000. The estimated cost from 2014 was \$98,580. This is roughly equivalent to 1.5% of our existing annual appropriation for transportation (current appropriation is \$1,630,000 and a \$7,600 appropriation to ACTA).

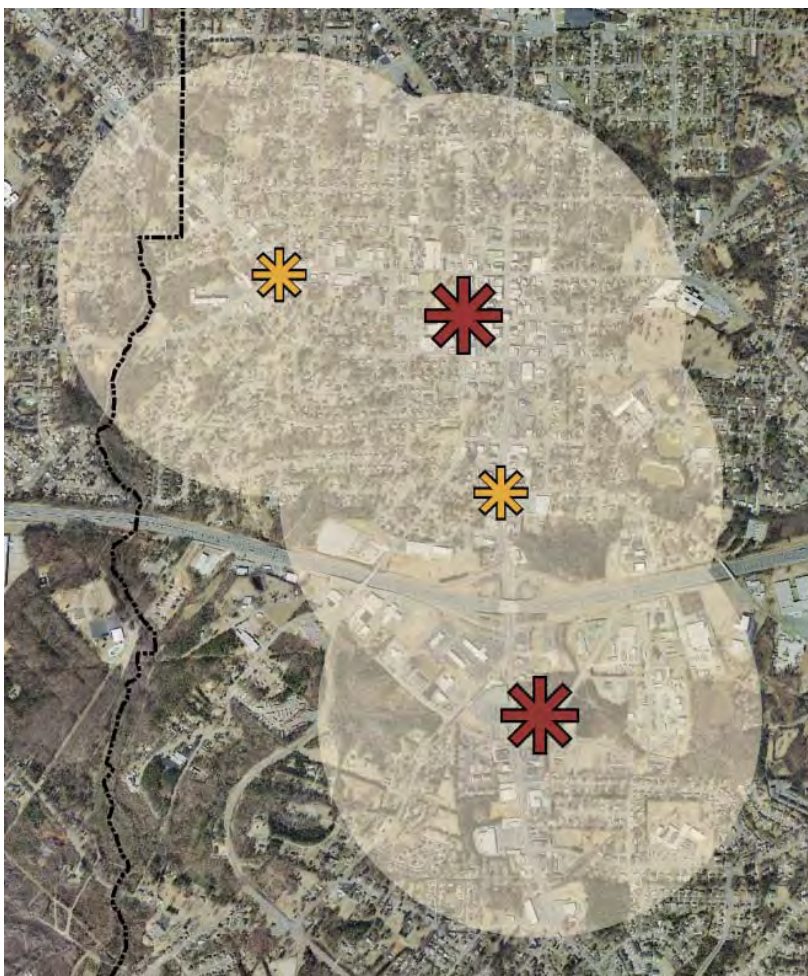
STAFF RECOMMENDATION:

None. The staff continues to believe that the initiation or expansion of service is a decision that comes from the top down rather than the staff level up. Participation in a fixed route system or another transportation alternative boils down to necessity, support and financial backing as determined by the Council who represent the citizens. Staff is here to support any efforts by providing pertinent information and carrying out the wishes of the elected officials.

The City's only other serious attempt to provide alternative transportation came in 2006 following the completion of a pedestrian transportation plan. \$4.5 million (using 2006 numbers) in infrastructure was identified as needed to enhance the pedestrian sidewalk network. This is an example of the cost barrier associated with introducing or enhancing transportation service. With the introduction of partners in a Graham route, the barrier to introducing the service is reduced when compared to 2014. Inasmuch, alternative forms of transportation; including a fixed route urban transit system should continue to be matters the City must consider to serve the future needs of the citizens of Graham.

SUGGESTED MOTION(S):

1. I move we forgo participation in the Link Transit system.
2. I move we participate in the Link Transit system and work towards implementation of a Graham route.



Four potential bus stop locations with a 10-minute walk radius around each.



MEDIA RELEASE

For Immediate Release

Date: August 18,
2015

Contact: Rachel Kelly

rkelly@ci.burlington.nc.us

(o)336.222.5076 (c) 336.516.1532

The City of Burlington Introduces Link Transit

BURLINGTON, NC— During their August 17, work session meeting, the Burlington City Council approved a proposal for a name, tagline, and logo package for the public transit system that the City will begin operating in the spring of 2016.

On June 2, the Burlington City Council approved a contract with Quest Corporation of America (QCA) for the branding, marketing, and public education efforts associated with the launch of a public transit system. Since the approval of the contract, a team of city staff members has worked closely with QCA to first establish a proposal for a system name, tagline, and logo.

To inform the branding process, the public was asked to use two words to describe public transit and two words to describe the community. This survey was distributed on **the City's website, social media accounts, via email, and through comment cards** that were collected at two public events and from targeted audiences such as senior citizens and those utilizing the services of the homeless shelter. Over the course of two weeks, 286 responses were collected.

Words most often used to describe what public transit meant to respondents were: connect, access, opportunity, important, necessary, independence, and accessibility.

Using the feedback from the survey and through examination of the position of public transit in the Burlington area, **the branding team recognized that Burlington's transit system will be a link that connects services, a link between key destinations, and ultimately, a critical link in the lives of residents. Therefore, the transit system name "Link Transit" was proposed to and accepted by the City Council.**

The branding team realizes that the City of Burlington wants people to ride public transit and promises to make it an enjoyable experience. Public transit will provide an important connection from where riders are to where they want to be. As a result, the

Link Transit tagline “Ride. Enjoy. Connect.” was proposed to and accepted by the City Council.

Color theory was considered during the design process of the Link Transit logo. A five color palate was selected. Three colors, blue, green and dark grey, make up the logo and an additional two colors, dark blue and light grey, support the logo in its applications on marketing materials. Blues convey trust, dependability, and cleanliness. Green symbolizes growth and rebirth. Each of these concepts is important to convey through the Link Transit logo package. Hexagonal elements are used in the logo to create a modern feel that is clean in appearance. The six connection points of a hexagon symbolize the many connections that will be made by bringing public transit to the Burlington area.

Of the new name and logo package, Councilmember Kathy Hykes said “Naming our transportation system Link Transit strikes me as original, appropriate and catchy. It will quickly become shortened to The Link. It perfectly describes what we are trying to do in our city which is to bring people to jobs, schools, shopping and medical facilities as well as other community resources and services.”

“The branding team worked hard to propose a system name that would truly reflect what public transportation will mean to this community. We wanted the design to be something that would give residents a sense of excitement and pride.” Director of Development Technical Services Nolan Kirkman commented regarding the branding process.

Residents can look forward to the launch of a Link Transit website in the coming months which will be the hub of all information related to Link Transit and its operation in the spring of 2016.

Logo files for Link Transit are attached to this media release.

LINK TRANSIT
ride • enjoy • connect
 ###

Our Mission:

“The City of Burlington is dedicated to providing high quality municipal services within our diverse community in a friendly, professional and efficient manner in order to promote the safety, health, and quality of life of residents and employees.”

Burlington Municipal Building • 425 South Lexington Avenue, Burlington, NC 27215
www.BurlingtonNC.gov • www.Facebook.com/BurlingtonNC • [Twitter @BurlingtonNC](https://twitter.com/BurlingtonNC)
www.Flickr.com/BurlingtonNC • [Instagram @BurlingtonNC](https://www.instagram.com/BurlingtonNC)

September 29, 2015

Mr. Harold Owen
223 Engleman Ave.
Burlington, NC 27215

Dear Mr. Owen:

The Hayden-Harman Foundation was extremely pleased by the City of Burlington's decision to implement a fixed-route public transit system. This is a service that is much needed by many residents of Burlington and surrounding communities.

We have been excited about the recent discussions about adding an additional route to the main Alamance Community College (ACC) campus. We believe that this route is an important component to having a successful transit system. Consequently, the Foundation has decided to give an annual grant of \$10,000 over the next four years to the City of Burlington for the development of the ACC route. The first year of this grant will be 2015 and the last will be in 2018.

Please call me at (336) 508-2703 if you have any questions.

Sincerely,



Patrick Harman, PhD
Executive Director



STAFF REPORT

SUBJECT:	DETERMINATION AND DISPOSAL OF SURPLUS PERSONAL PROPERTY
PREPARED BY:	FRANKIE MANESS, CITY MANAGER

REQUESTED ACTION:

Approve Resolution Authorizing the City Manager and Finance Officer the Authority to Determine and Dispose of Surplus Personal Property.

BACKGROUND/SUMMARY:

For many years the City participated with other local governments in an annual live auction and more recently in electronic auctions on GovDeals.com to dispose of surplus personal property. The City of Graham has an ongoing need to dispose of surplus property throughout the year as equipment is replaced or taken out of service and could benefit from a more efficient process. Some cities streamline the process by delegating disposal of surplus personal property to employees of the City.

The purpose of this resolution is to provide for a simplified and continuous approach for the disposal of all personal property valued less than \$30,000 as part of the normal administrative process. Currently when an item is replaced or removed from service, the asset is stored until a declaration by City Council and an annual auction is held. There are many cases where assets are stored for several months as the Finance Department awaits enough items to justify a sale and sometimes this process will cross fiscal years. The resolution would also serve to provide clarification and authority on how to handle other, but less straightforward disposals such as scrap metal, wood products and salvage assets.

FISCAL IMPACT:

Negligible. The City may realize some revenue from surplus items that would have otherwise been discarded, such as electronics.

STAFF RECOMMENDATION:

Approval. This process would provide a more efficient way of handling surplus property and free up valuable storage space and staff time. It also affords the City the ability to take full advantage of the convenience and nationwide reach of online auction and sales sites.

SUGGESTED MOTION(S):

I move we approve the Resolution Authorizing the City Manager and Finance Officer the Authority to Determine and Dispose of Surplus Personal Property.

**RESOLUTION AUTHORIZING THE CITY MANAGER AND FINANCE OFFICER
THE AUTHORITY TO DETERMINE AND DISPOSE OF SURPLUS PERSONAL
PROPERTY**

WHEREAS, The City of Graham desires to dispose of property determined to be surplus;

WHEREAS, G.S. 160A-266 allows a city council to adopt regulations prescribing procedures for disposing of personal property valued at less than thirty thousand dollars (\$30,000) for any one item or group of items;

WHEREAS, regulations shall be designed to secure for the City fair market value for all property disposed of and to accomplish the disposal efficiently and economically;

WHEREAS, a council may authorize one or more city officials to declare surplus any personal property valued at less than thirty thousand dollars (\$30,000) for any one item or group of items, to set its fair market value, and to convey title to the property for the city in accord with the regulations;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Graham that:

The City of Graham (“City”) desires to dispose of surplus personal property valued at less than thirty thousand dollars (\$30,000) by appointing the City Manager and Finance Officer the officials responsible for declaring any personal property valued at less than thirty thousand dollars (\$30,000) as surplus, set its fair market value, and to convey title to the property for the City.

BE IT FURTHER RESOLVED, that the City Manager and Finance Officer shall keep a record of all property sold and that record shall generally describe the property sold or exchanged, to whom it was sold, or with whom exchanged, and the amount of money or other consideration received for each sale or exchange.

Adopted this 6th day of October 2015.

Mayor Jerry Peterman

Attest:
