CONTRACT DOCUMENTS AND DETAILED SPECIFICATIONS FOR

**STREETSCAPE REHABILITATION**

# BROAD STREET at WEST 2nd AVE.

# and

# BROAD STREET AT WEST 3rd AVE.

## BID No. 028-20

## AUGUST 2020

**PREPARED FOR**

**CITY OF ROME PUBLIC WORKS DEPARTMENT**

**BY**

**CITY OF ROME ENGINEERING DEPARTMENT**

P.O. Box 1433, 200 Vaughn Rd., Rome, GA 30162-1433

**CITY OF ROME, GEORGIA**
**ADVERTISEMENT FOR BIDS**
**Bid No. 028-20**

Sealed Bids for construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, will be received in the Purchasing Department Conference Room in City Hall, located at 601 Broad Street, Rome, Georgia, 30161 until **10:00 a.m., September 10th, 2020** at which time and place they will be publicly opened and read aloud. No bid may be withdrawn after the closing time for the receipt of bids for a period of 60 days.

Work To Be Done: The work to be done consists of furnishing all labor, tools, equipment and materials necessary to construct the of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE."**, per the drawings and specifications herein. Bidders must complete the Bid Form to be considered. This work is located in city streets and along city sidewalks. The contractor selected for this project will need to install traffic control in accordance with the current version of the MUTCD, and will need to make every effort possible to keep a pathway available to pedestrians along the sidewalk during the course of the project.

The Contract shall consist of the removal and replacement of existing concrete curb and gutter, concrete sidewalks and brick pavers at the intersections of Broad Street and West 2nd Avenue and at Broad Street and West 3rd Avenue.

Handicap ramps at all intersections and are required to be constructed in full and complete compliance with GDOT Standard Details as well as current ADA requirements.

All concrete removed from project is to be disposed of in accordance with GA Rule 391-3-4.

Contract shall be **45** consecutive calendar days for completion of the work, to be computed from the date of the Notice to Proceed.

**NOTE**: Lane closure restrictions at Broad Street and West 2nd Ave. (S.R. 101) are required. No lane closures at this intersection are allow prior to 9:30 a.m. or after 4:00 p.m. on weekdays. Additional lane closure requirements may be imposed by the owner should traffic congestion become a problem. Every effort possible by the contractor to minimize abnormal traffic congestion while working on this project should be used.

Plans, Specifications and Contract Documents: Specifications, and Contract Documents are on file in the office of the Rome Engineering Services Department, P.O. Box 1433, 200 Vaughn Rd., and the City of Rome Purchasing Department, 601 Broad Street, Rome, Georgia 30161-1433. Copies may be obtained online at the City of Rome, Georgia website www.romega.us/bids. Interested parties may download all drawings, specifications and contract documents necessary from the website. The detail drawings are compiled at 11" X 17" sheet size and may be downloaded

and printed provided the interested firm has large sheet print capability. Copies can otherwise be obtained in person at the Engineering Services Department or via phone 706-378-3846. Documents and Drawings are $25.00 per set (non-refundable). Checks should be made payable to the "City of Rome, Georgia". Interested parties must provide the company name, contact person, address, phone number and e-mail address when purchasing plans. It shall be the full and complete responsibility of interested parties choosing to download the documents from the City of Rome website to check said website on a frequent basis to insure discovery of any addenda that may be issued. Any bid that does not include all addenda issued may be considered incomplete and may be rejected.

Bonds: All Bids must be accompanied by the Bidder's Declaration, Non-Collusion Affidavit, Certificate of Non-Discrimination, Bid Bond, List of Contractors, SAVE, E-Verify Compliance Affidavit, State of Georgia Prompt Pay Act Affidavit, Drug-Free Workplace Certificate, Taxpayer Identification Number and Certification in order to bid the project. Any Bid not having all required documents fully executed will be considered incomplete. The bid bond accompanying the bid must be in an amount of not less than 5% of the total amount of the bid. The successful bidder, if awarded the project, will be required to furnish a Performance Bond and Materials Payment Bond, each in the amount of 100% of the contract amount if the contract exceeds $100,000.00 dollars. The successful bidder, if awarded the contract shall be required to provide a Certificate of Insurance in the amount of (two) $2,000,000.00 million dollars Workers Compensation as required by the State of Georgia with the City of Rome listed as the additionally insured before a "Notice to Proceed" will be issued if the contract exceeds $100,000.00 dollars.

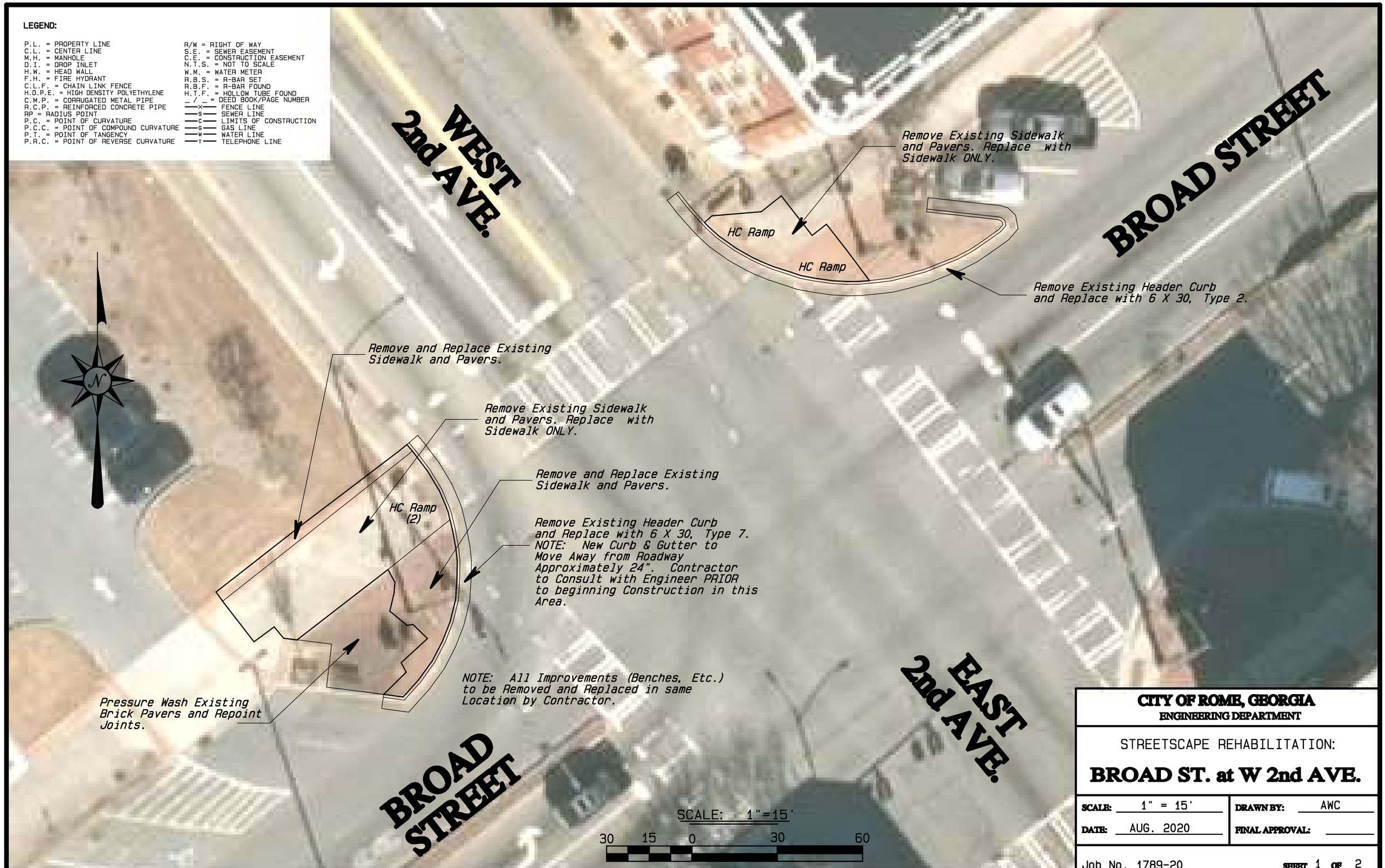
The City of Rome Georgia reserves the right to reject any or all bids, to waive informalities, and to re-advertise if necessary.

By: City of Rome, Georgia
Becky Smyth
Director of Purchasing

**LEGEND:**

P.L. = PROPERTY LINE
C.L. = CENTER LINE
M.H. = MANHOLE
D.I. = DROP INLET
H.W. = HEAD WALL
F.H. = FIRE HYDRANT
C.L.F. = CHAIN LINK FENCE
H.D.P.E. = HIGH DENSITY POLYETHYLENE
C.M.P. = CORRUGATED METAL PIPE
R.C.P. = REINFORCED CONCRETE PIPE
RP = RADIUS POINT
P.C. = POINT OF CURVATURE
P.C.C. = POINT OF COMPOUND CURVATURE
P.T. = POINT OF TANGENCY
P.R.C. = POINT OF REVERSE CURVATURE

R/W = RIGHT OF WAY
S.E. = SEWER EASEMENT
C.E. = CONSTRUCTION EASEMENT
N.T.S. = NOT TO SCALE
W.M. = WATER METER
R.B.S. = R-BAR SET
R.B.F. = R-BAR FOUND
H.T.F. = HOLLOW TUBE FOUND
_ / _ = DEED BOOK/PAGE NUMBER
—x— FENCE LINE
—s— SEWER LINE
—c— LIMITS OF CONSTRUCTION
—G— GAS LINE
—W— WATER LINE
—T— TELEPHONE LINE




**CITY OF ROME, GEORGIA**
**ENGINEERING DEPARTMENT**

STREETSCAPE REHABILITATION:

**BROAD ST. at W 2nd AVE.**

| | |
|---|---|
| SCALE: 1" = 15' | DRAWN BY: AWC |
| DATE: AUG. 2020 | FINAL APPROVAL: |

Job No. 1789-20

SHEET 1 OF 2

**LEGEND:**

P.L. = PROPERTY LINE
C.L. = CENTER LINE
M.H. = MANHOLE
D.I. = DROP INLET
H.W. = HEAD WALL
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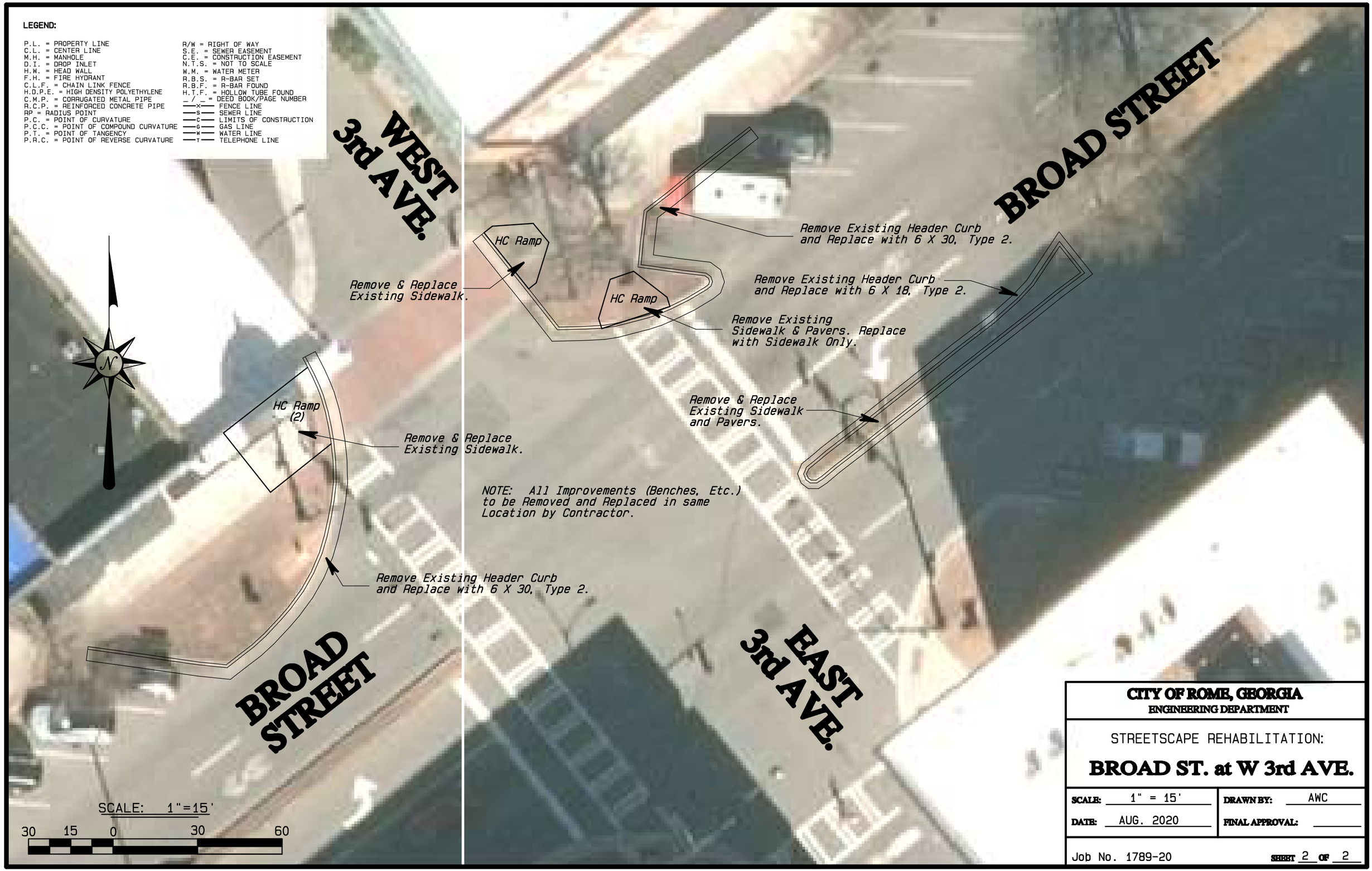



**CITY OF ROME, GEORGIA**
ENGINEERING DEPARTMENT

STREETSCAPE REHABILITATION:

**BROAD ST. at W 3rd AVE.**

| | |
|---|---|
| SCALE: 1" = 15' | DRAWN BY: AWC |
| DATE: AUG. 2020 | FINAL APPROVAL: |

Job No. 1789-20

SHEET 2 OF 2

# INSTRUCTIONS TO BIDDERS

1. Intent: It is intended that the Instructions to Bidders, General Conditions, Detailed Specifications and the Contract Drawings shall define and describe the complete work to which they relate.

2. Definitions: Where the following words or the pronouns used in their stead occur herein, they shall have the following meaning:

"Owner" shall mean the City of Rome, Georgia, or its authorized and legal representative.

"Director" shall mean the Street and Drainage Department Director of Rome, Georgia, or his authorized and legal representatives.

"Engineer" shall mean the Director of Engineering Services Department of Rome, Georgia, or his authorized and legal representative.

"Contractor" shall mean the party of the second part to the Contract Agreement or the authorized and legal representative of such party.

"Contract Time" shall mean **45** consecutive calendar days for completion of the work, to be computed from the date of the Final Notice to Proceed.

"Liquidated Damages" shall mean the sum of Three Hundred Dollars ($300.00) which the Bidder agrees to pay for each consecutive calendar day beyond the Contract Time required to complete the work.

"Products" shall mean materials or equipment permanently incorporated into the work. "Provide" shall

mean to furnish and install.

“Remove & Replace” shall mean the removal of existing material and the replacement with materials as specified within the specifications and drawings herein. Generally speaking the new improvements shall be installed at the existing alignment and grade, however, minor changes may be required. Prior to the placement of the forms, the contractor shall consult with Engineer to confirm that the new installation is to be in conformance with existing alignment and grade on each project. All areas disturbed as part of the “Remove & Replace” shall be restored to “as-good” or “better” conditions in which they were found by the Contractor as part of the “remove & replace” unit price. No additional payment will be made for restoration of adjacent areas. In the area of handicap ramps and drives, saw cutting of existing pavement may be required. No additional payment will be made for saw cutting but shall be included as part of the “remove and replace” unit price.

"New" shall mean the area to receive the new improvements is in its original condition. Installation of curb and gutter in these areas may require the saw cutting of the existing pavement, excavation of shoulder material, compaction of the existing subgrade material, installation and compaction of graded aggregate base prior to the placement of the curb and gutter. Likewise, areas to receive sidewalk may require the removal of existing material and the compaction of the existing material prior to the placement of the sidewalk. Ditches may also exist in these areas and may require the placement of material to bring those areas to grade prior to the placement of the new sidewalk. All work with the exception of Removal and Replacement of Unsuitable Materials shall be included in the unit bid for "New" Improvements. The City of Rome shall be responsible for the establishment of line and grade.

3. Work to Be Done: The work to be done consists of furnishing all products and performing all labor necessary to construct **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, including, but not limited to, saw cutting, excavation, trenching, pipe installation, backfilling, compaction of materials, setting of forms, placing and finishing concrete.

4. Addenda and Interpretations: No interpretation of the meaning of the drawings, specifications or other pre-bid documents will be made to any bidder orally. All questions should be submitted simultaneously to jabercrombie@rome.ga, acarroll@romega.us, cjenkins@romega.us, via Email. All questions and answers will be posted on the website – www.RomeFloyd.com. In order for a request for an interpretation to be given consideration, it must be received by 5:00 p.m., September 3, 2020.

Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications which shall be posted on the City of Rome Web Site not later than three days prior to the date affixed for the opening of the bids. Failure of a bidder to retrieve any Addendum shall not relieve him of any obligation under his bid. It shall be the full and complete responsibility of interested parties to check the website on a frequent basis to insure discovery of any addenda that may be issued. Any bid received that does not include all addenda issued may be considered incomplete and may be rejected.

5. Substitutions: Whenever the design is based on a specific product of a particular manufacturer, that manufacturer will be shown on the Drawings and/or provided in the list of approved manufacturers in the specifications. Any item other than those so designated shall be considered a substitution.

Approval of substitutions will be made under the following provisions:

(a) If the manufacturer is named in the Drawings and/or Detailed Specifications as an approved manufacturer, products of the manufacturer meeting all specification requirements are acceptable.

(b) If the term "EQUAL TO" precedes the names of approved manufacturers in the Specifications, the Contractor may, after receiving the Notice to Proceed, submit shop drawings on the substitute product for the approval of the Engineer.

Any bidder intending to furnish substitute products is cautioned to verify that the item being furnished will perform the same functions and have the same capabilities as the item specified. The Bidder should include in his bid the cost of accessory items which may be required by the substitute product and the cost of any architectural, structural, mechanical, piping, electrical, or other modifications required to accommodate the substitution.

Approval of the Engineer is dependent on his determination that the product offered is essentially equal in function, performance, quality of manufacture, ease of maintenance, reliability, and service life to the product on which the design is based, and will require no other major modifications to the project design.

6. Site Examination: The Bidder is highly advised to examine streets within the City of Rome as to their conditions in that the greater majority of this work shall be along and or across existing or new city streets.

7. Bids: All Bids must be made on the Bid forms contained herein. Bids may be mailed or delivered in a sealed envelope, to the City of Rome, Purchasing Department, 601 Broad Street, Rome, GA 30161, and labeled **"BID NO. 028-20, STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE."**. The Bid package shall also bear the name of Contractor thereon.

8. Bid and Contract Security: Each Bid must be accompanied by the Bid Bond provided in the Contract Documents, complete and executed, for an amount equal to at least five percent (5%) of the amount bid. The Bid Bond may be removed from the bid book to facilitate its execution, but must be reattached for submittal of the "Bid". Security may be provided in the form of a certified check, cashier's check, or cash deposit check. No other check type will be acceptable.

Bid shall not be read aloud or considered complete unless all other required documents specified in the "Advertisements for Bid" are provided with the Bid (O.C.G.A. 36-91-41(d)). If for any reason whatsoever the Bidder withdraws from the competition after opening the bids, or if he refuses to execute the Contract, the Owner will proceed on the Bid Bond.

The Surety of the Bid Bond, Performance Bond, and Payment Bond shall be a surety company authorized to do business in the State of Georgia, shall be listed in the Department of the Treasury Circular 570, and shall have an underwriting limitation in excess of 100% of the bid amount. The Bonds and Surety shall be subject to approval by the Attorney for the Owner.

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

9. Right to Reject Bids: The Owner reserves the right to reject any or all bids and to waive informalities. No bids will be received after the time set for opening Bids. Any unauthorized conditions, limitations or provisions attached to the Bid, except as provided herein, will render it informal and may cause its rejection. Unbalanced bids will be subject to rejection. Any bidder may withdraw his bid, either personally, by facsimile, or written request, at any time prior to the scheduled closing time for receipt of bids. Facsimile or written request for withdrawal must be in the possession of the Owner prior to the closing time for receipt of bids.

10. Bid Opening: Bids will be opened in public and read aloud. All bidders are welcome to be present at the opening.

11. Determination of Successful Bidder: Bids will be evaluated not only on Bid amount, but will be also be given consideration related to life expectancy of the Bid option compared with Bid amount to provide the overall best value for the project. The Contract will be awarded to the overall best responsive, responsible bidder, if awarded.

(a) Responsibility: The determination of the bidder's responsibility will be made by the Owner based on whether the bidder:

(1) maintains a permanent place of business,

(2) has the appropriate technical experience,

(3) has adequate plant and equipment to do the work properly and expeditiously, and

(4) has suitable financial means to meet obligations incidental to the work.

The bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, the bidder fails to satisfy the Owner that he is properly qualified to carry out the obligations of the Contract.

(b) Responsiveness: The determination of responsiveness will be made by the Owner based on a consideration of whether the bidder has submitted a complete Bid form without irregularities, excisions, special conditions, or alternative bids for any item unless specifically requested in the Bid form.

# BID

TO THE CITY OF ROME, GEORGIA

Submitted: _____, 2020

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making bid or Bid; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined all Drawings and the Specifications for the work and has read all Instructions to Bidders and General Conditions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the City of Rome, Georgia, in the form of contract specified, to furnish all necessary products, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, in full and complete accordance with the noted, and reasonably intended requirements of the Specifications and Contract Documents to the full and entire satisfaction of the City with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents, for the following prices:

(CONTRACT)

The Contract shall consist of the removal and replacement of existing concrete curb and gutter, concrete sidewalks and brick pavers at the intersections of Broad Street and West 2nd Avenue and at Broad Street and West 3rd Avenue.

ITEM 1 – For furnishing all materials and performing all labor necessary to complete of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, including all work shown and/or specified and **NOT** included in Items 2 through 8 below, the amount of

_____ Dollars ($_____).

ITEM 2 – CURB & GUTTER (REMOVE HEADER CURB & REPLACE w/6X30, Typ. 7 Face)

a. 60 LF (GDOT 9032B) $_____/LF $_____

ITEM 3 – CURB & GUTTER (REMOVE HEADER CURB & REPLACE w/6X30, Type. 2 Face)

a. 300 LF (GDOT 9032B) $_____/LF $_____

ITEM 4 – CURB & GUTTER (REMOVE HEADER CURB & REPLACE w/6X18, Type. 2 Face)

a. 130 LF (GDOT 9032B) $_____/LF $_____

ITEM 5 – DETECTABLE WARNING SURFACE WITHIN WHEEL CHAIR RAMP

a. 8 EA Brick – (Per Spec.) $_____/EA $_____

ITEM 6 – SIDEWALK (REMOVE & REPLACE)

a. 200 SY 4" Thick Concrete $_____/SY $_____

ITEM 7 – STREETSCAPE PAVERS (REMOVE & REPLACE)

a. 500 SF (Per Spec.) $_____/SF $_____

ITEM 8 – STREETSCAPE PAVERS (PRESURE WASH and REPOINT)

a. 275 SF $_____/SF $_____

TOTAL ITEMS 1 THROUGH 8 , INCLUSIVE IN THE AMOUNT OF _____DOLLARS ($_____).

The Bidder agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written order of the Owner, and to fully complete all work under this Contract as determined by the Owner and Bidder.
The Bidder declares that he understands that quantities for unit price items herein are subject to increase, or decrease and that should the quantities of any of the items increased, or decrease, the Bidder proposes to complete the work at the unit prices herein.

Anticipated Start Date _____.

Bidder acknowledges receipt of Addenda _____ .

Bidder: _____

By: _____

Title: _____

Address: _____

_____

_____

Phone: _____

Attached hereto is a Bid Bond for the sum of _____Dollars ($_____) according to the conditions of "Instructions to Bidders" and provisions thereof.

The full names and addresses of persons or parties interested in the foregoing bid, as principals, are as follows:

| NAME | ADDRESS |
| --- | --- |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

The Bidder lists below work he has done of similar nature to that bid for, as references that will afford the Owner opportunity to judge as to experience, skill, business standing, and financial ability.

_____

_____

_____

_____

_____

# BID BOND

STATE OF GEORGIA

COUNTY OF FLOYD

KNOW ALL MEN BY THESE PRESENTS, that we,_____ _____, as Principal, and _____ _____ Surety, are held and firmly bound unto the City of Rome, Georgia, in the sum of _____ Dollars ($_____).

Lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the Owner a Bid for construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**.

NOW THEREFORE, the conditions of this obligation are such that if the Bid be accepted, the Principal shall within ten days after receipt of conformed contract documents execute a contract in accordance with the Bid upon the terms, conditions and prices set forth therein, and in the form and manner required by the Owner and execute a sufficient and satisfactory Performance Bond and Payment Bond payable to the Owner, each in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to the Owner, then this obligation shall be void; otherwise, it shall be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid Owner, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty but as liquidated damages.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Section 36-10-1 et seq and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this_____day of_____, 2020

PRINCIPAL: _____

Signed and sealed in the presence of:

BY:_____

1._____

Title:_____

2. _____

SURETY:_____

Signed and sealed in the presence of:

By:_____

1._____

Title: _____

2. _____

**LIST OF LOCAL CONTRACTORS/ LOCAL MATERIALS SUPPLIERS**

The following is the list of Local Contractors/Local Suppliers referenced in the Bid Form submitted by:

(Bidder).....

Dated.....……and which is an integral part of the Bid Form.

The following work will be performed (or provided) by Contractors/Suppliers and coordinated by us:

| WORK SUBJECT | NAME |
|---|---|
| Concrete Contractor…… | |
| Storm Drainage Contractor…… | |

| MATERIAL | NAME |
|---|---|
| Concrete …….. | |
| Iron Work…… | |

(Continued on Next Page)

## LIST OF LOCAL SUB CONTRACTORS/ LOCAL MATERIALS SUPPLIERS

The following is the list of Local Sub Contractors/Local Suppliers referenced in the Bid Form submitted by:

(Bidder).....

Dated.....……and which is an integral part of the Bid Form.

The following work will be performed (or provided) by Sub Contractors/Suppliers and coordinated by us:

WORK SUBJECT NAME

Concrete Contractor……

Storm Drainage Contractor……

MATERIAL NAME

Concrete ……..

Iron Work……

(Continued on Next Page)

**LIST OF DBE SUB CONTRACTORS/ DBE MATERIALS SUPPLIERS**

The following is the list of DBE Contractors/DBE Suppliers referenced in the Bid Form submitted by:

(Bidder).....

Dated.....……and which is an integral part of the Bid Form.

The following work will be performed (or provided) by Contractors/Suppliers and coordinated by us:

| WORK SUBJECT | NAME |
|---|---|
| Concrete Contractor…… | |
| Storm Drainage Contractor…… | |

| MATERIAL | NAME |
|---|---|
| Concrete …….. | |
| Iron Work…… | |

# BIDDERS DECLARATION

The bidder understands, agrees and warrants:

That the bidder has carefully read and fully understands the full scope of the specifications:

That the bidder has the capability to successfully undertake and complete the responsibilities and obligations in said specifications.

That the bidder has liability insurance and a declaration of insurance form is included in the bid package.

That this bid may be withdrawn by requesting such withdrawal in writing at any time prior to **September 10, 2020, 10:00 a.m**., but may not be withdrawn after such date and time.

That the City of Rome reserves the right to reject any or all bids and to accept that bid which will, in its opinion, best serve the public interest. The City of Rome reserves the right to waive any technicalities and formalities in the bidding.

That by submission of this bid the bidder acknowledges that the City of Rome has the right to make any inquiry or investigation it deems appropriate to substantiate or supplement information supplied by the bidder.

If a partnership, a general partner must sign.

If a corporation, the authorized corporate officer(s) must sign and the corporate seal must be affixed to this bid.

BIDDER:

| | |
|---|---|
| _____ | _____ |
| Name | Title |
| _____ | _____ |
| Name | Title |

AFFIX CORPORATE SEAL (If Applicable)

# NON-COLLUSION AFFIDAVIT

The following affidavit is to accompany the bid:

STATE OF

COUNTY OF

Owner, Partner or Officer of Firm

Company Name, Address, City and State

Being of lawful age, being first duly sworn, on oath says that he/she is the agent authorized by the bidder to submit the attached bid. Affidavit further states as bidder, that they have not been a party to any collusion among bidders in restraint of competition by agreement to bid at a fixed price or to refrain from bidding; or with any office of the City of Rome or any of their employees as to quantity, quality or price in the prospective contract; or any discussion between bidders and any official of the City of Rome or any of their employees concerning exchange of money or other things of value for special consideration in submitting a sealed bid for:

FIRM NAME _____

SIGNATURE _____

TITLE _____

Subscribed and sworn to before me this_____ day of _____ 2020

_____

NOTARY PUBLIC

# CERTIFICATE OF NON-DISCRIMINATION

In connection with the performance of work under this contract, the Bidder agrees as follows:

> The Bidder agrees not to discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin or ancestry. The Bidder shall take affirmative action to insure that employees are treated without regard to their race, creed, color, sex, national origin or ancestry. Such action shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruiting or recruitment, advertising, lay-off or termination, rates of pay or other compensation and selection for training, including apprenticeship.

In the event of the Bidder's non-compliance with this non-discrimination clause, the contract may be canceled or terminated by the City of Rome. The Bidder may be declared, by the City of Rome, ineligible for further contracts with the City of Rome until satisfactory proof of intent to comply shall be made by the Bidder.

The Bidder agrees to include this non-discrimination clause in any sub-contracts connected with the performance of this agreement.

_____
Bidder

_____
Signature

_____
Title

# CITY OF ROME, GEORGIA
# E-VERIFY COMPLIANCE AFFIDAVIT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of the City of Rome, Georgia has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A, § 13-10-91 (b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification number
(Not Required if Less than 10 Employees)

_____
Signature (if less than 10 employees)

_____
Date of Authorization

_____
Name of Contractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 20____ in _____(city) _____ (state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 20_____

_____
NOTARY PUBLIC My Commission Expires:

# CITY OF ROME, GEORGIA
# SAVE COMPLIANCE AFFIDAVIT

**O.C.G.A § 50-36-1(e) (2) Affidavit**

By executing this affidavit under oath, as an applicant for a (n) Contract or Services, as referenced O.C.G.A. C. § 50-36-1, from the City of Rome, Georgia, the undersigned applicant verifies one of the following with respect to my application for a public benefit:

1) _____ I am a United State citizen.

2) _____ I am a legal permanent resident of the United States

3) _____ I am a qualified alien or non-immigrant under the Federal Immigration and Nationality Act with an alien number issued by the Department of Homeland Security or other federal immigration agency.
My alien number issued by the Department of Homeland Security or other federal immigration agency is: _____.

The undersigned applicant also hereby verifies that he or she is 18 years of age or older and has provided at least one secure and verifiable document, as required by O.C.G.A. § 50-36-1(e) (1), with this affidavit. The secure and verifiable document provided with this affidavit can best be classified as:
_____.

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of O.C.G.A. § 16-10-20, and face criminal penalties as allowed by such criminal statute.

Executed in _____ (city), _____ (state).

_____
Signature of Applicant

_____ Printed
Name of Applicant

SUBSCRIBED AND SWORN

BEFORE ME ON THIS THE

_____DAY OF _____, 2020

_____
NOTARY PUBLIC
My Commission Expires:

# STATE OF GEORGIA PROMPT PAY ACT AFFIDAVIT

THIS AFFIDAVIT IS TO ACCOMPANY THE BID

GEORGIA PROMPT PAY ACT: The Georgia Prompt Pay Act was enacted by the General Assembly in 1994 and took effect January 1, 1995. This act requires owners to pay contractors within 15 days of receipt of a pay request by the owner or the owner's representative. If payment is not made the owner shall pay the contractor 1% per month interest on the delayed payment. Additionally, the contractor must pay subcontractors within 15 days of receipt of payment from the owner.

This Act is Code Section 13-11-1 (Georgia Laws of 1994, p. 1398 par. 4)

Firm Name: _____

Signature: _____

Title: _____

Subscribed and Sworn to before me this_____ day of _____, 2020

_____
Notary Public

**CITY OF ROME**

**DRUG-FREE WORKPLACE CERTIFICATE**

---

By signature on this certificate, the Bidder certifies that the provisions of O.C.G.A. Section 50-24-1 through 50-24-6 related to the "Drug-Free Workplace Act" will be complied with in full. The Bidder further certifies that:

1. A drug-free workplace will be provided for the Bidder's employees during the performance of the contract; and

2. Each contractor who hires a subcontractor to work in a drug-free workplace shall secure from that subcontractor the following written certification: "As part of the subcontracting agreement with (contractor's name), (subcontractor's name) certifies to the contractor that a drug-free workplace will be provided for the subcontractor's employees during the performance of this contract pursuant to O.C.G.A. Section 50-24-3(b)(7)."

By signature on this certificate, the Bidder further certifies that it will not engage in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

Bidder: _____

By: _____

Name Printed: _____

Title: _____

Date: _____

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

# Request for Taxpayer Identification Number and Certification

**Give Form to the requester. Do not send to the IRS.**

Print or type
See **Specific Instructions** on page 2.

**1** Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

**2** Business name/disregarded entity name, if different from above

**3** Check appropriate box for federal tax classification; check only **one** of the following seven boxes:
☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate
☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____
**Note.** For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.
☐ Other (see instructions) ▶

**4** Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
*(Applies to accounts maintained outside the U.S.)*

**5** Address (number, street, and apt. or suite no.)

Requester's name and address (optional)

**6** City, state, and ZIP code

**7** List account number(s) here (optional)

## Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

**Social security number**
☐☐☐ – ☐☐ – ☐☐☐☐

**or**

**Employer identification number**
☐☐ – ☐☐☐☐☐☐☐

## Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

**Sign Here** **Signature of U.S. person ▶** **Date ▶**

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments**. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at *www.irs.gov/fw9*.

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding.* See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Cat. No. 10231X Form **W-9** (Rev. 12-2014)

STATE OF GEORGIA,
COUNTY OF _____:

**NOTICE OF COMMENCEMENT**

TO: CLERK OF SUPERIOR COURT OF _____ COUNTY, GEORGIA

Pursuant to O.C.G.A. § 13-10-62(a), not later than fifteen (15) days after physically commencing work on the property, the undersigned gives Notice of Commencement of improvements to property including the following information:

1. The name, address and telephone number of the contractor;
   _____
   _____
   _____

2. The name and location of the public work being constructed or a general description of the improvement;
   _____
   _____
   _____

3. The name and address of the state or the agency or the authority of the state that is contracting for the public works construction;
   _____
   _____
   _____

4. The name and address of the surety for the performance and payment bonds, if any; and
   _____
   _____
   _____

5. The name and address of the holder of the security deposit provided, if any.
   _____
   _____
   _____

Contractor: _____
By: _____
Name: _____
Title: _____

THIS DOCUMENT MUST BE FILED WITH THE CLERK OF THE SUPERIOR COURT FOR THE COUNTY IN WHICH THE PROJECT IS LOCATED AND A COPY OF THIS DOCUMENT MUST BE POSTED AT THE PROJECT SITE NOT LATER THAN FIFTEEN (15) DAYS AFTER THE CONTRACTOR PHYSICALLY COMMENCES WORK ON THE PROPERTY.

WITHIN TEN (10) CALENDAR DAYS OF THE RECEIPT OF A WRITTEN REQUEST, GIVE A COPY OF THIS NOTICE OF COMMENCEMENT TO ANY SUBCONTRACTOR, MATERIALMAN OR PERSON MAKING THE REQUEST.

# CONTRACT AGREEMENT

This agreement made and entered into on the_____ day of _____, 2020, by and between the City of Rome, Georgia, part of the first part (hereinafter called the "Owner"), and _____ party of the second part, (hereinafter called the "Contractor").

WITNESSETH:

That the Contractor, for the consideration hereinafter full set out hereby agrees with the Owner as follows:

1. That the Contractor will furnish all products, tools, construction equipment, skill, and labor of every description necessary to carry out and to complete in a good, firm, substantial and workmanlike manner construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20,** and will complete work in strict conformity with the Drawings and the Specifications, together with the foregoing Bid made by the Contractor, the Advertisement for Bids, Instructions to Bidders, General Conditions, this Agreement, Performance and Payment Bonds, and all Addenda hereto annexed which form essential parts of this Agreement, as if fully contained herein. The work covered by this Agreement includes all work as shown on the Drawings, specified, and listed in the attached Bid.

2. That the Contractor shall commence the work to be performed under this Agreement on a date(s) to be specified in a written Notice to Proceed and shall fully complete all work hereunder within the number of consecutive calendar days specified for each project. Time is of the essence in this Contract, and the Contractor shall pay to the Owner, not as a penalty, but as liquidated damages, the sum of Two Hundred Dollars ($200.00) for each calendar day that he shall be in default of completing the work within the time limit named herein for each project. These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the Owner and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the Owner and the general public of Floyd County, Georgia, as a result of the failure on the part of the Contractor to complete the work on time. Such liquidated damages are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute, or under the Contract.

3. The Owner hereby agrees to pay to the Contractor for the faithful performance of this Agreement, subject to additions and deductions as provided in the Specifications and Bid, in lawful money of the United States the sum of _____ _____and_____ Dollars ($ _____) which sum shall also pay for all loss or damage arising out of the nature of the work

aforesaid, or from the action of the elements, or from unforeseen obstructions or difficulties encountered in the prosecution of the work, and for all expenses incurred by or in consequence of the work, its, suspension or discontinuance, and for well and faithfully completing the work and the whole thereof, as herein provide, and for replacing defective work or products for a period of one year after completion.

4. The Owner shall make monthly partial payments to the Contractor in accordance with the provisions of the Contract Documents.

5. Final payment on account of this Agreement shall be made within thirty (30) days after the completion by the Contractor of all work covered by this Agreement and the acceptance of such work by the Owner, in accordance with the provisions of the Contract Documents.

6. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and the surety bonds hereto attached for its faithful performance, the Owner shall deem the surety or sureties upon such bond to be unsatisfactory, or if, for any reason, such bond ceases to be adequate to cover the performance of the work, the Contractor shall, at his expense, within five (5) days after the receipt of notice from the Owner to do so, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the Owner. In such event, no further payment to the Contractor shall be deemed to be due under this Agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the Owner.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement under their respective seals on the day and date first above written in four (4) counterparts, each of which shall without proof or accounting for the other counterparts, be deemed an original contract.

CITY OF ROME, GEORGIA:

Signed and sealed in the presence of:

By: _____

Title: _____

1. _____

(SEAL)

2. _____

Attest: _____

Title: _____

CONTRACTOR'S NAME:

_____

Signed and sealed in the presence of:

By: _____

Title: _____

1. _____

(SEAL)

2. _____

Attest:_____

Title: _____

NOTE: If the Contractor is a corporation, the Agreement shall be signed by the President or Vice President, attested by the Secretary and the Corporate seal affixed. If the Contractor is a partnership, the Agreement shall be signed in the partnership name by one of the partners, with indication that he is a general partner.

# PERFORMANCE BOND

STATE OF GEORGIA

COUNTY OF FLOYD

KNOW ALL MEN BY THESE PRESENTS, that we_____, as Principal, (hereinafter known as "Contractor"), and we_____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Rome, Georgia, for the use and _____and no/100 Dollars ($_____) for the payment of which well and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the Owner has engaged the said Contractor for the sum of _____ Dollars ($_____) for construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, as more fully appears in a written agreement bearing the date of _____, 2020, a copy of which Agreement is by reference hereby made a part hereof.

NOW, THEREFORE, if said Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract hereinbefore referred to and shall fully indemnify and save harmless the said Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of said Contractor to do so, and shall fully reimburse and repay the said Owner any and all outlay and expense which it may incur in making good any such default, and shall guarantee all products and workmanship against defects for a period of one year, then this obligation or bond shall be null and void, otherwise, it shall remain in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of the said Agreement or Contract or in the work to be performed thereunder, or the Specifications accompanying the same shall in any wise affect the obligations under this obligation or bond, and notice is hereby waived of any such damage, extension of time, alteration or addition to the terms of the Agreement or Contract or to the work or to the Specifications.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Section 36-10-4 et seq and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 2020. Executed in four (4) counterparts.

_____:

Signed, sealed and delivered
in the presence of:

By:_____

Title:_____

1. _____

(SEAL)

2. _____

SURETY:

Signed, sealed and delivered
in the presence of:

By:_____

Title:_____

1. _____

(SEAL)

2. _____

# PAYMENT BOND

STATE OF GEORGIA

COUNTY OF FLOYD

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (hereinafter known as "Contractor"), and we, _____, as Surety, are held and firmly bound unto the City of Rome, Georgia, (hereinafter called the "Owner") in the penal sum of _____and no/100 Dollars ($_____.00 ) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has entered into a certain Contract with said Owner, dated _____, 2020, (hereinafter called the "Contract"), for construction of **"STREETSCAPE REHABILITATION BROAD STREET AT WEST 2ND AVE. AND BROAD STREET AT WEST 3RD AVE.", Bid No. 028-20**, which Contract, Drawings and Specifications for said work shall be deemed a part hereof as fully as if set out herein.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Contractor and all subcontractors to whom any portion of the work provided for in said Contract is sublet and all assignees of said Contractor and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, products, services, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension or of addition to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimants in suits on this bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, products, or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right of action against the Contractor and Surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said Contract is to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for his or their use and benefit against said Contractor and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

(b) The Principal and Surety hereby designate and appoint the _____, as agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.

(c) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said Contract.

(d) This bond is given pursuant to and in accordance with provisions of O.C.G.A. Section 36-10-1 et seq and all the provisions of law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety had hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 2020. Executed in four (4) counterparts.

_____ :

Signed, sealed and delivered
in the presence of:

By: _____

Title:_____

1. _____

(SEAL)

2. _____

SURETY:

Signed, sealed and delivered
in the presence of:

By: _____

Title:_____

1. _____

(SEAL)

2. _____

# GENERAL CONDITIONS

1. Notice of Award of Contract: As soon as possible, and within 60 days after receipt of bids, the Owner shall notify the successful bidder of the award of the contract.

   Should the Owner require additional time to award a contract, the time may be extended by mutual agreement between the Owner and the successful bidder. If an Award of Contract has not been made within 60 days from the bid date or within the extension mutually agreed upon, the bidder may withdraw the bid without further liability on the part of either party.

2. Execution of Contract Documents: Within five days of notification of Award of Contract, the Owner shall furnish the Contractor the conformed copies of Contract Documents for execution by him and his surety.

   Within ten days after receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the Owner shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

   Should the contractor and/or surety fail to execute the documents within time specified, the Owner shall have the right to proceed on the bid bond accompanying the bid.

   If the Owner fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw his bid without penalty.

   Should either party require an extension of any of the time limits stated above, this shall be done only by mutual agreement between both parties.

3. Contract Security: The Contractor shall furnish a Performance Bond and a Payment Bond in penal sums equal to the amount of the Contract Price, conditioned upon the performance by the Contractor of all undertakings covenants, terms, conditions and agreements of the Contract Documents, and upon the prompt payment by the Contractor to all persons supplying labor and products in the prosecution of the work provided by the Contract Documents. Such bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State of Georgia and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the Contractor. If at any time a surety on any such bond is declared a bankrupt or loses its right to do business in the State of Georgia or is removed from the list of Surety Companies accepted on Federal bonds, Contractor

shall within ten (10) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety shall have furnished an acceptable bond to the Owner.

The person executing the bond on behalf of the surety shall file with the bond a general power of attorney, unlimited as to amount and type of bond covered by such power of attorney and certified to by an official of said surety.

4. Insurance: The Contractor shall not commence work under this contract until all insurance described below has been obtained and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been so obtained and approved by the Contractor.

(a) Worker's Compensation: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Workmen's Compensation Insurance for all of his employees to be engaged in work on the project under this contract, and in case any such work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation insurance for all the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation insurance. Workmen's Compensation insurance shall include Broad Form All States endorsement.

(b) Comprehensive General Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, such Comprehensive General Liability insurance as shall protect him and any subcontractor performing work covered by this contract from claims for damages for bodily injury, including accidental death, as well as from claims for property damages, which may arise from operations under the Contract Agreement, whether such operations are by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. The amount of insurance shall not be less than the following:

| | |
|---|---|
| $1,000,000 | Bodily Injury, including death, each occurrence. |
| $250,000 | Property Damage, each occurrence. |
| $2,000,000 | Property Damage, in the aggregate. |

The insurance shall include coverage of the following hazards:

Products/Completed Operations

Independent Contractors

Contractual Liability

(c) Owner's Protective Liability: The Contractor shall procure and shall maintain during this life of the Contract Agreement, Owner's Protective Liability Insurance with the same limits as the Comprehensive General Liability.

(d) Automobile Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Comprehensive Automobile Liability insurance in amounts not less than the following:

| | |
|---|---|
| $1,000,000 | Bodily Injury or death to any one person. |
| $1,000,000 | Bodily Injury, each occurrence. |
| $250,000 | Property Damage, each occurrence. |

(e) Materials and Equipment Floater: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Materials and Equipment Floater Insurance to protect the interests of the Owner, Contractor, and Subcontractors against loss by vandalism, malicious mischief, and all hazards included in a standard All Risk Endorsement. The amount of the insurance shall at all times equal or exceed the full amount of the Contract. The policies shall be in the names of the Owner and the Contractor.

(f) Certificates of Insurance: Certificates acceptable to the Owner shall be attached to the signed Contract Documents when they are transmitted to the Owner for execution. These certificates shall contain the statement that "Coverages afforded under the policies will not be cancelled unless at least thirty (30) days prior to cancellation written notice has been given to the Owner, as evidenced by receipts of registered or certified mail."

5. Indemnification: The Contractor will indemnify and hold harmless the Owner, its agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

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

The obligation of the Contractor under this paragraph shall not extend to the liability of the Owner, his agents or employees arising out of the preparation or approval or drawings, opinions, reports, surveys, change orders, designs or specifications.

6. Notice to Proceed: The Notice to Proceed shall be issued following the pre-construction conference within ten (10) days of the execution of the Contract Agreement by the Owner. If there are reasons why the Notice to Proceed should not be issued within this period, the time may be extended by mutual agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the ten (10) day period or within the period mutually agreed upon, the contractor may terminate the Contract agreement without further liability on the part of either party.

7. Suspension of Work, Termination and Delay:

(a) If the Contractor is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or is a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen, materials or equipment, or if he repeatedly fails to make prompt payments to subcontractor or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work of if he disregards the authority of the Director, or if he otherwise violates any provision of the Contract Documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and his surety a minimum of ten (10) days from delivery of a written notice, terminate the services of the Contractor and take possession of the project and of all products, tools, construction equipment and machinery thereon owned by the Contractor, and finish the work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor and/or his surety shall pay the difference to the Owner. Such costs

incurred by the Owner will be determined by the Director and incorporated in a change order.

(b) Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.

(c) After ten (10) days from delivery of a written notice to the Contractor, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the Contractor shall be paid for all work executed and any expense sustained plus reasonable profit.

8. Assignments: The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the Instrument of assignment shall contain a clause substantially to the effect that it is agreed the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior liens of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

9. Subcontracting:

(a) The Contractor shall not subcontract the complete work, or any major part thereof.

(b) The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

(c) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.

(d) Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner.

10. Separate Contracts:

(a) The Owner reserves the right to let other contracts in connection with this project. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their products and the execution of their work, and the Contractor and other Contractors shall properly connect and coordinate their work with each other. If the proper execution or results of any part of the Contractor's work depends upon the work of the Owner or any other Contractor the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results.

(b) The Owner may perform additional work related to the project with his own forces. The Contractor will afford the Owner reasonable opportunity for the introduction and storage of products and the execution of work, and shall properly connect and coordinate his work with theirs.

(c) If the performance of additional work by other Contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Owner of others involves him in additional expense or entitles him to an extension of the contract time, he may make a claim therefore as provided in "Changes in the Contract."

11. Laws and Regulations: The Contractor's attention is directed to the fact that all applicable Federal, State, and County laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract as though written out in full herein. The Contractor shall keep himself fully informed of all laws, ordinances and regulations of the Federal, State, County, and municipal governments or authorities in any manner affecting those engaged or employed in the work or the materials used in the work or in any way affecting the conduct of the work and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in these Contract Documents or in the drawings or specifications herein referred to, in relation to any such law, ordinance, regulation, order or decree, he shall herewith report the same in writing to the Owner. He shall at all times observe and comply with all such existing and future laws, ordinances and regulations, and shall protect and indemnify the Owner and its agents against the violation of any such law, ordinance, regulation, order or decree, whether by himself or by his employees.

Permits and licenses of a temporary nature, including business licenses, building permits, and land disturbing permits, necessary for the prosecution of the Work shall

be secured and paid for by the Contractor. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified.

12. Taxes: The Contractor will pay all sales, consumer, use and other similar taxes required by the law of the place where the work is performed. The Owner will be responsible for any sales or use tax due on products furnished by the Owner to the Contractor to be incorporated into the work.

13. Notice and Service Thereof:

(a) All Notices, demands, requests, instructions, approvals, and claims shall be in writing.

(b) Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor specified in the Bid (or at such other office as the Contractor may from time to time designate to the Owner in writing), or if deposited in the United States Mail in sealed, postage-prepaid envelope, or delivered, with charges prepaid, to any telegraph company for transmission, in each case addressed to such office.

(c) All papers required to be delivered to the Owner shall, unless other wise specified in writing to the Contractor, be delivered to the City Manager of Rome, Georgia. Any notice to or demand upon the Owner shall be sufficiently given if delivered to the Office of said City Manager or if deposited in the United States Mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to said City Manager or to such other representative of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purposes.

(d) Any such notice or demand shall be deemed to have been given or made as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post or (in the case of telegrams) at the time of actual receipt, as the case may be.

14. Land and Right-of-Way: The Owner will provide, as indicated in the Contract Documents and prior to Notice to Proceed, the lands upon which the work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine his work and all associated activities to the easements and other areas designated for his use.

If, due to some unforeseen reason, the necessary easements are not obtained, the Contractor shall receive an equitable extension of Contract Time and/or equitable

increase in the Contract Price to cover his additional costs as a result thereof. His claim therefore shall be handled as provided for under "Changes in the Contract".

15. Products, Services and Facilities:

(a) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all products, labor (including labor performed after regular working hours, on Sundays, or on legal holidays), equipment, tools, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete place into operation, and deliver the work.

It is further understood that the Contractor's proposed construction schedule is based on a normal 40 hour work week, less recognized holidays. If the Contractor desires to work in excess of this limit, he shall submit a written request to the Owner a minimum of 5 days prior to the desired work date. The Contractor shall be responsible for any additional expenses incurred by the Owner as a result of the extended work hours.

(b) Products shall be so stored in accordance with the manufacturer's recommendations to insure the preservation of their quality and fitness for the work. Stored products to be incorporated in the work shall be located so as to facilitate prompt inspection.

(c) Manufactured products shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

(d) Products to be incorporated into the work shall not be purchased by the Contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

(e) The Contractor shall maintain a local office with telephone in the general area of the work, and will be required to have a responsible representative on call at all times. The Contractor will also be required to maintain a crew with necessary tools and equipment available on call after normal working hours, on weekends during inclement weather and other times when work is not in progress to perform any necessary emergency repair work which may occur as a result of the work under this Contract.

16. Supervision of Work: The Contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will employ and maintain on the work a qualified

supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The superintendent shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

The supervisor shall have full authority to act on behalf of the Contractor and to execute the orders or directions of the Owner without delay. He shall have full authority to promptly supply products, tools, plant equipment and labor as may be required. His authority shall be such that all communication given to him shall be as binding as if given to the Contractor.

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the Owner, immediately remove any Superintendent, Foreman or workman whom the Engineer may consider incompetent or undesirable.

17. Concurrent Construction: Work by the Contractor may be concurrent with the construction ofwater and sewer services or other utilities. The Contractor shall be responsible for coordination with the utility companies and other contractors working in the area.

18. Protection of Work, Property and Persons:

(a) The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the work and other persons who may be affected thereby, all the work and all products to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

(b) The Contractor will comply with the Department of Labor, Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54). He will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the work may effect them.

(c) The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by him or any of his subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

(d) In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt written notice of any significant changes in the work or deviations from the Contract Documents caused thereby, and shall request a change order covering the changes and deviations involved.

19. Protection of the Environment:

(a) Necessary sanitary conveniences for the use of the laborers on the work shall be erected and maintained by the Contractor, in such a manner and at such points as shall be approved by the Owner. Their use shall be strictly enforced.

(b) Should the Contractor so desire, he may locate trailers or other structures for housing tools, machinery, and supplies, but they will be permitted only at approved places, and their surroundings shall be maintained at all times in a sanitary and satisfactory manner. On or before the completion of the work, all such structures shall be removed, together with all rubbish and trash, at the expense of the Contractor.

20. Schedules, Reports and Records: The Contractor shall submit to the Engineer progress schedules, payrolls, reports, estimates, records and other data as the Engineer may request concerning work performed or to be performed.

Immediately after execution of the Contract by the Owner, and before the first partial payment is made, the Contractor shall deliver to the Engineer a construction progress schedule in form satisfactory to the Engineer, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the Progress Schedule.

The Contractor shall maintain on the project site throughout the Contract Time an up to date set of Record, or As-Built, Drawings. Record Drawings shall depict the project as actually constructed; providing elevations, dimensions, angles, details, sections, etc., as required to locate all exposed or concealed features of the construction. Special attention shall be given to recording deviations from the Contract Drawings. The locations shall be referred to easily identifiable, permanent landmarks or benchmarks, to allow future reproducibility of the measurements with a minimum of personnel and equipment.

21. Drawings and Specifications: The Drawings, Specifications, Contract Documents, and all supplemental documents, are considered essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all work necessary to complete the project in an acceptable manner, ready for use, occupancy , or operation by the Owner.

In case of conflict between the Drawings and Specifications, the specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

In cases where products or quantities are omitted from the Specifications, the description and quantities shown on the Drawings shall govern.

Any discrepancies found between the Drawings and Specifications and Site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities and prior to the Engineer's correction shall be done at the Contractor's risk.

The Engineer will furnish the Contractor three copies of the Contract Drawings and the Specifications, one copy of which the Contractor shall have available at all times on the job site.

22. Shop Drawings: The term shop drawings shall mean drawings, prints, descriptive literature, test reports samples, calculations, schedules, material lists and information and items of similar meaning.

(a) Submittals Required: The Contractor shall furnish to the Engineer for review in accordance with the procedure outlined below, shop drawings and descriptive literature for all manufactured or fabricated products. Detailed information on non-manufactures products shall be provided when requested by the Engineer. Additional information such as special drawings, schedules, calculations and curves, shall be provided as specifically required in the Contract Documents.

(b) Contractor's Review: The Contractor shall review and check drawings and submittals. He shall indicate his approval by initials and date, and shall also reference each drawing number where the item appears. If the drawings or submittals deviate from the Contract Documents, the Contractor shall advise the Engineer, in writing, of the deviation and the reasons therefore. Shop drawings and submittals originating from subcontractors shall be reviewed, initialed and dated by the Contractor.

The Contractor shall submit a minimum of four copies of all shop Drawings to the Engineer. A transmittal form shall accompany each submittal or group of submittals. A separate transmittal sheet shall be used for reference to each numbered paragraph of the specifications.

(c) Engineer Review: All submittals will be reviewed within five days of receipt, stamped, dated and initialed by the Engineer before they are returned to the Contractor.

Acceptable submittals will be marked "No Exceptions Taken". A minimum of two copies will be retained by the Engineer for the Owner's use and the remaining copies will be returned to the Contractor.

Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted". The Contractor may order, fabricate or ship the items included in the submittal, provided the indicated corrections are made. Drawings must be resubmitted for review prior to installation or use of products.

Submittals marked "Amend and Resubmit" must be revised to reflect required changes and initial review procedure repeated.

The "Rejected - See Remarks" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable products.

(d) Drawings For Construction: Drawings or other submittals not bearing the Engineer's "No Exceptions Taken" notation shall not be issued to subcontractors or utilized for construction purposes. No work shall be done or products installed without a drawing or submittal bearing the "No Exceptions Taken" notation. The Contractor shall maintain at the job site a complete set of shop drawings bearing the Engineer's stamp.

(e) Substitutions: In the event the Contractor obtains the Engineer's approval for the use of products other than that which is called for in the Contract Documents, the Contractor shall, at his own expense and using methods approved by the Engineer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.

(f) Contractor's Responsibility: Use of the "No Exceptions Taken" notation on shop drawings or other submittals is general and shall not relieve the Contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents.

The Engineer's review shall not relieve the Contractor of responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site. The Contractor is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

23. Surveys: The Owner shall furnish all land surveys and establish all base lines for locating the principal component parts of the work together with suitable number of bench marks adjacent to the work as shown in the Contract Documents. From the information provided by the Owner, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for other working points, lines, elevations and cut sheets.

The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

24. Testing, Inspection and Rejection of Work:

(a) Testing of Materials: Unless otherwise specifically provided for in the Specifications, the inspection and testing of products to be incorporated in the work at the site shall be made by bureaus, laboratories, or agencies approved by the Owner and the cost of such inspection and testing shall be paid by the Contractor. The Contractor shall furnish evidence satisfactory to the Engineer that the products have passed the required tests prior to their incorporation into the work. The Contractor shall promptly segregate and remove rejected products from the site of the work.

(b) Inspection: The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether or not the work performed and products used are in accordance with the requirements and intent of the Specifications and Contract Documents. No work shall be done or products used without suitable supervision or inspection by the Engineer or his representative. Failure to reject any defective work or product shall not in any way prevent later rejection when such defect is discovered, or obligate the Owner to final acceptance.

(c) Rejection of Work and Materials: All products furnished and all work done that is not in accordance with the Drawings or Specifications or that is

defective will be rejected. All rejected products or work shall be removed immediately. If rejected products or work is not removed within forty-eight hours, the Engineer or Owner shall have the right and authority to stop the work immediately and shall have the right to arrange for the removal of said rejected products or work at the cost and expense of the Contractor. All rejected products or work shall be replaced with other products or work which conforms with the Drawings and Specifications.

(d) Contractor's Responsibility: Inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his contract and defective work shall be made good regardless of whether such work has been previously inspected by the Engineer and accepted or estimated or payment. The failure of the Engineer to reject improper work shall not be considered a waiver of any defect which may be discovered later, or for work actually defective.

25. Time for Completion and Liquidated Damages: The Contract time shall begin on a date specified in the Notice to Proceed issued by the Engineer.

The Contractor will proceed with the work at a rate of progress which will insure 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.

If the Contractor shall fail to complete the work within the contract time, or extended contract time if authorized by change orders, then the Contractor will pay to the Owner the amount of liquidated damages specified in the Contract Documents for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.
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.

(a) To any preference, priority or allocation order duly issued by the Owner.

(b) 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, acts 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

(c) To any delays of subcontractors occasioned by any of the causes specified in paragraphs (a) and (b).

26. Changes in the Contract:

(a) Changes in the Work: The Owner may at any time, as the need arises, order change within the scope of the work without invalidating the Contract Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the Time required for performance of the work, an equitable adjustment shall be authorized by Change Order.

The Engineer, also, may at any time, by issuing a field order, make changes in the details of the work. The Contractor shall proceed with the performance of any changes in the work so ordered by the Engineer unless the Contractor believes that such field order entitles him to a change in Contract Price or time or both, in which event he shall give the Engineer written notice thereof within fifteen days after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the Owner.

The Contractor shall visit the site and become familiar with all conditions of the work. No additional claim will be allowed by the Contractor for conflicts, extra work, or unforeseen conditions associated with any subsurface condition encountered, whether indicated on the Plans or not.

No claim will be allowed for unanticipated working conditions associated with, but not limited to, existing and abandoned utility lines and resulting poor trench conditions, trench collapse, underground structures, etc. The Contractor shall furnish and install sufficient sheeting, shoring and bracing to allow for construction of the work under all conditions, both anticipated and unanticipated, at no additional cost to the Owner.

The Owner reserves the right to relocate the proposed sewer lines or add additional sewer lines at the unit prices bid. No additional payment will be made for additional clearing and grubbing required by relocation of lines. Rock excavation along relocated or new lines shall be paid for at the unit price bid in the Bid.

No claim will be allowed by the Contractor for cost of downtime of men or equipment associated with any type of unforeseen condition associated with the project and/or installation of the sewer line; project shutdown by the Engineer, Owner or any governing authority that has jurisdiction over the work; or with any change or addition to the project made by the Owner.

The Owner may, when changes are minor or when changes would result in relatively small changes in the Contract Price or Contract Time, elect to postpone the issuance of a Change Order until such time that a single change order of substantial importance can be issued incorporating several changes. In such cases, the Owner shall indicate this intent in a written response to the Contractor's request for a change.

(b) Changes in Contract Price: The Contract Price may be changed only by a Change Order. The value of any work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be determined by one or more of the following methods in the order of precedence listed below:

(1) By estimating the number of unit quantities of each part of the work which is changed and then multiplying the estimated number of such unit quantities by the price bid (which price shall include the Contractor's overhead and profit) for a unit quantity thereof.

(2) The Owner shall fix the total lump sum value of the change in the work of the Contractor, and shall set out the price which shall be added to or deducted from the Contract Price (which price shall include the Contractor's overhead and profit). On any change which involves a net credit to the Owner, no allowance for overhead and profit shall be figured.

(3) By ordering the Contractor to proceed with the work and to keep and present in such form as the Owner may direct a correct account of the cost of the change together with all vouchers therefore. The cost may include an allowance for overhead and profit not to exceed 15% of the net cost. The cost may also include all items of labor or materials, the use of power tools and equipment actually used, power and all items of cost such as public liability and Workmen's Compensation Insurance, pro rata charges for foremen, also Social Security, Old Age and Unemployment Insurance. If deductions are ordered, the credits shall be the net cost. Among the items considered as overhead are included insurance other than that mentioned above, bond or bonds, superintendent, timekeeper, clerks, watchmen, use of small tools incidental job burdens and general office expenses.

In figuring changes, instructions for measurement of quantities set forth in the Specifications shall be followed.

The Contractor shall, when required by the Engineer, furnish to the Engineer an itemized breakdown of the quantities and prices used in computing the value of any change that might be ordered.

(c) Changes in Contract Time: The Contract Time may be changed only by a Change Order. Changes in the work described in (a) and any other claim made by the Contractor for a change in the Contract Time (including those allowed under "Time for Completion and Liquidated Damages") shall be evaluated by the Engineer/Owner and if the conditions warrant, an appropriate adjustment of the Contract Time will be made.

27. Payments and Completion:

(a) Contract Price: The Contract Price is the sum of the unit prices stated in the agreement for each item multiplied by the actual quantities installed of each item plus any other lump sum amounts for work set forth in the Contract. The Contract Price is the total amount payable by the Owner to the Contractor for the performance of the work set forth in the Contract.

(b) Breakdown of Cost: Before the first application for payment the Contractor shall submit to the Engineer a breakdown of cost for the various portions of the work, including quantities if required by the Engineer, aggregating the total Contract Price prepared in such form as specified or as the Engineer and the Contractor may agree upon and supported by such data to substantiate its correctness as the Engineer may reasonably require. This schedule, when approved by the Engineer, shall be used only as a basis for the Contractor's application for payment.

(c) Progress Payments: At the end of each calendar month, the Contractor shall submit to the Engineer an itemized application for payment supported by such other substantiating data as the Engineer may reasonably require covering work completed during the month.

Application for payment shall, at the Contractor's option, include the cost of products not yet incorporated into the work which have been delivered to the site or to other storage locations authorized and approved by the Engineer and Owner.

Payment for stored products shall be subject to the following conditions being met or satisfied.

(1) The products shall be received in a condition satisfactory for incorporation in the work.

(2) The products shall be stored in such manner that they will not be damaged due to weather, construction operations or any other cause.

(3) An invoice from the supplier shall be furnished for each item on which payment is requested.

(4) The Contractor shall on request of the Engineer furnish written proof from the supplier of payment (less retention equal in percentage to that being retained by the Owner) for the products no later than thirty days after receipt of payment for same from the Owner. The Owner shall have the right to deduct from the next payment estimate an amount equal to the payment for the products if reasonable and adequate proof is not submitted.

The Contractor warrants and guarantees that title to all work and products covered by an Application for Payment, whether incorporated into the project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances (except retention equal in percentage to the being retained by the Owner which may be withheld from suppliers and subcontractors to guarantee completion and performance and 10% retainage will be maintained throughout the life of the contract).

(d) Certificate for Payments: If the Contractor has made application for payment as above, the Engineer will within seven days issue a Certificate for Payment to the Director, with a copy to the Contractor, for such amount as he determines to be properly due, or state in writing his itemized and specific reasons for withholding a Certificate as provided herein.

After the Engineer has issued a Certificate for Payment, the Owner shall within 15 days pay to the Contractor the amount covering work completed plus stored products, less retention and less previous payments made.

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

(e) Retention: The Owner shall retain ten percent (10%) from each properly certified estimate until said estimate reaches 50 percent of the contract value provided for by the contract documents. Thereafter, until all work has been accepted by the Owner, no additional retainage shall be withheld. The Owner reserves the right to resume retainage if a determination is made that the progress of the work schedule, or the work itself, is unsatisfactory.

Amounts retained by the Contractor from payments due to product suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the Owner.

(f) Payments Withheld: The Director may decline to approve an Application for Payment and may withhold his certificate in whole or in part as may be necessary to protect the Owner from loss because of:

(1) Failure of the Contractor to make payments properly to subcontractors or for labor or products.

(2) Unsatisfactory prosecution of the work by the Contractor.

When the above reasons for nonpayment are corrected, then payment shall be made for amounts withheld because of such reason, not later than the next payment.

(g) Completion: ALL WORK REQUIRED BY THE CONTRACT DOCUMENTS, CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE COMPLETED BEFORE THE FINAL INSPECTION IS PERFORMED. This includes, but is not limited to, the following:

(1) Sweeping the roadway clear of dirt, rocks, trash or construction material.

(2) Clearing pipes and catch basins of dirt, silt, or other debris.

(3) Restoration of the work area.

Upon completion of all work required, the Contractor shall submit completed Record Drawings to the Engineer and request in writing that the final inspection be performed. If the Engineer finds the work of the Contractor complete and acceptable in accordance with the provisions of the Contract Documents and that the Record Drawings accurately depict the complete work, he shall recommend to the Owner that the job be accepted and that final payment be made.

In the event that the final inspection deficiencies in meeting the Contract requirements, the Contractor shall complete all remaining items of work, and make adjustment found to be necessary. Upon receipt of written notice from the Contractor that the work is complete and ready for re-inspection, the Engineer will make a final inspection.

The Contractor will be notified in writing by the Owner of the final acceptance of the work. The date of final acceptance shall be the termination date for the Contractor's liability for the physical properties of the facilities and the beginning of the guaranty period.

Before final payment can be made, the Contractor must certify in writing to the Owner that all payrolls, materials bills, and other indebtedness connected with the work have been paid.

Final payment will not be made if there is disputed indebtedness or if there are liens upon the property.

Upon completion of all work if there is disputed indebtedness or there are liens upon the property, semi-final payment may, at the Owner's option, be made in accordance with the following provisions:

(1) The Owner shall retain an amount equal to the disputed indebtedness and/or liens upon the property including all related cost and interest in connections with said disputed indebtedness and liens which the Owner may be compelled to pay upon and subsequent adjudication.

(2) The Contractor shall certify to those items of work not disputed that all payables, materials bills and other indebtedness connected with the work have been paid or otherwise satisfied.

The making and acceptance of the final payment shall constitute a waiver of all claims by the Owner other than those for faulty work covered by and appearing within the guaranty period.

The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

28. Guarantee: The Contractor shall warrant and guarantee for a period of one year from the date of final acceptance that the completed system, except trees, is free from all defects due to faulty products or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

# DETAILED SPECIFICATIONS

# SECTION NO. 1

## EARTHWORK

1.01 - SCOPE: This section of the Specifications describes materials and equipment to be utilized and requirements for their use in performing all site preparation, including, but not limited to, erosion control, clearing and grubbing, excavation, and placement of fill. The Contractor shall furnish all materials, equipment and labor necessary to complete the work.

1.02 - TEMPORARY EROSION AND SEDIMENTATION CONTROLS: The Contractor shall provide the necessary controls to ensure that storm water, other water, and drainage from jobsite areas which have been denuded, stripped or modified of its natural existing or artificially established stabilization or protection against erosion shall pass through some type of filter or removal system before being discharged to a stream or channel and that these areas shall be kept sufficiently moist to control dust as required for each project.

The Contractor shall observe all local laws and ordinances in relation to erosion and sediment control as they pertain to each project. All erosion control plans and construction shall be in accordance with the "Manual for Erosion and Sediment Control in Georgia" latest revision, the State of Georgia Erosion and Sedimentation Control Act of 1975, as amended in 1995 and Best Management Practices. All erosion control measures shall be employed to effectively control erosion and sedimentation for all rainfall events up to and including the 25-year, 24-hour rainfall.

The Contractor shall designate one individual to be responsible for implementation and maintenance of erosion and sedimentation controls on a 24-hour, every day basis as required for each project. Said person shall possess a valid Level 1A Certified Personnel Certification Card issued by Georgia Soil and Water Conservation Commission. The Contractor shall furnish to the Engineer the individual's name, address and 24-hour telephone number and notify the Engineer of any updates as necessary.

All erosion and sedimentation control measures, if required, must be installed prior to the initiation of any construction activity. Additional erosion and sedimentation control devices shall be installed as needed, or as directed by the Engineer. Replacement and maintenance of erosion control devices shall be at the Contractor's expense.

The Engineer shall have the right to stop work when erosion and sediment control measures are not being implemented in accordance with Best Management Practices. No claim will be allowed by the Contractor for cost of downtime of men and equipment associated with any shutdown of the Contractor's operations for failure to maintain suitable erosion and sedimentation controls.

NOTE: If it is determined that additional silt fence not shown on the plans is necessary to prevent escape of sediment from the site, payment shall be made at the unit price bid for silt fence for that additional silt fence directed by the Engineer.

Silt dams, traps, barriers, and appurtenances shall be installed as indicated on the approved plans and working drawings, and shall be maintained in-place until no longer needed, and then removed. Hay bales which deteriorate, and filter stone which becomes dislodged shall be replaced with new materials.

Materials used in temporary erosion and sedimentation control shall meet the following requirements.

(a) Hay bales shall be clean, seed free cereal hay type.

(b) Commercial silt fence shall be of woven polypropylene construction which has been ultraviolet light (UV) stabilized. Silt fence shall be equal to Supac 4WS manufactured by Phillips Fibers Corp. Silt fence stakes shall be either steel rods not smaller than 1/2-inch diameter, fir, southern pine, or hemlock. All silt fence shall be constructed in accordance with Georgia Department of Transportation Standard Specifications section 171 for silt fence.

Type "C" silt fence shall be used at the toe of all fills. It should be used for ditch checks where slopes are 3% to 5% using 25' spacing. The fence should never run continuous; it should turn back into the fill or ground line to create small pockets to trap silt. Fabric shall be 36" DOT approved with DOT approved reinforcement. Use DOT approved wood or steel post at 4-ft. on centers. C-POP sediment control system is an allowable alternative to standard Type "C" silt fence.

(c) Filter stone shall be crushed stone.

(d) Concrete block shall be hollow, non-load-bearing type.

(e) Silt retention barriers shall be constructed in accordance with Georgia Department of Transportation Standard Specifications Section 170.

1.03 - EXISTING UTILITIES AND OBSTRUCTIONS: When drawings are provided, the Drawings shall indicate underground utilities or obstructions that are known to exist according to the best information available to the Owner. Where these or unforeseen underground utilities are encountered, the location and alignment of new work may be changed, upon written approval of the Engineer, to avoid interference. The Contractor must contact the Georgia Utility Protection Center before beginning work on any portion of any project and comply with all rules and regulations applicable to utility protection.

(a) Electronic Pipe and Cable Finder: Furnish and have available at all times an electronic pipe detector, in good working order, to locate existing pipe lines or other obstructions.

(b) Relocation of Services: Before initiating any excavation, locate all utilities services to avoid interference with such services and to determine whether these services should be relocated. Repair any damage done to utilities services or pipe lines resulting from efforts to locate services or resulting from the construction operation.

NOTE: Any delay or extra cost due to encountering underground utilities or obstructions not shown on Drawings when provided, or found in locations different from those shown on the said Drawings shall not constitute a claim for additional payment, except as provided for payment for authorized additional depths.

1.04 - CONSTRUCTION ALONG HIGHWAYS, STREETS, AND ROADWAYS:

(a) General: Perform all work along highways, streets and roadways in accordance with the applicable regulations of the Georgia Department of Transportation and the City of Rome, with reference to construction operations, safety, traffic control, road maintenance and repair.

(b) Safety: Provide suitable signs, barricades and lights for protection of traffic, in locations where traffic may be endangered by construction operations. Replace all highway signs removed for construction as soon as possible. Do not close any highway, street or roadway without first obtaining permission from the proper authorities. Provide sufficient barricades and warning lights. Provide flagmen as required.

The Contractor shall provide a traffic control plan approved by Georgia Department of Transportation prior to any construction activities within D.O.T. right of way. All costs associated with the preparation, approval and implementation of this plan shall be the responsibility of the Contractor.

Backfill any portion of a trench excavated during the same work day. No trench shall remain open overnight.

(c) Construction Operations: Perform all work along highways, streets and roadways to least interfere with traffic.

(1) Stripping: Where earthwork or excavations occur along road shoulders, strip and stockpile all sod, topsoil and other material suitable for shoulder restoration.

(2) Trenching, Laying and Backfilling: In pipe laying operations, do not open the trench any further ahead of pipe laying than is necessary. Backfill and remove excess

material immediately behind laying operations. Complete excavation and backfill for any portion of the trench in the same day.

(3) Shaping: Reshape damaged slopes, side ditches, and ditch lines immediately after completing backfilling operations. Replace topsoil, sod and any other materials removed from shoulders.

(d) Excavated Materials: Do not place excavated material along highways, streets and roadways in a manner which obstructs traffic. Sweep all scattered excavated material off of pavement.

(e) Drainage Structures: Keep all side ditches, culverts, cross drains, and other drainage structures clear of excavated material and free to drain at all times.

(f) Maintaining Highways, Streets, Roadways and Driveways: Maintain streets, highways, and roadways in suitable condition for movement of traffic until completion and final acceptance of the work.

Repair all driveways that are cut or damaged immediately. Maintain them in a suitable condition for use until completion and final acceptance of the work.

The Contractor shall be responsible for all damages to existing improvements resulting from his operations.

1.05 - PRELIMINARY GRADING: Before beginning construction, the Contractor shall excavate and stockpile topsoil for use in preparation of the site for grassing.

1.06 - BORROW EXCAVATION: If necessary to complete the work, the Contractor shall excavate material from borrow areas, or pits, outside the right-of-way and Limits of Disturbed Area. Borrow excavation shall include hauling and placement of such material as required on the Drawings. Borrow excavation includes all necessary stripping, excavation and disposal of any unsuitable material from borrow areas. Borrow pits shall be secured by the Contractor and approved by the Engineer. Borrow material shall meet the requirements of Section 206.02 of the Georgia Department of Transportation Standard Specifications. Construction of all borrow pits shall meet the requirements of Section 206.03 of the Georgia Department of Transportation Standard Specifications.

NOTE: No additional payment will be made for Borrow Excavation. All costs for providing the source of borrow material and the excavation, hauling, placing and compacting the approved material shall be included in the amount bid for Backfilling Shoulders.

NOTE: The borrow site shall have an approved Soil & Erosion Control Plan. The Contractor shall be responsible for development, implementation and maintenance of said

plan. No separate payment will be made for the installation and maintenance of soil & erosion control devices at the Borrow Site. The costs of all labor, materials, and equipment required to install and maintain proper soil & erosion control measures at the Borrow Site shall be included in the amount bid for Backfilling Shoulders.

1.07 - BACKFILLING AND EMBANKMENT: Fill materials shall be placed as required to provide compacted subgrade for roadway and pavements and produce finished grade elevations shown on the Drawings.

(a) Material: Fill materials shall be free of organic or other perishable material and shall not contain stones or rubble. No material shall be placed when frozen. If additional material, other than that to be obtained from excavation, is required for backfilling and grading, the Contractor shall obtain such additional material from sources on-site as identified by the Engineer or sources off the work site secured by the Contractor.

NOTE: There shall be no separate payment for backfilling and embankment. The costs of these items and all costs incidental thereto shall be included in the unit price bid for the item to which it pertains.

(b) Placement: Prior to placement of any material in embankments, the area within embankments limits shall be stripped of topsoil and all unsuitable materials removed as described under Excavation. The area shall then be scarified to a depth of at least six inches.

Fill material shall be placed in continuous approximately horizontal layers extending the full width of the embankment cross-section and the full dimension of the excavation where practicable and having a net compacted thickness of not over 8 inches.

Fill materials shall be placed at optimum moisture content within practicable limits (not less than 1% below optimum). Optimum moisture shall be maintained by sprinkling the layers as placed or by allowing materials to dry before placement.

(c) Compaction: Fill materials shall be compacted and tested in accordance with Section 208 and 209 of the Georgia Department of Transportation Standard Specifications. Fill materials shall be compacted for their full depth to 95% of the maximum dry density.

Compaction of embankments shall be by sheepsfoot rollers with staggered uniformly spaced knobs and suitable cleaning devices. The projected area of each knob and the number and spacing of the knobs shall be such that the total weight of the roller and ballast when distributed over the area of one row of knobs shall be 250 psi. Placement and compaction of materials shall extend beyond the final contours sufficiently to insure compaction of the material at the resulting final surface. Final contours shall then be achieved by a tracked bulldozer shaping the face of the embankment.

If tests indicate that density of fill is less than that specified, the area shall be either recompacted or undercut, filled, and compacted until specified density is achieved.

(d) Final Grading: Upon completion of construction operations, cut and fill slopes shall be graded to finish elevations and grades shown on the Drawings. Graded areas shall be made to blend into conformation with remaining ground surfaces. All surfaces shall be left smooth and free to drain.

(e) Excess Material: Any excess earth excavation and unsuitable materials shall be removed from the project by the Contractor at his expense for remove & replace projects.

1.08 - PAYMENT: No additional payment shall be made for work required in this Section of the Specifications except as specifically set forth in the Bid. The cost of all labor, materials, and equipment required by the work, and all costs incidental thereto, shall be included in the unit price bid for the work to which it pertains.

# **SECTION NO. 2**

## STORM DRAINAGE SYSTEM

2.01 - SCOPE: This section of the Specifications describes products and requirements for their use and installation in the storm drainage systems shown on the Drawings and/or Specified.

Furnish all materials and equipment and perform all labor necessary to fulfill the requirements of these Specifications.

2.02 - GENERAL: Supply all products and perform all work in accordance with applicable American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI) or other recognized standards. Latest revisions of all standards are applicable. If requested by the Engineer, submit evidence that manufacturer has consistently produced products of satisfactory quality and performance over a period of at least two years.

2.03 - PIPE, MATERIALS, AND ACCESSORIES:

(a) Reinforced Concrete Pipe: Reinforced concrete pipe shall be supplied in lengths of at least four feet. All pipes shall be certified and stamped by the Georgia D.O.T. for projects located within State Routes. Project not located within State Routes are not required to be certified or stamped by Georgia D.O.T.

(1) Pipe: Pipe shall be reinforced concrete conforming to ASTM C 76 for Class III pipe. Wall thickness design shall correspond to Wall B. Pipe shall have tongue and groove type joints.

(2) Acceptance: For pipe with a diameter of 30-inches or greater, acceptance shall be on the basis of material tests and inspection of manufactured pipe for defects and imperfections as defined in Paragraph 4.1.2 of ASTM C 76. Acceptance of smaller pipe shall be on the basis of plant load-bearing tests, material tests, and inspection of manufactured pipe for visual defects and imperfections as described in Paragraph 4.1.1 of ASTM C 76.

All pipe is subject to the inspection of the Engineer at the pipe plant, jobsite, or other point of delivery for the purpose of rejecting pipe not conforming to these Specifications.

Pipe shall be inspected after delivery for shape, cracks, uniformity, blisters and imperfect surfaces, and damaged ends. Repaired or patched pipe or pipe with repaired or patched joint ends or shoulders will be rejected.

(b) Manholes: Provide materials for construction of manholes in accordance with the following:

(1) Precast Concrete Sections: Precast concrete sections shall meet the requirements of ASTM C 478. The minimum compressive strength of the concrete in precast sections shall be 4,000 psi. The minimum shell thickness shall be one-twelfth of the inside diameter of the riser of the largest cone diameter. Each section shall be Georgia D.O.T. certified.

(2) Brick and Mortar: Brick shall be whole and hardburned, conforming to ASTM C 32 Grade MS. Mortar shall be made of one part Portland cement and two parts clean sharp sand. Cement shall be Type 1 and shall conform to ASTM C 150. Sand shall meet ASTM C 53. All brick manholes shall be constructed on a minimum 6-inch thick solid concrete slab constructed with concrete having a minimum compressive strength of 3000 psi. Said 6-inch concrete slab shall be constructed on a minimum of 6-inches of compacted GAB material. NO brick bottoms are allow for catch basins. Payment for Slab and GAB shall be included in the unit price for manhole.

(3) Iron Castings: Cast iron manhole frames, covers, and steps shall be gray iron, conforming to ASTM A 48 for Class 258 gray iron and all applicable local standards. All castings shall be tough, close grained, smooth and free from blow holes, blisters, shrinkage, strains, cracks, cold shots and other imperfections. No casting will be accepted which weighs less than 95% of the design weight. Shop drawings must indicate the design weight and provide sufficient dimensions to permit checking. All castings shall be thoroughly cleaned in the shop and given two coats of approved bituminous paint before rusting begins.

Grate inlets shall be East Jordan Iron Works 7510 Catch Basin Curb Inlet with a Type M3 Vane Grate. 24-inch Curb and Gutter shall be transitioned up to 30-inches as directed by the Engineer to match the 7510 Catch Basin. This type hood and grate is required on all GDOT Type 1019-A-Type "E" structures instead of the hood and grate called for on said detail.

Manhole frames and covers shall be East Jordan Iron Works V-1480. Lid to have the following castings; ("CITY OF ROME GEORGIA" and "STORM" and City clock tower emblem).

Catch Basin frames and covers shall be East Jordan Iron Works V-1860 with ¾" Raised Letters "PROPERTY OF THE CITY OF ROME".

All frames and covers shall have machined horizontal bearing surfaces.

(4) Plastic Steps: Manhole steps of polypropylene molded around a steel rod, equal to products of M. A. Industries may be used.

(5) Pipe/Manhole Connector: Pipe connections to precast concrete manholes shall be made using brick and mortar.

(e) Concrete: Concrete shall be composed of cement, fine aggregate, coarse aggregate, admixtures, and water proportioned and mixed to produce a plastic workable mix. Concrete shall have a minimum 28-day compressive strength of 3,000 psi.

(f) Grout: Grout which is required by the Drawings or Specifications, and is not otherwise specified, shall be composed of one part cement and three parts sand. Grout shall have a maximum water cement ratio of 5.0 U.S. gallons per 94 lb. bag of cement.

(g) Reinforcing Steel: Bar reinforcing steel shall conform to the requirements of ASTM A 615 Grade 40, as amended to date.

(h) Rip Rap: Provide rip-rap where shown on the Drawings or otherwise directed using only one method, either (1) or (2), throughout the job.

(1) Stone Rip-Rap: Use sound, tough, durable stones resistant to the action of air and water. Slabby or shaley pieces will not be acceptable. Specific gravity shall be 2.0 or higher. Minimum weight of individual stones shall be 50 pounds. The maximum allowable dimension for an individual stone is 24 inches. The minimum allowable dimension for an individual stone is 6 inches. At least 50% of the stones shall have a minimum dimension of 12 inches.

(2) Sand-Cement Bag Rip-Rap: Use cement sacks or burlap bags having a capacity of from 1 to 2 cubic feet. Do not use bags previously used for sugar or chemicals. Fill bags with a mixture of one part Portland Cement to five parts sand.

2.04 - LOCATION AND GRADE: The Drawings show the location and grade of catch basins, manholes, and drainage ditches. The grade line shown on the profile, or spot elevations in the plan view, corresponds to the invert of the pipe or ditch, respectively.

The Contractor shall protect the location and elevation of bench marks and reference points shown on the Drawings and shall provide all other control required to construct the drainage systems.

2.05 - EXCAVATION OF TRENCHES: Excavate all materials encountered, including rock, and dispose of excess excavated material not required for backfilling. Perform all excavation in accordance with the Occupational Safety and Health Act of 1970 (PL 91596).

(a) Dimensions: Excavate trenches to the depths shown on the drawings to accommodate the required bedding and for manholes and other structures.

Excavate the top portion of the trench to any width which will not cause unnecessary damage to adjoining structures, roadways, pavements, utilities, trees, or private property.

Excavate the lower portion of the trench to a width no greater than the outside diameter of the pipe plus 18 inches. Maintain this width up to two feet above the pipe.

(b) Earth Excavation: Excavate and prepare the trench bottom to support the pipe uniformly throughout its length.

NOTE: No additional payment will be made for improved bedding required to compensate for over excavation of the trench.

(c) Rock Excavation:

(1) Definition of Rock: Any material which cannot be excavated with a backhoe equal to a Caterpillar Model 426, Series II, and occupying an original volume of at least one-half cubic yard.

(2) Excavation: Where rock is encountered, excavate to the minimum depth and width which will provide 6 inches clearance beyond the outside diameter of the pipe.

(3) Blasting: Provide experienced workmen to perform blasting. Conduct blasting operations in accordance with all existing ordinances and regulations. Protect all structures from the effects of the blast. Repair any resulting damage.

NOTE: No additional payment will be made for repair of damage caused by blasting.

(4) Removal of Rock: Do not use excavated rock as backfill material. Dispose of rock which is surplus or not suitable for use as rip-rap.

NOTE: Rock excavation will be paid for as an extra in addition to payment for pipe provided for elsewhere in these Specifications. Payment will be made for the measured quantity of rock excavated, at the unit price bid. The Unit price for rock excavation shall include the cost of rock excavation, the cost of additional backfill material as specified and all costs incidental thereto. The allowable volume of rock excavation for payment shall be based on the width of trench specified above, (but not less than 36 inches), and depth of rock in the centerline, from the top of the rock to the specified bottom of the trench. The Owner must be given reasonable notice to measure all rock. No allowance

shall be made for excavating to extra width for construction of appurtenances and cost of all such additional rock excavation shall be included in the unit price bid for rock excavation.

(d) Bracing and Sheeting: When required by regulations, for safety of workers, or to prevent damage to adjoining structures, roadways pavements, utilities, trees, or private property which are specifically required to remain, provide bracing and sheeting.

(1) Timber: Timber for shoring, sheeting, or bracing shall be sound and free of large or loose knots and in good condition. Size and spacing shall be in accordance with OSHA regulations.

Remove bracing and sheeting in units when backfill reaches the point necessary to protect the pipe and adjacent property. Leave sheeting in place when in the opinion of the Engineer it cannot be safely removed. Cut off sheeting left in place at least two feet below the surface.

(2) Steel Sheet Piling: Continuous lockjoint steel sheet piling may be substituted for timber sheeting when approved by the Engineer. Steel piling may be removed, without cutting, provided the rate of removal is kept in pace with the tamping and backfilling operations to assure complete filling of the void created by the withdrawal of the piling. Complete withdrawal of the piling in advance of the tamping and backfilling will not be permitted. Piling, where ordered to be left in place by the Engineer for reasons of safety, will be cut off where directed.

(e) Dewatering and Trench Stabilization: Dewater excavation continuously to maintain a water level below the bottom of the trench.

Wherever the material at the bottom of the trench is unsuitable for the proper installation of the pipe, the Engineer will direct the removal and replacement of the unsuitable material.

When so directed, undercut the trench and backfill with crushed stone bedding material. Place and compact this material to bring the trench to the required grade.

NOTE: The price bid for pipe, culverts and manholes shall include excavation for the depth below the grade line necessary to provide specified bedding, and to lay pipe or set structures to grade, but measurements for payment will be made only to the grade line.

NOTE: All cost of equipment, labor, and materials required for dewatering shall be included in the price bid for pipe.

2.06 - BEDDING: Bed pipe and other storm drainage structures in accordance with the detail drawings and the following specifications.

(a) Materials: Bedding shall be crushed stone material unless shown or specified otherwise. Earth bedding materials may be substituted for crushed stone when authorized by the Engineer.

Earth bedding material shall be suitable materials selected from materials excavated from the trench. Materials shall be clean and free of rock, organics, and other unsuitable material.

Crushed stone bedding material shall meet the requirements of Georgia Department of Transportation Specification 800.01 for No. 57 stone.

(b) General: Prepare the trench bottom to support the pipe uniformly throughout its length. Compact stone bedding material by tamping or slicing with a flat blade shovel. If the trench is excavated to excessive width or depth, provide the next better class of bedding. In rock trenches, bed pipe in at least six inches of suitable bedding material.

(c) Bedding Classification: Lay all pipe with Class “C” crushed stone bedding unless shown or specified otherwise.

(1) Class "A": Excavate the trench to a depth of one-fourth the nominal diameter of the pipe below grade and lay the pipe to line and grade on concrete block. Place concrete to the full width of the trench and to a height of one-fourth the outside diameter of the pipe above the invert.

(2) Class "B": Excavate the bottom of the trench flat at a minimum depth shown on the Drawings below the bottom of the pipe barrel. Place and compact bedding material to the proper grade. Bedding shall then be carefully placed by hand and compacted to provide full support under and up to the centerline of the pipe.

(3) Class "C": Excavate the bottom of the trench flat at a minimum depth shown on the Drawings below the bottom of the pipe barrel. Place and compact bedding material to the proper grade. Bedding shall then be carefully placed by hand and compacted to provide full support under and up to a height of one-fourth the outside diameter of the pipe above the invert.

(d) Manholes: Excavate to a minimum of 12 inches below the planned elevation of the base of the manhole. Place and compact stone bedding material to the required grade before constructing the manhole.

NOTE: No separate payment will be made for material used to provide specified bedding. The cost of all bedding materials shall be included in the unit price bid for the item to which it relates.

2.07 - LAYING PIPE AND PRECAST CULVERTS: Lay the pipe to conform accurately to the alignment and grade shown on the Drawings.

(a) Handling: Use suitable tools and equipment to handle and lay pipe. Prevent damage to the pipe. Examine all pipe for cracks and other defects as it is laid. Do not lay pipe or other materials which are known to be defective.

If any pipe or other material is discovered to be defective or damaged after being laid, remove and replace it.

NOTE: No additional payment will be made for replacement of defective materials.

(b) Sequence: Excavate, lay the pipe, and backfill as closely together as possible. Do not leave unjointed pipe in the trench overnight. Backfill and compact the trench as soon as possible after laying and jointing is completed. Cover the exposed end of the installed pipe each day at the close of work and at all other times when work is not in progress. If necessary to backfill over the end of an uncompleted pipe, close the end with a plug.

(c) Placing and Jointing: Clean pipe and fittings thoroughly before laying. Before making the joint, clean the sealing surfaces of dust, dirt, gravel, and other foreign substances. Apply joint lubricant recommended by the pipe manufacturer.

Center the tongue end in the groove of the preceding pipe and shove home. Apply moderate force to ensure proper seating.

Immediately after jointing bring the pipe to final alignment and grade.

NOTE: Measurement for payment at the unit price for storm drain pipe and culverts shall be made from centerline to centerline of manholes, catch basins, junction boxes, or to the point of connection with headwalls or flared end sections. Depth of cut, if applicable, shall be measured from grade line to the invert of the pipe. Cut sheets prepared by the Contractor and approved by the Owner shall be the basis for payment.

NOTE: Full payment will not be made until inspection and clean-up are complete and the line is ready to be placed into service.

2.08 - CATCH BASINS AND MANHOLES: Construct catch basins and manholes as shown on the Drawings:

(a) Precast Concrete: Handle sections carefully to prevent cracking or chipping. Provide uniform bedding of the bottom section to prevent uneven loading. If preformed openings must be enlarged or altered, or if new openings must be made in the field, minimize the amount of material removed to provide closely matched surfaces for grouting. Install gaskets in accordance with manufacturer's recommendations to produce a watertight structure.

(b) Brick: Bed the bottom and sides of every brick in mortar. Apply a smooth coat of mortar, 3/4-inches thick, on the inside and outside.

(c) Inverts: Form channels as shown on the drawings, rounded, and troweled smooth. Maintain consistent grade through the invert. Seal the connection of pipes to the manhole with brick and mortar on the inside and outside.

(d) Top elevations: Build manholes outside of paved areas 18 inches above ground unless otherwise shown on the plans or directed by the Owner. Build manholes in paved areas to existing grades.

(e) Diamond Dowels: All catch basin shall have Diamond Dowell System (or equal) installed therein. Installation shall be in full and complete compliance with manufacturer’s recommendations. In areas where sidewalk is not being installed as part of the project, plastic pockets are to be installed and the metal plates shall be provided to the City of Rome.

NOTE: All catch basins shall be constructed on a minimum 6-inch thick solid concrete slab constructed with concrete having a minimum compressive strength of 3000 psi. Said 6-inch concrete slab shall be constructed on a minimum of 6-inches of compacted GAB material. NO brick bottoms are allow for catch basins. Payment for Slab and GAB shall be included in the unit price for catch basin.

NOTE: Measurement for payment at the unit price for manholes shall be made from the invert to the base of the manhole frame.

NOTE: Payment for installation of Diamond Dowell System shall be included in the unit price for catch basins.

NOTE: In areas where sidewalk will be installed, the rear portion of all catch basin lids shall be extended away from the curb such that the rear portion of the lid is aligned with the back of the sidewalk in order to avoid a small strip of concrete at the rear of the lid. No additional payment will be made for this lid modification.

2.09 - CONCRETE COLLARS, HEADWALLS AND OTHER STRUCTURES: Provide concrete and reinforcement for collars, headwalls and other structures in accordance with the

requirements of Section 3 - Concrete Work. Construct according to the details on the Drawings or D.O.T. standards where referenced.

2.10 - BACKFILLING: Backfill carefully to restore the ground surface to its original condition. Dispose of surplus material.

(a) Backfill Under Roads: Compact backfill underlying pavement and backfill under dirt and gravel roads to 95% of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698), except in the top 12 inches, which shall be to 100% of the maximum dry density. All other bedding and backfill shall be compacted to 85% of the maximum dry density. Roadway cuts shall be constructed in full and complete compliance with the City of Rome Standard "Repair of Roadway Cut Detail."

(b) Initial: Place initial backfill material carefully around the pipe above bedding in uniform 6 inch layers to a depth of at least 18 inches above the pipe bell. Compact each layer thoroughly with suitable hand tools. Do not disturb or damage the pipe. Backfill on both sides of the pipe simultaneously to prevent side pressures. Initial backfill material is earth material excavated from the trench which is clean and free of rock, organics, and other unsuitable material. If materials excavated from the trench are not suitable for use as initial backfill material, obtain suitable materials elsewhere.

(c) Final: After initial backfill material has been placed and compacted, backfill with general excavated material. Final backfill material shall not contain more than 1/3 broken rock, of which no single stone or boulder shall weigh more than 50 pounds. Place backfill material in uniform layers and thoroughly compact with heavy power tamping tools of the "Wacker" type.

(d) Settlement: If trenches settle, refill and grade the surface to conform to the adjacent surfaces.

(e) Additional Material: Where final grades above the pre-existing grades are required to maintain minimum cover, additional fill material will be shown on the Drawings.

Utilize excess material excavated from the trench if the material is suitable. If excess excavated materials are not suitable, or if the quantity available is not sufficient, provide suitable additional fill material.

NOTE: No separate payment will be made for backfilling. The cost of all such work and all costs incidental thereto shall be included in the unit price bid for the item to which the work pertains. This includes but is not limited to concrete required in roadway cuts and the placement of asphaltic pavement over said cuts.

2.11 - RIP-RAP: Where shown on the Drawings, carefully compact backfill and place rip-rap to prevent subsequent settlement and erosion.

(a) Imbed stone rip-rap by hand so as to form a compact layer at least 12 inches thick. Place rip rap in such a way that the smaller stones are not segregated by evenly distributed. Place chinking stones in the crevices between the larger stones so that a dense, well graded mass is produced.

(b) Imbed sand-cement bag rip-rap by hand to form a compact layer at least 12 inches thick. Place with overlapping joints. The finished surface shall not deviate from the specified by more than 3 inches at any point.

(c) Place a filter fabric between rip-rap and soil foundation. Fabric shall be a geotextile underliner as per ASSHTO M288-98.

2.12 - INSPECTION: Clean pipe lines before requesting final acceptance. Where any obstruction is met, clean the pipe by means of rods, swabs, or other instruments. When requested by the Owner flush out lines and other structures before final inspection.

Pipe lines shall be straight and show a uniform grade between manholes. Correct any discrepancies discovered during inspection.

2.13 - PAYMENT: No separate payment shall be made for work required in this Section of the Specifications except as specifically set forth in the Bid. The cost of all required work and all costs incidental thereto shall be included in the unit prices bid in the Proposal for the items to which it pertains.

# SECTION NO. 3

## CONCRETE WORK

3.01 - SCOPE: This section of the Specifications describes materials and equipment and requirements for their use in constructing all concrete work. The Contractor shall furnish all materials and equipment and perform all labor necessary to fulfill the requirements of these Specifications.

3.02 - GENERAL: Submit concrete design mix and shop drawings on reinforcing, admixtures, and curing compound for review prior to any work. Shop drawings with this information shall be submitted for all precast or cast-in-place concrete work.

All formwork, reinforcing, inserts, and other items to be built into the concrete work shall be correctly positioned, secured, inspected, and approved prior to placing concrete.

1\4-inch Diamond Dowel Load Transfer System Components as manufactured by PNA Construction Technologies, Inc. (800-542-0214) shall be installed at ALL COLD joints as specified by the manufactures recommendations. No Additional Payment will be made for the installation of said Transfer System, but shall be included as part of the unit price for the item to which it is associated.

3.03 - MATERIALS: Materials for use in concrete work including admixtures, aggregates, cement, form material, reinforcing and water shall be in accordance with the following:

(a) Cement: All cement shall be one brand of Portland Cement. All cement shall be Type I and meet the requirements of ASTM C 150. One bag of Portland cement shall be considered to weigh 94 lbs.

(b) Aggregates: Aggregates shall conform to requirements of ASTM C 33. All sand shall be manufactured sand. No local sand to be used in concrete mix.

(c) Water: Mixing water for concrete shall be fresh, clean and potable.

(d) Admixtures: For each one hundred pounds of cement the following amount of admixture shall be provided in accordance with the manufacturer's recommendations.

(1) For air temperatures below 70 degrees F., provide 3-6 ozs. of Master Builders Pozzolith 344-N (or 122-N) or 3-6 oz. of Monex Resources' Relcrete HW.

(2) For air temperatures above 70 degrees F., provide 3 oz. of Master Builders Pozzolith 300-R or 3 oz. of Monex Resources' Relcrete TR.

(3) An air-entraining admixture conforming to the requirements of ASTM C 260, Master Builder's MB-AE 10, Monex Resources' Air 30, or equal, shall be used in all concrete exposed to freezing temperatures. The air content of freshly mixed air-entrained concrete, as determined by the method of ASTM C 233, shall be not less than 3 nor more than 6 percent. The air-entraining admixture is in addition to the admixture specified in (1) or (2) above.

(e) Formwork:

(1) Form Material: Forms shall be of plywood or architectural type steel panel forms.

(2) Form Oil: Form oil shall be non-staining, solvent base type oil equal to Dura-Guard as manufactured by Standard Oil Company.

(3) Form Ties: Form ties shall have a minimum working strength of at least 3,000 pounds when fully assembled and shall be of the snap or break type with a water stop in the center. Ties shall be free of cones, washers or other devices which will leave a hole larger than 7/8 inch diameter in the exposed surface of the concrete. Ties shall be such that when forms are removed no metal shall be within 1-1/2 inches of the finished surface.

(4) Chamfer Strips: Chamfer strips shall be placed in forms for exposed edges of beams, slabs, and curbs. Chamfer strips shall have a minimum dimension of 3/4-inch.

(f) Reinforcing Steel: Reinforcing steel shall be properly supported and secured in position before concrete is placed.

(1) Reinforcement Bars: Bar reinforcing steel shall conform to the requirements of ASTM A 615 Grade 40.

The reinforcement shall be bent cold to the shapes indicated on the plans. This shall be done in the shop, before shipment, and not in the field, unless otherwise noted on the plans or directed by the Engineer.

(2) Wire Fabric: Wire fabric for concrete reinforcement, shall conform to the requirements of ASTM A 185.

(3) Bending: Hooks of 90 degrees shall have a radius of bend on the axis of the bar of not less than four bar diameters plus an extension of five bar diameters at the free end.

(g) Detectable Warnings: Wheelchair ramps shall be 2004 ADA (or latest version) Compliant with Detectable Warning Areas with either Matt Type truncated dome, or Brick Pavers in River Red made by Pavestone or equal to be approved by the Engineer. The 2004 ADA (or latest version) Compliant Detectable Warning Pavers shall be installed in the "Runnerbond" installation pattern as shown in the installation details by Pavestone.

(h) Waterstops: In construction joints not shown as expansion joints, waterstops shall be steel plate 1/8 inch thick by 6 inches wide. The waterstop shall extend the entire length of the joint and all splices shall be butt welded.

(i) Grout: Grout which is required by the Drawings or Specifications, and is not otherwise specified, shall be composed of equal parts of cement and sand. Grout shall have a maximum water:cement ratio of 5.0 U.S. gallons per 94 lb. bag of cement.

(j) Non-Shrink Grout: All grout shall be non-metallic, non-shrink type. Cement shall be Type III. Grout shall meet the following requirements:

| Criteria | Test Method | Results |
|---|---|---|
| Workability | ASTM C-191 | initial set time not less than 60 min. |
| Compressive Strength | ASTM C-109 (restrained condition) | 1 day - 3,000 psi |
| Shrinkage | ASTM C-827 and CRD 588 | no shrinkage after placement and no shrinkage after set. |

Grout shall be mixed and placed in accordance with the recommendations of ACI, and the grout manufacturer's published recommendations.

Grout shall be equal to Five Star Grout manufactured by U.S. Grout Corporation.

(k) Epoxy Bonding Compound: Epoxy bonding compound shall be 100% solids with a minimum bond strength of 2100 psi at 14 days. Epoxy bonding compound shall be equal to Rezi-Weld 1000 by W.R. Meadows.

(l) Expansion Joint Filler: Joint filler shall be a preformed type meeting the requirements of ASTM D 1751.

(m) Curing Compound: Curing compound shall be an acrylic based compound conforming ASTM C 309, Type I, Class B. The curing compound shall form a moisture impermeable film which retains a minimum of 95 percent of the mixing water beyond the required curing time. Curing compound shall be equal to Meadows Sealtight CS-309.

3.04 - PLACING AND FASTENING OF REINFORCING: Unless otherwise called for, installation practices of the American Concrete Institute shall be strictly followed.

All reinforcement shall be furnished in full length as indicated on the plans. No splicing of bars, except where shown on the plans, will be permitted without permission of the Engineer.

Splices which are permitted shall have a lap of not less than forty times the diameter of the bar, unless otherwise shown. Splices shall be well distributed or otherwise located at points of low tensile stress.

3.05 - CONCRETE COMPOSITION: Concrete shall be proportioned by weight to give an ultimate compressive strength of 3,000 psi at 28 days when sampled and tested in accordance with ASTM C 31 and C 39. Concrete shall contain not less than 517 pounds of cement per cubic yard of concrete. Ready-mix concrete shall be mixed and transported in accordance with ASTM C 94.

3.06 - TESTING: Concrete for all structures requiring over ten (10) cubic yards of concrete shall be tested. All testing shall be performed by an independent laboratory, selected by the Contractor, approved by the Engineer, and paid for by the Contractor.

(a) Required Tests: The following tests of materials and concrete are required to be conducted in accordance with the current ASTM Standards.

(1) Test Cylinders: Cylinders shall be made and cured in accordance with ASTM C 31. One set of five cylinders from the same batch of concrete shall be made for each days placing of concrete.

Two cylinders from each set shall be broken at 7 days and two at 28 days in accordance with ASTM C 39. The test results shall be the average of the strengths of the cylinders tested at 28 days. One cylinder shall be held as a spare to be broken at 56 days in the event that cylinders broken at 28 days do not meet specified values.

All sampling, molding, transporting, storing, curing, preparation for breaking, and testing of cylinders shall be the responsibility of the laboratory and shall be performed by qualified laboratory personnel. The Contractor shall supply wheelbarrows, shovels, mixing boards, and shaded area for molding cylinders, and similar equipment required by the laboratory representative for molding test cylinders.

(2) Slump Tests: At least two slump tests shall be made on each day that concrete is placed. One slump test shall be made at the time cylinders are made for compression tests. Tests shall meet ASTM C 143.

(b) Test Results: The laboratory shall send one copy of all reports to the Engineer, one copy to the Contractor and one to the ready mix plant. Concrete test reports shall include slump tests and state where the concrete was used in the structure.

3.07 - PLACING CONCRETE: Before concrete is placed, steel forms shall be uniformly coated with form oil and wood forms shall be thoroughly wetted.

Concrete shall be placed to avoid the segregation or separation of aggregates, and displacement of reinforcing.

All concrete shall be placed in daylight, and the placing of concrete in any portion of the work shall not be begun if such work cannot be completed during daylight.

Contractor shall be responsible for any vandalism to uncured or wet concrete.

Concrete shall not be placed when the atmospheric temperature is below 40 degrees F. If after placing concrete the temperature drops below 40 degrees F., the Contractor shall enclose, heat and protect the work in a manner to keep the air surrounding the fresh concrete at a temperature of not less than 45 degrees F. for a period of 5 days after concrete is placed.

Concrete shall be compacted by the use of mechanical internal vibrating equipment supplemented by hand spading. Vibrating shall not be used to transport concrete within forms. Internal vibrators shall maintain a speed of at least 5,000 impulses per minute when submerged in concrete.

Keys shall be formed in all construction joints as indicated on the Drawings and as directed by the Engineer.

3.08 - FINISHING: All exposed concrete surfaces shall be finished to 12 inches below finish grade. Concrete not exposed to view, therefore not specified to be finished, shall have rough edges tooled off and shall be pointed and spot finished to fill irregularities.

(a) Vertical Surfaces: When concrete has set sufficiently to permit, forms and form ties shall be carefully removed. All depressions resulting from removal of form ties and all other holes and rough places shall be thoroughly wetted with water and pointed with sand cement grout.

After pointed surfaces have set sufficiently to permit, all surfaces specified to be finished shall be kept wetted with water, and rubbed with a carborundum stone of

medium fineness, or other equally good abrasive, to bring the surface to a smooth rubbed finish and to remove all form and tie marks.

(b) Slabs: After the concrete has been placed, struck off, consolidated and leveled, it shall not be worked further until ready for floating. Floating shall begin when the water sheen has disappeared and the mix has hardened sufficiently that the weight of a man standing on it leaves only a slight imprint on the surface. The surface shall then be consolidated by handfloating with wood floats.

Immediately after the floating has been completed, exposed surfaces shall be given a coarse transverse scored texture by drawing a broom or burlap belt across the surface.

3.09 - CURING: A curing compound as previously specified shall be applied to all concrete surfaces except those which are to receive future concrete or mortar. The compound shall be applied in accordance with the manufacturer's recommendations.

3.10 - IMPERFECT OR DAMAGED WORK: Imperfect or damaged work, or any work damaged before final acceptance shall be satisfactorily removed and replaced in accordance with the requirements of the Drawings and Specifications. Removal and replacement of concrete work shall be done in such a manner that the strength of the structure will not be impaired.

3.11 - CLEANING: Upon completion of the work, all forms, equipment, protective coverings and rubbish resulting therefrom shall be removed from the premises. Finished surfaces shall be left in a condition satisfactory to the Engineer.

3.12 - PAYMENT: No separate payment shall be made for work required in this section of the Specifications except as specifically set forth in the Bid. The cost of all required work and all costs incidental thereto shall be included in the amount bid in the Bid for the item to which the work pertains.

# SECTION NO. 4

## ROADWAYS

4.01 - SCOPE: This Section of the Specifications describes materials and equipment required to complete development of the roadways. Furnish all materials and equipment and perform all labor necessary to fulfill the requirements of these Specifications.

4.02 - GENERAL: Completion of roadway development, including subgrade preparation, base and paving, and curb and gutter shall comply with the Standard Specifications of the Georgia Department of Transportation, 2001 Edition, and the 2001 Standard Specifications For Construction of Roads and Bridges, unless specified otherwise.

4.03 - GRADED AGGREGATE BASE: The base shall be a minimum of 6-inches thick and extending the full roadway width from 12-inches outside of the curb. Furnish stone in two sizes of such gradation that when combined in approximately equal quantities, the resulting mixture is well graded from coarse to fine, meeting the gradation requirements of Georgia D.O.T. Standard Specification Section 815.

4.04 - ASPHALTIC CONCRETE PAVEMENT: Asphaltic concrete pavement shall be constructed over the graded aggregate base in accordance with the sections shown on the Drawings and Section 400 of the Georgia D.O.T. Standard Specification latest revision. All asphaltic concrete shall be tested in accordance with Section 400 of the Georgia D.O.T. Standard Specifications latest revision. All testing of asphaltic concrete shall be paid for by the Contractor. Superpave asphaltic concrete mixtures shall meet the requirements of mix design level ‘A’.

4.05 - CURB AND GUTTER: Construct curb and gutter to the size and dimensions shown on the Drawings. Concrete shall be provided in accordance with Section 3 - Concrete Work, unless specified otherwise in this Section.

All curb and gutter shall be underlain by a minimum of 6-inches compacted graded aggregate base material. Said material shall extend a minimum of 12-inches behind and in front of new curb and gutter. In the case of remove and replace, the graded aggregate shall extend 12-inches behind the curb and to the edge of the existing pavement. No additional payment for the placement of said graded aggregate shall be made but should be included in the unit price for curb and gutter.

On straight-grade tangents there shall be no deviation of more than 1-inch in ten feet (10'-0"). This tolerance will not be permissible if it reduces the thickness of the gutter, or alters the direction of flow. Vertical curves shall be uniform and shall not allow water to stand in a

localized depression. Gutter pitch shall be as shown on the Drawings and finished with a tolerance of ± 1/4-inch, full width.

Construction joints may be either sawed or tooled. Joints shall be spaced a minimum of six feet and a maximum of ten feet. Joint spacing near the end of a curbed section shall be adjusted so that no section is shorter than four feet.

Expansion joints shall be ½" and shall be placed at intersections with other concrete structures and at sixty foot intervals along the curb and gutter. Joints shall be filled in accordance with Section 3.03 of these specifications.

Patching between curb and gutter and existing pavement shall be the responsibility of the City of Rome.

4.06 - PAVEMENT MARKINGS AND SIGNAGE: Prior to completion of paving operations signage in areas to be paved shall be removed as shown on plans or as directed by the Engineer in conformance with Section 610 of the Georgia D.O.T. Standard Specifications. New signage shall be installed as shown on plans or as directed by the Engineer. New signage shall conform to Section 636 of the Georgia D.O.T. Standard Specifications and the Manual of Uniform Traffic Control Devices, latest edition.

Upon completion of paving operations, traffic stripes and other pavement markings shall be applied by the Owner. Pavement marking materials and their application shall conform to Section 652 and Section 653 of the Georgia D.O.T. Standard Specifications and the Manual on Uniform Traffic Control Devices, latest edition.

Traffic stripes and paint shall be placed as indicated on the Drawings or as directed by the Engineer.

4.07 - SIDEWALKS: Construct sidewalk to the size and dimensions shown on the Drawings. Concrete shall be provided in accordance with Section 3 - Concrete Work, unless specified otherwise in this Section.

Construction joints may be either sawed or tooled. Joints shall be spaced a nominal distance of five feet apart. Joint spacing near the end of a curbed section shall be adjusted so that no section is shorter than four feet.

Expansion joints shall be ½" and shall be placed at intersections with other concrete structures and at sixty foot intervals along the curb and gutter. Joints shall be filled in accordance with Section 3.03 of these specifications.

Provide curb cuts where shown on the Drawings and with detectable warning strips that meet the requirements of ADA guidelines and the D.O.T. Standards for Curb Cut (Wheelchair) Ramps. Color for the detectable warning surface shall be selected by the Owner.

4.08 - STREETSCAPE: Construct streetscape items to the size, dimensions, and with the materials shown on the Drawings. Brick pavers with truncated domes shown in ADA compliant wheel chair ramps shall be 2004 ADA (or latest revision) Compliant Detectable Warning Pavers in River Red made by Pavestone or similar color approved by the Engineer. The 2004 ADA Compliant Detectable Warning Pavers shall be installed in the "Runner Bond" installation pattern as shown in the installation details by Pavestone. The brick pavers shown on the Drawings between the back of curb and edge of sidewalk shall be modular brick pavers for mortared applications made by Pine Hall Brick. The color of the modular brick pavers shall be Pathway Full Range Modular.

All areas where the Streetscape pavers are installed shall be underlain with concrete as shown on the drawings. Concrete in these areas shall be paid for as sidewalk (form ready, remove & replace, or new).

Payment for Streetscape Pavers along with grout for leveling and joint material shall be made in the unit price for Streetscape Pavers.

4.09 - PAYMENT: No separate payment shall be made for work required in this Section of the Specifications except as specifically set forth in the Bid. The cost of all labor, materials, and equipment required by the work, and all costs incidental thereto shall be included in the unit price bid for the work to which it pertains.

## SECTION NO. 5

PROTECTION AND RESTORATION OF WORK AREA

5.01 - GENERAL: Return all items and all areas disturbed, directly or indirectly by work under these Specifications, to their original condition or better, as quickly as possible after work is started.

5.02 - MAN-MADE IMPROVEMENTS: Protect, or remove and replace with the Owner's approval, all fences, walkways, mail boxes, pipe lines, drain culverts, power and telephone lines and cables, and other improvements that may be encountered in the work.

5.03 - CULTIVATED GROWTH: Do not disturb cultivated trees or shrubbery unless approved by the Owner. Any such trees or shrubbery which must be removed shall be heeled in and replanted under the direction of an experienced nurseryman.

5.04 - CUTTING OF TREES: Do not cut trees for the performance of the work except as absolutely necessary. Protect trees that remain in the vicinity of the work from damage from equipment. Do not store spoil from excavation against the trunks. Remove excavated material stored over root system of trees within 30 days to allow proper natural watering of the root system. Repair any damaged tree over 3-inches in diameter, not to be removed, under the direction of an experienced nurseryman. All trees and brush that require removal shall be promptly and completely removed from the work area and disposed of by the Contractor. No stumps, wood piles, or trash piles will be permitted on the work site.

5.05 - REMOVING AND REPLACING PAVEMENT:

(a) Removing Pavement: Remove existing pavement as required or specified.

(1) Marking: Before removing any pavement, mark the pavement neatly paralleling pipe lines and existing street lines. Space the marks the width of the trench.

(2) Breaking: Break asphalt pavement along the marks using jack hammers or other suitable tools. Break concrete pavement along the marks by use of jack hammers or by scoring with a rotary saw and breaking below the score by the use of jack hammers or other suitable tools.

(3) Machine Pulling: Do not pull pavement with machines until completely broken and separated from pavement to remain.

(4) Damage to Adjacent Pavement: Do not disturb or damage the adjacent pavement. If the adjacent pavement is disturbed or damaged, remove and replace the damaged pavement.

NOTE: No additional payment will be made for removing and replacing damaged adjacent pavement.

(5) Sidewalk: Remove and replace sidewalks disturbed by construction for their full width and to the nearest undisturbed joint.

(6) Curb: Remove and replace to the nearest undisturbed joint, or tunnel under, any curb disturbed or encountered by construction.

(b) Replacing Pavement: Upon completion of backfilling and consolidation of the backfill, arrange to have the compaction checked by the Engineer.

Prior to replacing pavement, make a final cut in concrete pavement nine inches back from the edge of damaged pavement. Make the cut using a rotary saw. Remove asphalt pavement nine inches back from the edge of damaged pavement using jack hammers or other suitable tools.

Replace all street and roadway pavement as shown on the Drawings. Replace driveways, sidewalks, and curbs with the same material and to the same dimensions as existing.

(c) Supervision and Approval: Pavement restoration shall meet the requirements of the regulatory agency responsible for the pavement. Obtain agency approval of pavement restorations before requesting final payment.

Obtain the Owner's approval of restoration of pavement not the responsibility of a regulatory agency, such as private roads and drives.

Complete pavement restoration as soon as possible after backfilling.

(d) Failure of Pavement: Should any pavement restoration or repairs fail or settle during the life of the Contract, including the bonded period, promptly restore or repair defects.

NOTE: No separate payment for removing and replacing damaged pavement will be made.

5.06 BACKFILLING SHOULDERS: After placement and proper curing of curb and gutter and/or sidewalk, the Contractor shall place top soil which has been stockpiled from excavation or from borrow areas (secured and fully permitted by the Contractor at his expense) in areas to be grassed to a minimum depth of 4-inches. The finished surface shall present a smooth, uniform, loose, well-broken soil without large clods, rocks, roots or other unsatisfactory materials.

Topsoil shall be defined as soil in its unaltered state as having a Ph range of 5.5 – 6.5 and containing more than 80 percent of the nutrients necessary for plants to produce sustainable growth.

NOTE: No separate payment shall be made for the incorporation of lime into soil to bring it into the required Ph range for classification as top soil, but shall be included in the Bid Item for Backfilling Shoulders.

5.07 GRASSING: Grass surfaces by hydro seeding with a mixture of fertilizer, seed, mulch, and water at the following rates:

| | |
|---|---|
| Fertilizer (12-12-12) | 1500 lbs/acre |
| Bermuda Seed | 60 lbs/acre |
| Fescue Seed | 200 lbs/acre |
| Mulching Material | 1500 lbs/acre |

Mulching material shall be Conwed-2000, Weyerhauser Silva Fiber, or equal.

In areas where hydro seeding is not practical, hand seeding is permissible using the same mixture of fertilizer and seed listed above. These areas shall be mulched in accordance with the "Manual for Erosion and Sediment Control in Georgia", latest revision.

In areas so specified, grassing shall be Bermuda sod as specified by the Engineer.

5.08 - TREES: Contractor shall schedule a meeting with City of Rome Arborist, Mr. Terry Paige, at the location of chosen nursery to cooperatively select trees to be planted. Planting location of trees along Maple Ave. shall be staked by Mr. Terry Paige. Any trees planted at locations not staked by Mr. Terry Paige shall result in the removal and replacement of said trees by the contractor sholely at his expense. Before trees are placed in the ground, holes and root balls shall be inspected and approved by Mr. Terry Paige. All trees shall be loosely guyed with three (3) straps of 5/8" thick Mule Tape attached to stakes as directed by Mr. Terry Paige. Final payment for tress shall not be made until trees are inspected and approved by Mr. Terry Paige. Mr. Terry Paige may be contacted at (706) 506-3552.

NOTE: For contractor guarantee see page GC-20

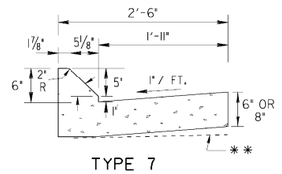
5.09 - DISPOSAL OF RUBBISH: Dispose of all materials cleaned and grubbed during the construction of the project in accordance with the applicable codes and rules of the appropriate regulatory agencies, county, state and federal.

5.10 - PAYMENT: No additional payment shall be made for work required in this Section of the Specifications except as specifically set forth in the Bid. The cost of all labor, materials, and equipment required by the work shall be included in the unit price bid for the work to which it pertains.

# DETAILED DRAWINGS

| STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| GA. | | | |

## CONCRETE CURB & GUTTER

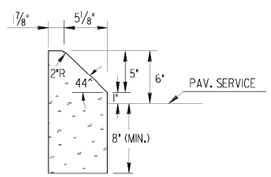



TYPE 7

SCALE 1" = 1FT.

**AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6" OR 8" AT ANY POINT.

## CONCRETE HEADER CURB

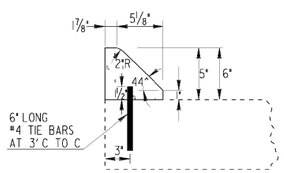



TYPE 7

SCALE: 1 1/2" = 1FT.

THE 8" MIN. DEPTH MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB ALIGNS WITH PAV. BOTTOM.

## CONCRETE DOWELED INTEGRAL CURB

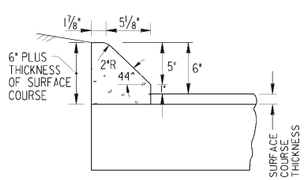



TYPE 7

SCALE: 1 1/2" = 1FT.

TIE BARS WILL BE PLACED AS SOON AS PRACTICAL AFTER FINISHING AND BEFORE INITIAL SET IN PPC PAVEMENT. TIE BARS MAY BE DRIVEN IN OR DRILLED & GROUTED IN ASPHALT PAVING. JOINTS IN CURB SHALL MATCH THOSE IN PCC PAV. OR BE AT 20' SPA. FOR ASPHALT PAVING

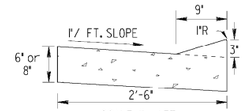
## CONCRETE INTEGRAL CURB




TYPE 7

SCALE: 1 1/2" = 1FT.

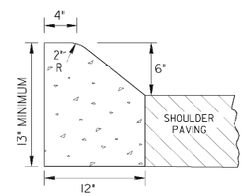
## RAISED EDGE WITH CONCRETE GUTTER




SCALE: 1" = 1FT.

RAISED EDGE TO BE CONSTRUCTED WITH SAME CONCRETE MIX AS THE GUTTER AND SHALL BE FORMED IMMEDIATELY AFTER GUTTER HAS BEEN FINISHED OR FORMED MONOLITHIC WITH GUTTER JOINTS IN RAISED EDGE SHALL MATCH THOSE IN THE GUTTER.

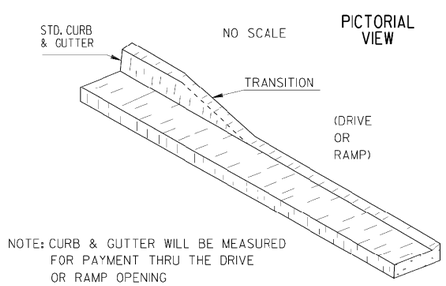
## CONCRETE HEADER CURB (TYPE 6)



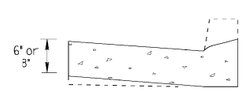

SCALE: 1 1/2" = 1FT.

## DETAILS OF RECESSED CURB

TYPICAL USE: AT DRIVEWAYS OR CURB CUT RAMPS



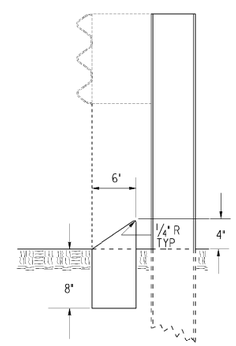

NOTE: CURB & GUTTER WILL BE MEASURED FOR PAYMENT THRU THE DRIVE OR RAMP OPENING




SECTIONAL VIEW

(SEE SEPARATE STANDARD FOR DRIVEWAY OR CURB RAMP FOR ADDITIONAL DETAILS.)

FACE OF CURB MUST ALIGN WITH BACK EDGE OF GUARDRAIL AND THE FACE OF THE OFFSET BLOCK.



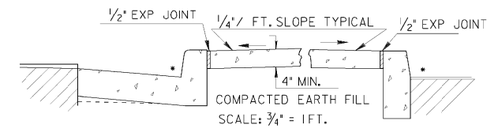

TYPE 8

TYPE 8 CURB IS USED IN CONJUNCTION WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.

NOTE:
IF CONCRETE MEDIAN INTERCEPTS PEDESTRIAN CROSSWALKS. WHEELCHAIR RAMPS (STANDARD 9031-W) WILL BE REQUIRED.

## CONCRETE MEDIAN (Between Curbs)

NOTE: CURB TYPES SHOWN ARE TYPICAL. OTHER TYPES MAY BE SPECIFIED.

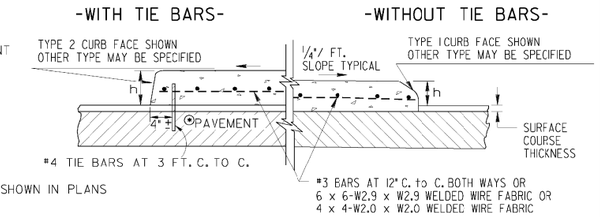



SCALE: 3/4" = 1FT.

NOTE: WIDTH OF CONCRETE MEDIAN WILL BE AS SHOWN IN PLANS

## CONCRETE MEDIANS (Integral)

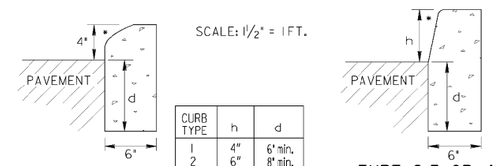
SCALE: 1"=1FT.




## CONCRETE HEADER CURBS

(STANDARD FACE DESIGNS)

SCALE: 1 1/2" = 1FT.

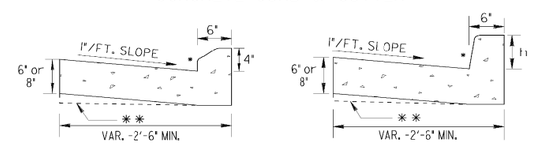



| CURB TYPE | h | d |
|---|---|---|
| 1 | 4" | 6" min. |
| 2 | 6" | 8" min. |
| 3 | 8" | 10" min. |
| 4 | 10" | 12" min. |

TYPE 1 TYPE 2,3 OR 4

THE DIMENSION d MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB WILL ALIGN WITH BOTTOM OF PAVING

## CONCRETE CURB & GUTTER

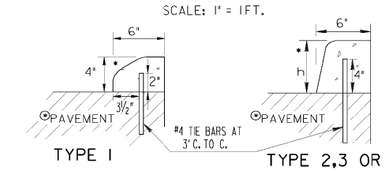



TYPE 1 SCALE: 1"= 1FT. TYPE 2, 3 OR 4

**AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6" OR 8" AT ANY PONT.

## CONCRETE DOWELED INTEGRAL CURBS

SCALE: 1" = 1FT.




TYPE 1 TYPE 2,3 OR 4

⊙ P.C. CONCRETE PAVEMENT-
TIE BARS WILL BE PLACED AS SOON AS PRACTICABLE AFTER FINISHING AND BEFORE INITIAL SET HAS TAKEN PLACE. JOINTS IN CURB OR CONC. MEDIAN WILL MATCH THOSE IN PAVEMENT.

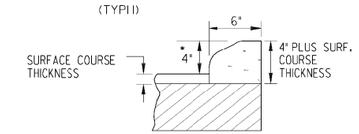
⊙ ASPHALT PAVEMENT-
TIE BARS MAY BE DRIVEN IN OR DRILLED AND GROUTED IN. CONTRACTION JOINTS ARE TO BE CONSTRUCTED IN CURB OR CONCRETE MEDIAN AT 20 FT. SPACINGS.

| MINIMUM TIE BAR LENGTHS (FOR CONC. DOWELED CURBS OR CONC. MEDIAN) | | |
|---|---|---|
| CURB TYPE | P.C. CONC. PAV. | ASPHALT PAV. |
| 1 | 6" | 8" |
| 2, 3 or 4 | 8" | 12" |

NOTE:
TIE BARS FOR DOWELED CURBS MAY BE UNCOATED PLAIN OR DEFORMED BILLET-STEEL BARS (GRADE 40) AS USED FOR CONCRETE REINFORCEMENT. (AASHTO M-31)

## CONCRETE INTEGRAL CURB

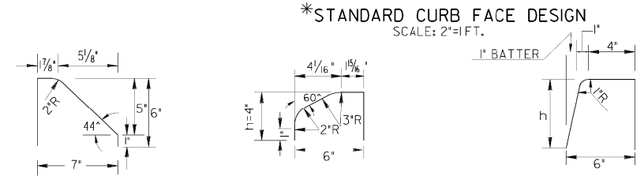
(TYPII)




SCALE: 1 1/2" = 1FT.

## *STANDARD CURB FACE DESIGN

SCALE: 2"=1FT.



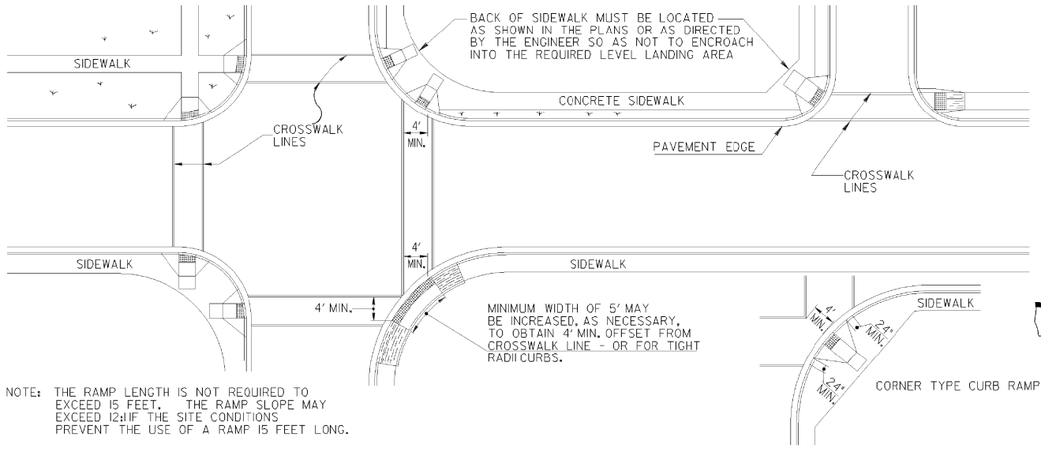

TYPE 7 TYPE 1 TYPE 2, 3 OR 4

| TYPE | θ |
|---|---|
| 1 | 4" |
| 2 | 6" |
| 3 | 8" |
| 4 | 10" |

| | | |
|---|---|---|
| 3-03 | DATE | DEPARTMENT OF TRANSPORTATION<br>STATE OF GEORGIA |
| ADDED TYPE 8 DETAIL | REVISION | STANDARD<br>CONCRETE CURB & GUTTER<br>CONCRETE CURBS, CONCRETE MEDIANS |
| | | SCALE: AS SHOWN — REDRAWN SEPT., 1999 |
| | BY | DES. ____ (SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR.<br>DRW. ____<br>TRA. ____ (APPROVED) CHIEF ENGINEER<br>CHK. ____ |
| | | NUMBER 9032B |

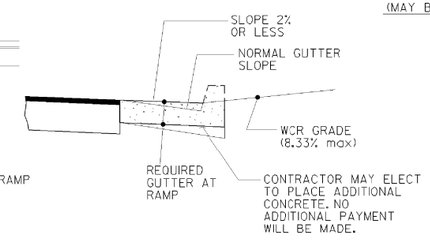
| STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| GA. | | | |

## TYPICAL LOCATIONS FOR CURB CUT RAMPS - PLAN VIEW

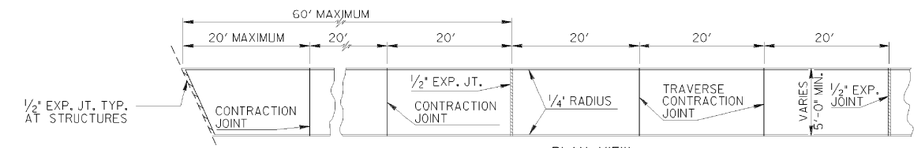



NOTE: THE RAMP LENGTH IS NOT REQUIRED TO EXCEED 15 FEET. THE RAMP SLOPE MAY EXCEED 12:1 IF THE SITE CONDITIONS PREVENT THE USE OF A RAMP 15 FEET LONG.

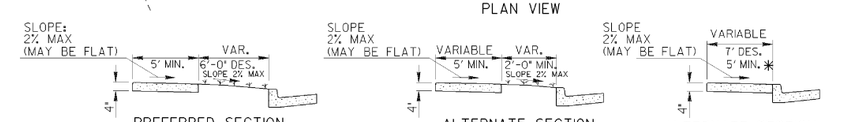
## GUTTER TRANSITION DETAIL




## CONCRETE SIDEWALK DETAILS




PLAN VIEW




PREFERRED SECTION WITH 6' GRASS STRIP

*16' SHOULDER RECOMMENDED WITH THIS INSTALLATION

ALTERNATE SECTION WITH GRASS STRIP

ALTERNATE SECTION WITHOUT GRASS STRIP

*5' MIN WIDTH WITH NO OBSTRUCTIONS (MAILBOXS, SIGNS,ETC)

7' PREFERRED WIDTH WITH A 2' AREA OF CONTRASTING COLOR & TEXTURE ADJACENT TO THE CURB. (COST OF TEXTURE, COLORING & HOLES REQUIRED FOR MAILBOX AND SIGN POST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK)

NOTES FOR CONCRETE SIDEWALK:

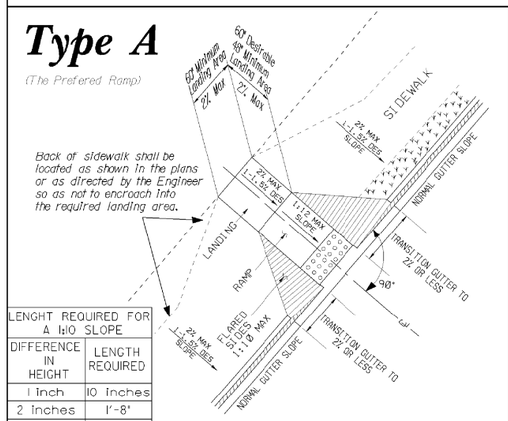
A. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO 1/4" RADIUS.
C. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

NOTES FOR CURB CUT RAMPS:

1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT SPECIFY OTHERWISE.
   a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
   b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
   c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC.. WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1.
6. LIN. FT. OF CURB AND GUTTER WILL INCLUDE THE TRANSITIONED CURB IN FRONT OF RAMPS. SQ. YDS. OF CONCRETE SIDEWALK AND CONCRETE MEDIAN PAVING WILL INCLUDE RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR CURB RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR SAWING AND REMOVING EXISTING SIDEWALK OR CURB WHERE NECESSARY FOR RAMP CONSTRUCTION.
7. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT. THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT.
8. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD.

## Type A

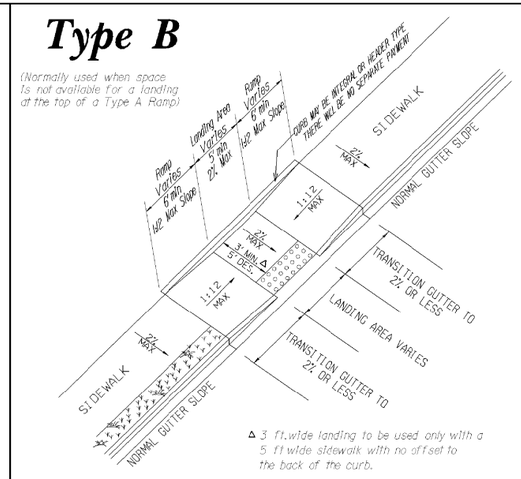
*(The Prefered Ramp)*




| LENGHT REQUIRED FOR A 1:10 SLOPE | |
|---|---|
| DIFFERENCE IN HEIGHT | LENGTH REQUIRED |
| 1 Inch | 10 Inches |
| 2 Inches | 1'-8" |
| 3 Inches | 2'-6" |
| 4 Inches | 3'-4" |
| 5 Inches | 4'-2" |
| 6 Inches | 5 feet |

## Type B

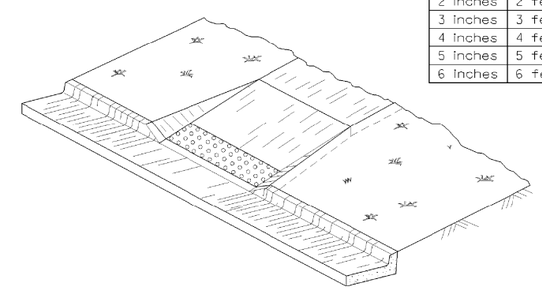
*(Normally used when space is not available for a landing at the top of a Type A Ramp)*




Δ 3 ft.wide landing to be used only with a 5 ft wide sidewalk with no offset to the back of the curb.

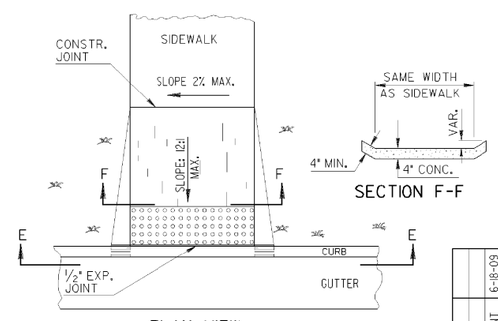
## Type D

*(Normally used when the sidewalk ties directly into the crosswalk)*

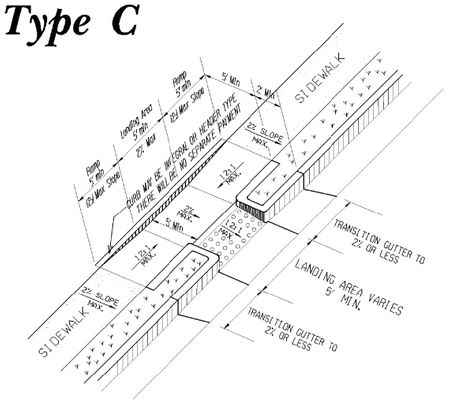


| LENGHT REQUIRED FOR A 1:12 SLOPE | |
|---|---|
| DIFFERENCE IN HEIGHT | LENGTH REQUIRED |
| 1 Inch | 1 foot |
| 2 Inches | 2 feet |
| 3 Inches | 3 feet |
| 4 Inches | 4 feet |
| 5 Inches | 5 feet |
| 6 Inches | 6 feet |

*IN AREAS WHERE THE GUTTER HAS A SLOPE 1" IN 1' END NORMAL GUTTER SLOPE AT A DISTANCE OF 6 TO 10 FEET FROM THE RAMP AND BEGIN TRANSITION TO A FLAT GUTTER SLOPE. NORMAL GUTTER SLOPE SHALL BE RESUMED AT A SIMILAR DISTANCE BEYOND THE RAMP.*



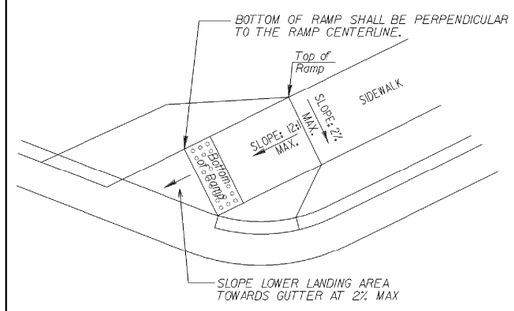

## Type C




## Skewed Ramp Details

### (Applies to Type A & Type D Ramps Only)

*WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP.*




## This Detail Replaces Ga Standard 9031W

*Guidelines For Usage On Metric Projects*

*When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" =25mm, 4"=100mm, and 12" or 1' =300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.*

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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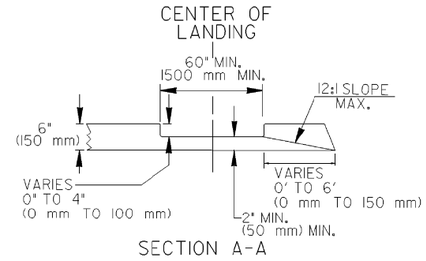
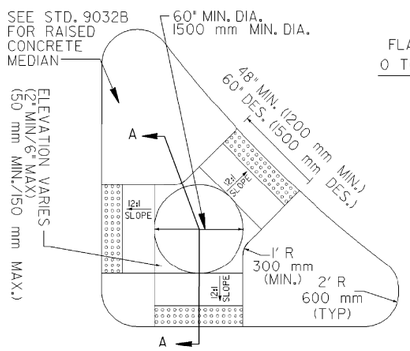
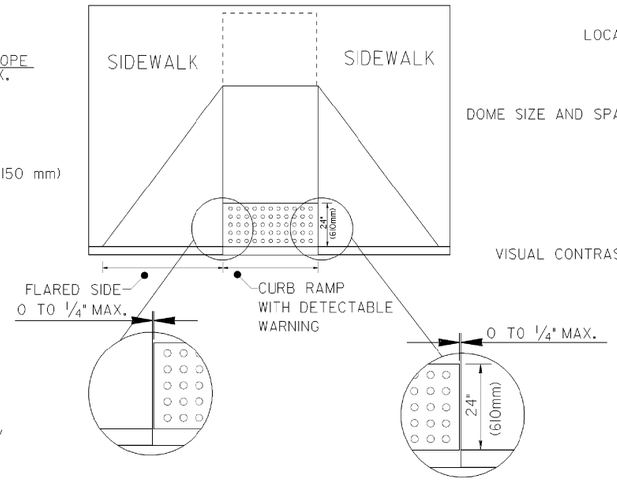
| STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| GA. | | | |




SECTION A-A




CONCRETE ISLAND WITH ELEVATED CUT THROUGH

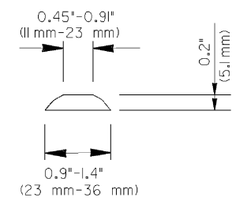


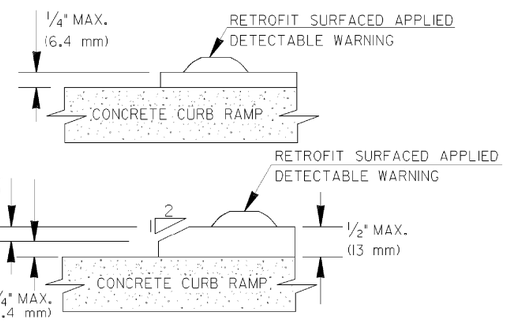

SIZE: DETECTABLE WARNINGS SHALL BE 24 INCHES (610 mm) IN THE DIRECTION OF PEDESTRAIN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

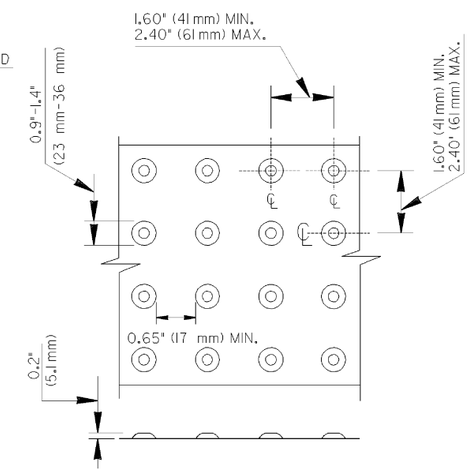
LOCATION: THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES (150 mm to 180mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUSH AS A REFLECTIVE POOL EDGE OR THE DYNAMIC ENVELOPE OF RAIL OPERATIONS.

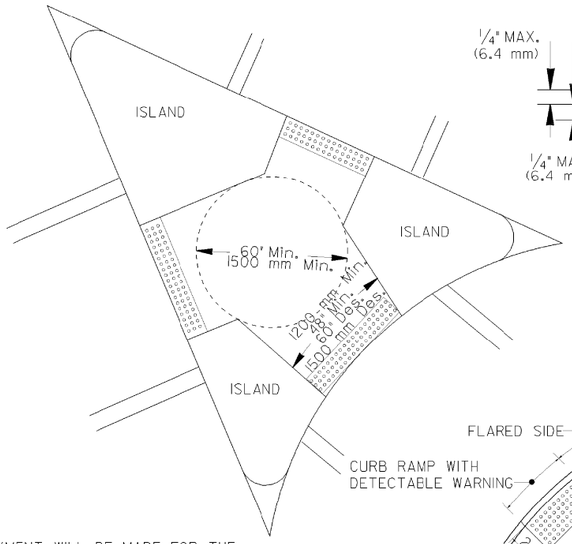
DOME SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23mm-36mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.91 INCH (11mm-23mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMENTER, A HEIGHT OF 0.2 INCH (5.1mm) AND A CENTER-TO-CENTER SPACING OF 2.40 INCHES (61mm) DESIRABLE 1.60 INCHES (41mm) MINIMUM MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT. DOMES SHALL HAVE A SQUARE ARRANGEMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

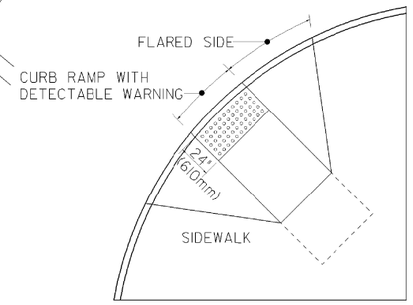
VISUAL CONTRAST: DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE VISUAL CONTRACT SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.



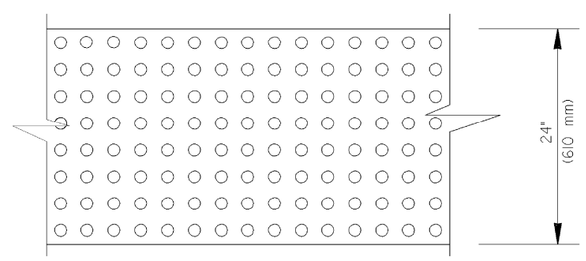



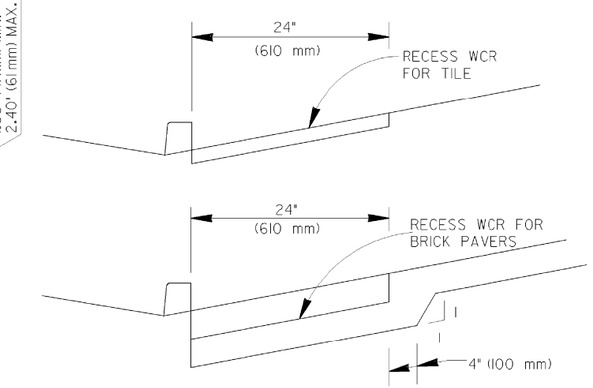




DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND




FOR TILE OR BRICK PAVERS NO VERTICAL LIP OVER 1/8" (3 mm) IS ALLOWED

## MATERIALS:

### NEW CONSTRUCTION

THE DETECTABLE WARNINGS SHALL BE MADE OF MATERIALS SPECIFIED ON OPL 87.

### RETROFIT OF EXISTING RAMPS

SURFACED APPLIED MATERIALS WILL ONLY BE APPROVED TO BE USED ON EXISTING WHEELCHAIR RAMPS.

### INSTALLATION:

BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF 4" THICK.

CERAMIC TILE SHALL BE EPOXIED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

ALL OTHER MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURES DETAILS OR INSTRUCTION.

## GENERAL NOTES:

RETROFIT SURFACED APPLIED MATERIALS ONLY:

1. CHANGES IN LEVEL OF 1/4" (6.4 mm) HIGH MAXIMUM SHALL BE PERMITTED VERTICALLY ON SURFACED APPLIED MATERIALS.
2. CHANGES IN LEVEL BETWEEN 1/4" (6.4 mm) HIGH MINIMUM AND 1/2" (13mm) HIGH MAXIMUM SHALL BE BELEVELED WITH A SLOPE NOT STEEPER THAN 2:1.

NO SEPARATE PAYMENT WILL BE MADE FOR THE DETECTABLE WARNINGS. THE COST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK (OR CURB CUT RAMP IF THE ITEM IS INCLUDED IN THE PROPOSAL).

FOR CUT-THRU ISLANDS AND EXISTING RAMPS, WHERE NO SIDEWALK OR CURB CUT RAMPS ARE IN THE PROPOSAL. THE COST OF THE DETECTABLE WARINGS SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.

| BY | REVISION | DATE |
|---|---|---|
| GLO | ADDED RETROFIT DETAIL AND ADDED ALT. RAMP DETAIL AND GEN. NOTES | 6-18-09 |
| GLO | ADDED TOLERANCE TO DTL. | 10-2-06 |
| GLO | REVISEDTUNCATED DOMES AND NOTES. | 5-10-06 |
| | REVISED | 11-14-02 |
| | REVISED | 7-29-02 |

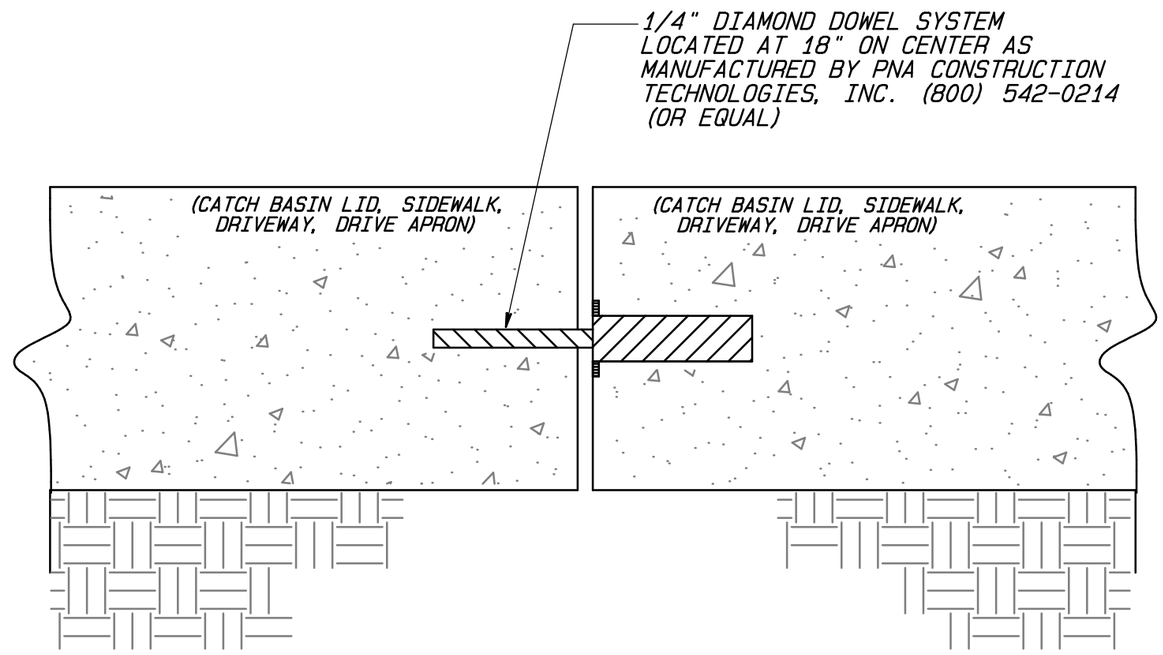
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DETAIL

DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS

NO SCALE — MARCH 12, 2002

NUMBER A4




## DIAMOND DOWEL TRANSFER SYSTEM

NTS

NOTE: 1\4-inch Diamond Dowel Load Transfer System Components as manufactured by PNA Construction Technologies, Inc. (800-542-0214) shall be installed at ALL COLD joints as specified by the manufactures recommendations. No Additional Payment will be made for the installation of said Transfer System, but shall be included as part of the unit price for the item to which it is associated.

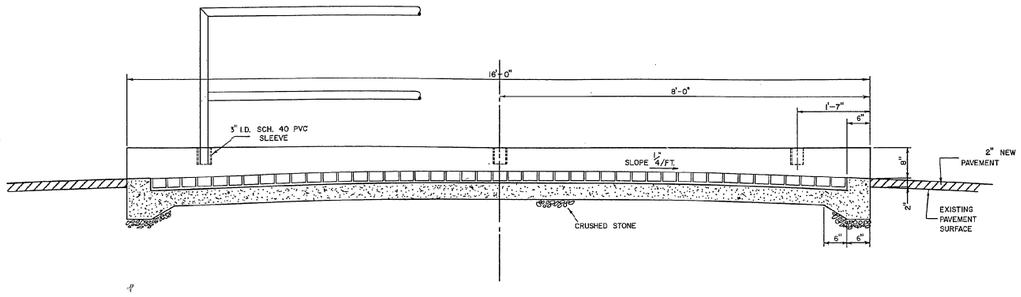
**CITY OF ROME, GEORGIA**
**ENGINEERING DEPARTMENT**

# DIAMOND DOWEL LOAD TRANSFER SYSTEM

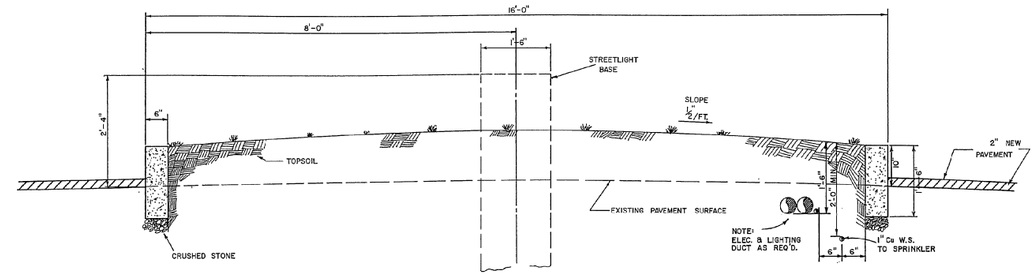
REVISIONS

| | | | |
|---|---|---|---|
| **SCALE:** | NONE | **DRAWN BY:** | AWC |
| **DATE:** | 05-17-2016 | **FINAL APPROVAL:** | AWC |

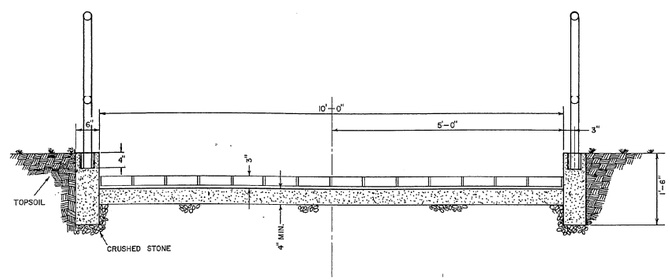
EFFECTIVE 05-17-2016



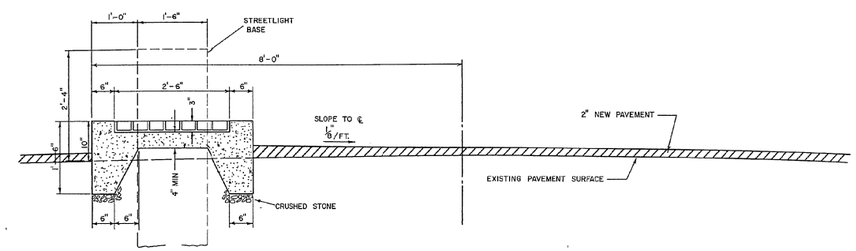

CROSSWALK SECTION (B/15)



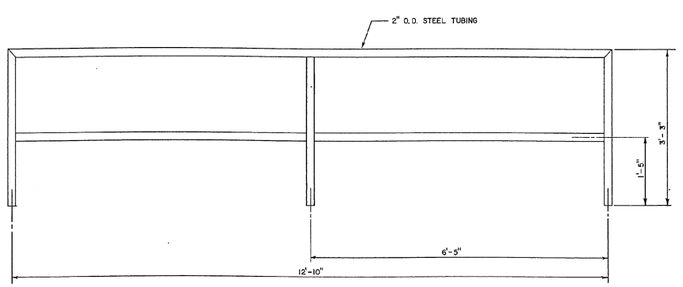

MEDIAN SECTION (A/15)



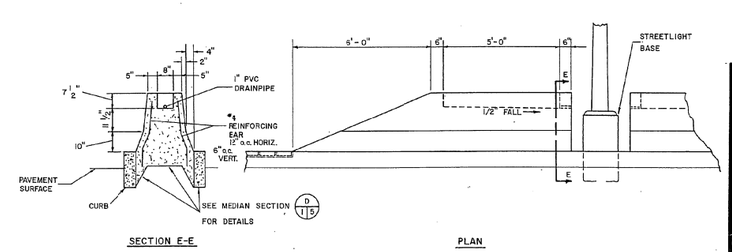

CROSSWALK SECTION (C/15)




MEDIAN SECTION (D/15)




HANDRAIL DETAIL




SECTION E-E

PLAN

MEDIAN TRAFFIC BARRIER

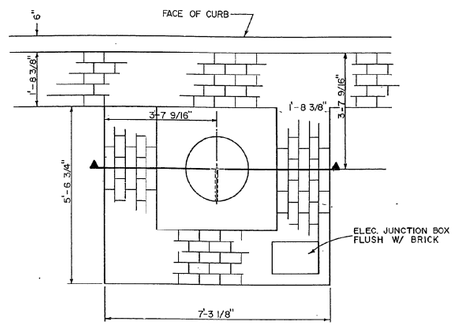
SCALE: 3/8" = 1'-0"

| | |
|---|---|
| 1-29-87 | MEDIAN TRAFFIC BARRIER |
| DATE | REVISON |

**CITY OF ROME, GEORGIA**
ENGINEERING DEPARTMENT
STREETSCAPE MEDIAN
DETAILS

| | |
|---|---|
| SCALE 3/4" = 1'-0" | REV. |
| DATE MAY 1986 | |
| Drawn By S C B | Final Approval |

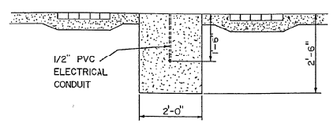
SHEET 5 OF 9




PLAN

NOTE:

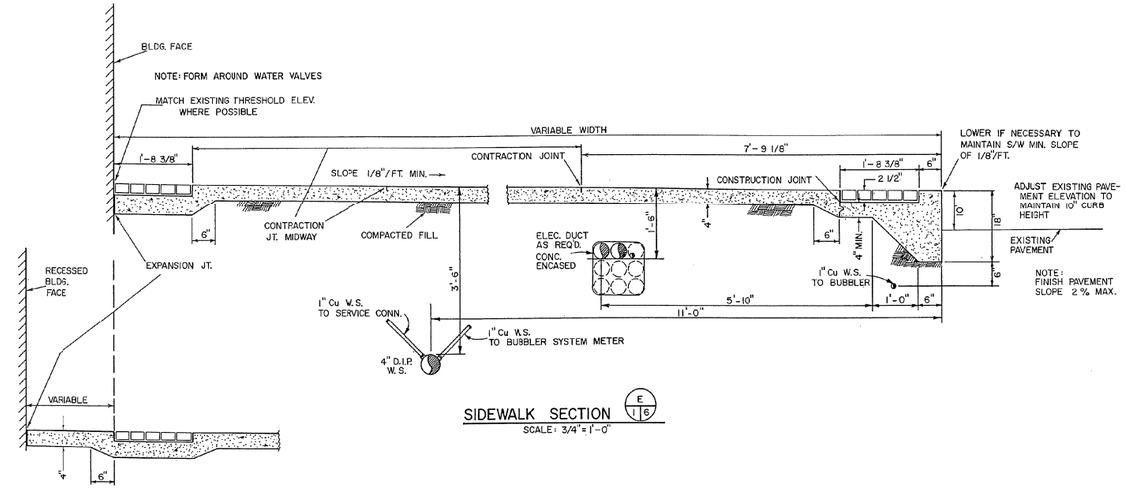
ANCHOR BOLTS TO BE INSTALLED PER MFR RECOMMENDATIONS.




SECTION

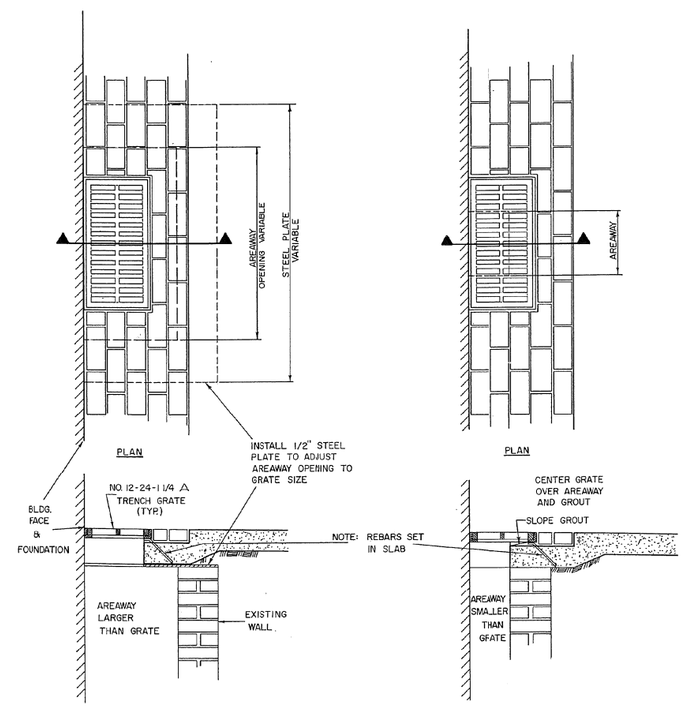
## PERIOD LIGHT BASE DETAIL

SCALE: 1/2" = 1'-0"



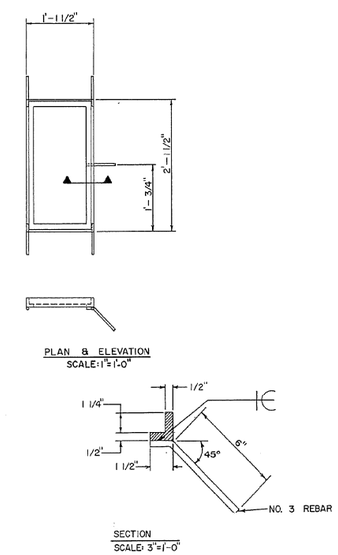

## SIDEWALK SECTION E/6

SCALE: 3/4" = 1'-0"




## AREAWAY DETAIL

SCALE: 1" = 1'-0"




SCALE: 1" = 1'-0"

SCALE: 3" = 1'-0"

## AREAWAY GRATE FRAME

**CITY OF ROME, GEORGIA**
**ENGINEERING DEPARTMENT**

STREETSCAPE
SIDEWALK DETAILS

| | |
|---|---|
| SCALE AS SHOWN | REV. |
| DATE MAY 1986 | |
| Drawn By SCB | Final Approval |

SHEET 6 OF 9