



June 11<sup>th</sup>, 2015

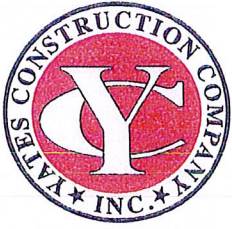
City of Greensboro  
P.O. Box 3136  
Greensboro, N. C. 27401  
Attn: Mr. Tom Carruthers

**Re: Bellemeade Village - Reimbursement for Upgrade to Existing  
Utilities as requested by the City of Greensboro**

The following is a summary of the costs necessary to Upgrade existing utilities as requested by the City of Greensboro. The breakdown of the utility costs shown are included on the attachment. The costs are based on the attached plans to existing storm drainage lines, structures and waterlines and appurtenances:

|                                               |                    |
|-----------------------------------------------|--------------------|
| Existing Storm Drainage Demolition & Upgrades | \$52,010.00        |
| Existing Waterline Demolition & Upgrades      | \$111,712.50       |
| Administrative Costs (15%)                    | <u>\$24,558.37</u> |
| Total:                                        | \$188,280.87       |

The attached breakdown for the upgrades, as requested by the City, is provided by Yates Construction Company and includes additional additions requested from the City on June 8<sup>th</sup>, 2015. Please review the information and let us know of any questions or additional information needed. Please forward the necessary Reimbursement Agreement for review.



# YATES CONSTRUCTION COMPANY, INC.

## UTILITY CONTRACTOR

P.O. BOX 707  
9220 NC 65 • STOKESDALE, N.C. 27357  
PHONE: (336) 548-9621 OR (336) 379-8131  
FAX: (336) 548-1903

### BELLEMEADE VILLAGE CITY OF GREENSBORO ADDED ITEMS

#### STORM DRAIN

##### DEMOLITION

|                               |     |    |        |                   |
|-------------------------------|-----|----|--------|-------------------|
| Pipe Removal                  | 255 | LF | 14.00  | \$3,570.00        |
| Structure Removal             | 4   | EA | 600.00 | \$2,400.00        |
| Sidewalk Removal              | 125 | SY | 8.00   | \$1,000.00        |
| <b>TOTAL STORM DRAIN DEMO</b> |     |    |        | <b>\$6,970.00</b> |

##### INSTALL

|                         |     |     |         |                    |
|-------------------------|-----|-----|---------|--------------------|
| 54" RCP                 | 96  | LF  | 130.00  | \$12,480.00        |
| 42" RCP                 | 140 | LF  | 100.00  | \$14,000.00        |
| DI                      | 1   | EA  | 2800.00 | \$2,800.00         |
| Breakdown/Rebuild MH    | 2   | EA  | 3500.00 | \$7,000.00         |
| Remove/Replace C & G    | 20  | LF  | 40.00   | \$800.00           |
| Sidewalk Remove/Replace | 20  | LF  | 40.00   | \$800.00           |
| Asphalt Repair          | 32  | TN  | 180.00  | \$5,760.00         |
| Traffic Control         | 2   | DAY | 700.00  | \$1,400.00         |
| <b>TOTAL INSTALL</b>    |     |     |         | <b>\$45,040.00</b> |

**TOTAL STORM DRAIN** **\$52,010.00**

#### WATER

##### DEMOLITION

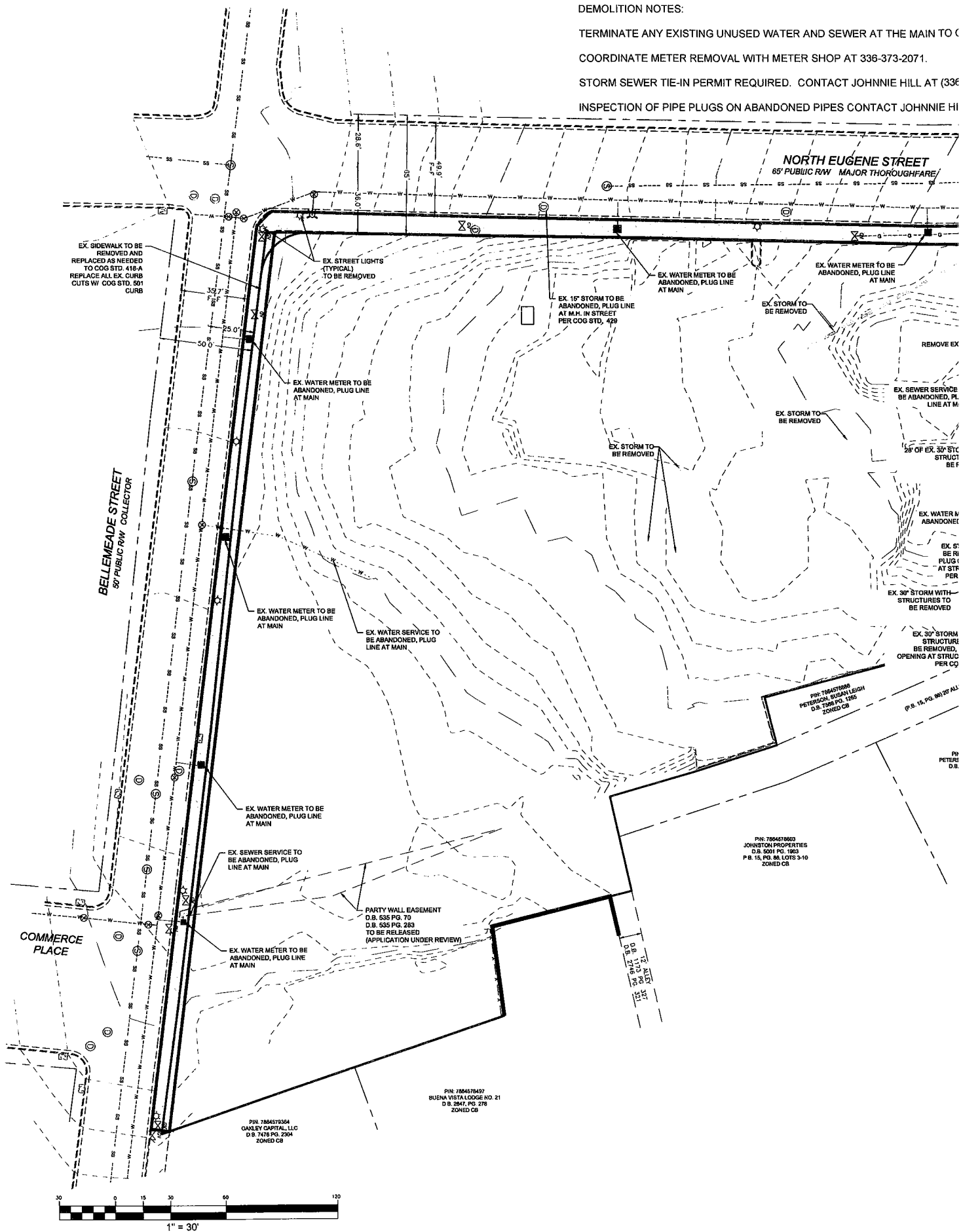
|                         |     |    |        |                   |
|-------------------------|-----|----|--------|-------------------|
| Abandon 6" Water        | 272 | LF | 5.00   | \$1,360.00        |
| 6" Plugs                | 2   | EA | 300.00 | \$600.00          |
| <b>TOTAL WATER DEMO</b> |     |    |        | <b>\$1,960.00</b> |

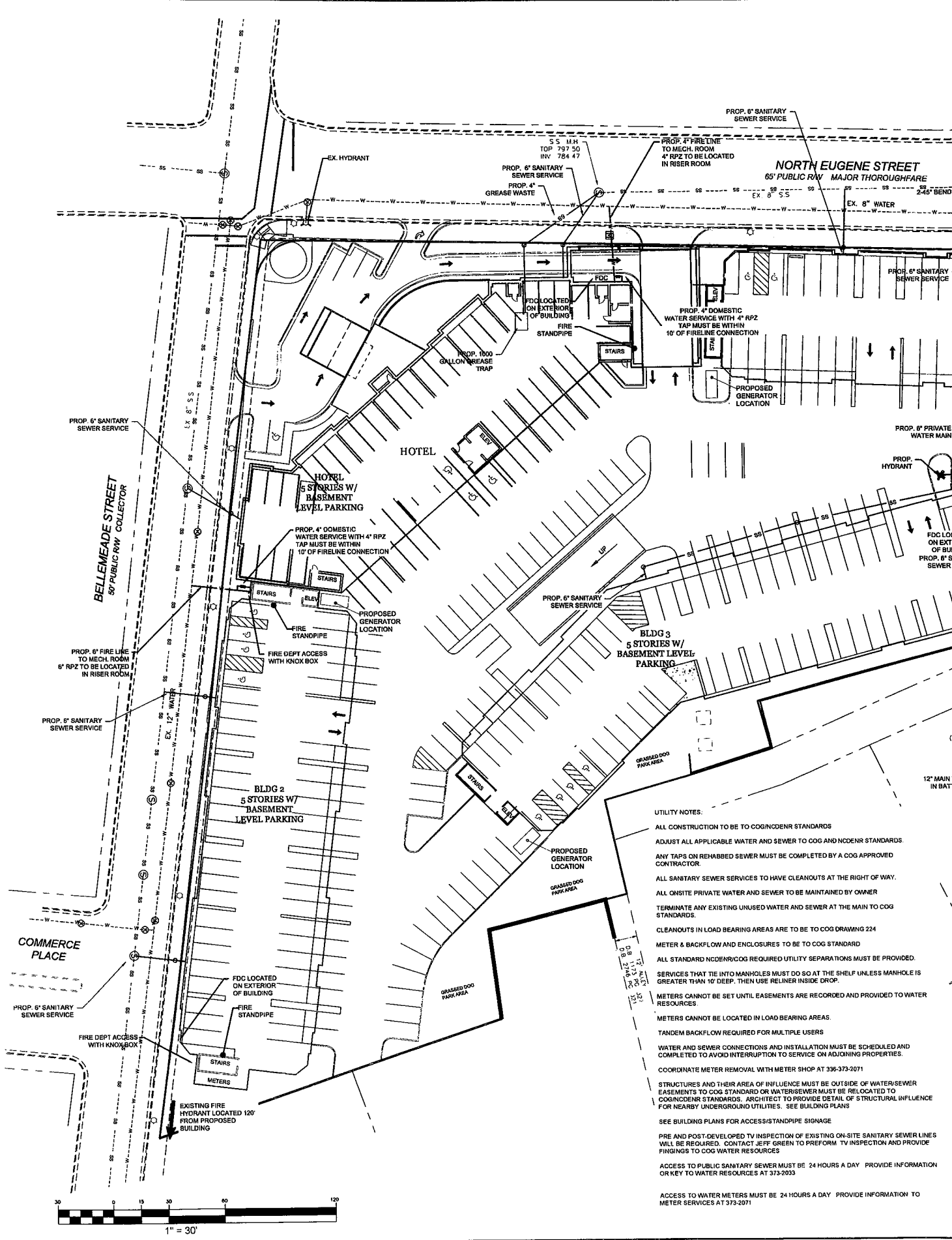
##### INSTALL

|                |     |    |         |             |
|----------------|-----|----|---------|-------------|
| 12" DI         | 385 | LF | 80.00   | \$30,800.00 |
| 8" DI          | 120 | LF | 90.00   | \$10,800.00 |
| 4" DI          | 46  | LF | 70.00   | \$3,220.00  |
| 12" GV         | 4   | EA | 1500.00 | \$6,000.00  |
| 8" GV          | 1   | EA | 1100.00 | \$1,100.00  |
| 4" GV          | 1   | EA | 900.00  | \$900.00    |
| 24" Encasement | 90  | LF | 90.00   | \$8,100.00  |

|                              |      |      |         |                     |
|------------------------------|------|------|---------|---------------------|
| DI FTGS                      | 2495 | LBS  | 3.50    | \$8,732.50          |
| Tie in 2" Meter              | 1    | LS   | 1500.00 | \$1,500.00          |
| Tie-in Fire Hydrant          | 1    | LS   | 2500.00 | \$2,500.00          |
| Traffic Control              | 5    | DAYS | 500.00  | \$2,500.00          |
| Asphalt Repairs              | 120  | TN   | 150.00  | \$18,000.00         |
| Testing                      | 1    | LS   | 1200.00 | \$1,200.00          |
| Relocate/Connect Services    | 3    | EA   | 1000.00 | \$3,000.00          |
| Plug 6" Main at Last Service | 1    | LS   | 1200.00 | \$1,200.00          |
| 8" Dead Men                  | 2    | EA   | 850.00  | \$1,700.00          |
| Straighten Existing FH Leg   | 1    | LS   | 2500.00 | \$2,500.00          |
| Night Tie-In                 | 2    | EA   | 3000.00 | \$6,000.00          |
| <b>TOTAL INSTALL</b>         |      |      |         | <b>\$109,752.50</b> |
| <b>TOTAL WATER</b>           |      |      |         | <b>\$111,712.50</b> |

TERMINATE ANY EXISTING UNUSED WATER AND SEWER AT THE MAIN TO C  
COORDINATE METER REMOVAL WITH METER SHOP AT 336-373-2071.  
STORM SEWER TIE-IN PERMIT REQUIRED. CONTACT JOHNNIE HILL AT (336)  
INSPECTION OF PIPE PLUGS ON ABANDONED PIPES CONTACT JOHNNIE HI





- UTILITY NOTES:
- ALL CONSTRUCTION TO BE TO COG/NCENR STANDARDS
  - ADJUST ALL APPLICABLE WATER AND SEWER TO COG AND NCENR STANDARDS
  - ANY TAPS ON REHABbed SEWER MUST BE COMPLETED BY A COG APPROVED CONTRACTOR
  - ALL SANITARY SEWER SERVICES TO HAVE CLEANOUTS AT THE RIGHT OF WAY.
  - ALL ON-SITE PRIVATE WATER AND SEWER TO BE MAINTAINED BY OWNER
  - TERMINATE ANY EXISTING UNUSED WATER AND SEWER AT THE MAIN TO COG STANDARDS
  - CLEANOUTS IN LOAD BEARING AREAS ARE TO BE TO COG DRAWING 224
  - METER & BACKFLOW AND ENCLOSURES TO BE TO COG STANDARD
  - ALL STANDARD NCENR/COG REQUIRED UTILITY SEPARATIONS MUST BE PROVIDED.
  - SERVICES THAT TIE INTO MANHOLES MUST DO SO AT THE SHELF UNLESS MANHOLE IS GREATER THAN 10' DEEP. THEN USE RELINER INSIDE DROP.
  - METERS CANNOT BE SET UNTIL EASEMENTS ARE RECORDED AND PROVIDED TO WATER RESOURCES
  - METERS CANNOT BE LOCATED IN LOAD BEARING AREAS
  - TANDEM BACKFLOW REQUIRED FOR MULTIPLE USERS
  - WATER AND SEWER CONNECTIONS AND INSTALLATION MUST BE SCHEDULED AND COMPLETED TO AVOID INTERRUPTION TO SERVICE ON ADJACENT PROPERTIES
  - COORDINATE METER REMOVAL WITH METER SHOP AT 336-373-2071
  - STRUCTURES AND THEIR AREA OF INFLUENCE MUST BE OUTSIDE OF WATER/SEWER EASEMENTS TO COG STANDARD OR WATER/SEWER MUST BE RELOCATED TO COG/NCENR STANDARDS. ARCHITECT TO PROVIDE DETAIL OF STRUCTURAL INFLUENCE FOR NEARBY UNDERGROUND UTILITIES. SEE BUILDING PLANS
  - SEE BUILDING PLANS FOR ACCESS/STANDPIPE SIGNAGE
  - PRE AND POST-DEVELOPED TV INSPECTION OF EXISTING ON-SITE SANITARY SEWER LINES WILL BE REQUIRED. CONTACT JEFF GREEN TO PREFORM TV INSPECTION AND PROVIDE FINDINGS TO COG WATER RESOURCES
  - ACCESS TO PUBLIC SANITARY SEWER MUST BE 24 HOURS A DAY. PROVIDE INFORMATION OR KEY TO WATER RESOURCES AT 373-2033
  - ACCESS TO WATER METERS MUST BE 24 HOURS A DAY. PROVIDE INFORMATION TO METER SERVICES AT 373-2071

NEW STORM DRAINAGE NOTES:

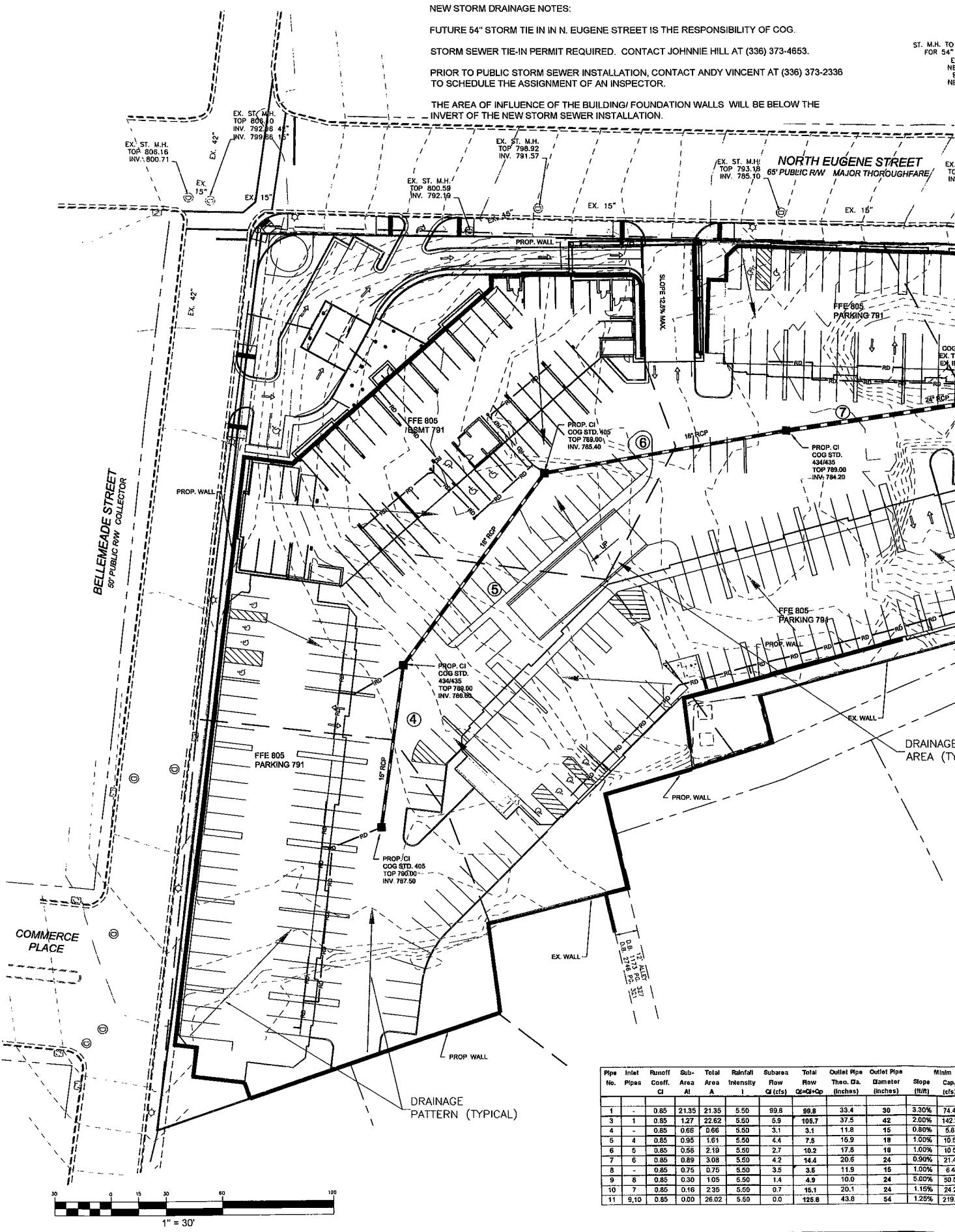
FUTURE 54" STORM TIE IN IN N. EUGENE STREET IS THE RESPONSIBILITY OF COG.

STORM SEWER TIE-IN PERMIT REQUIRED. CONTACT JOHNNIE HILL AT (336) 373-4653.

PRIOR TO PUBLIC STORM SEWER INSTALLATION, CONTACT ANDY VINCENT AT (336) 373-2336 TO SCHEDULE THE ASSIGNMENT OF AN INSPECTOR.

THE AREA OF INFLUENCE OF THE BUILDING/ FOUNDATION WALLS WILL BE BELOW THE INVERT OF THE NEW STORM SEWER INSTALLATION.

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| Pipe No. | Inlet Pipes | Runoff Coeff. C <sub>i</sub> | Sub-Area A <sub>i</sub> | Total Area A | Rainfall Intensity I | Subarea Flow Q <sub>i</sub> (cfs) | Total Flow Q <sub>T</sub> (cfs) | Outlet Pipe Theo. Dia. (Inches) | Outlet Pipe Diameter (Inches) | Slope (ft/ft) | Minim. Cap. (cfs) |
|----------|-------------|------------------------------|-------------------------|--------------|----------------------|-----------------------------------|---------------------------------|---------------------------------|-------------------------------|---------------|-------------------|
| 1        | -           | 0.85                         | 21.35                   | 21.35        | 5.50                 | 99.8                              | 99.8                            | 33.4                            | 30                            | 3.30%         | 74.4              |
| 3        | 1           | 0.85                         | 1.27                    | 22.62        | 5.50                 | 5.9                               | 105.7                           | 37.5                            | 42                            | 2.00%         | 142.2             |
| 4        | -           | 0.85                         | 0.66                    | 0.66         | 5.50                 | 3.1                               | 3.1                             | 11.8                            | 15                            | 0.80%         | 5.8               |
| 5        | 4           | 0.85                         | 0.98                    | 1.61         | 5.50                 | 4.4                               | 7.5                             | 15.9                            | 18                            | 1.00%         | 10.5              |
| 6        | 5           | 0.85                         | 0.58                    | 2.19         | 5.50                 | 2.7                               | 10.2                            | 17.8                            | 18                            | 1.00%         | 10.2              |
| 7        | 6           | 0.85                         | 0.89                    | 3.08         | 5.50                 | 4.2                               | 14.4                            | 20.6                            | 24                            | 0.90%         | 21.4              |
| 8        | -           | 0.85                         | 0.75                    | 0.75         | 5.50                 | 3.5                               | 3.5                             | 11.9                            | 15                            | 1.00%         | 6.4               |
| 9        | 8           | 0.85                         | 0.30                    | 1.05         | 5.50                 | 1.4                               | 4.9                             | 10.0                            | 24                            | 5.00%         | 50.2              |
| 10       | 7           | 0.85                         | 0.16                    | 2.35         | 5.50                 | 0.7                               | 15.1                            | 20.1                            | 24                            | 1.15%         | 24.2              |
| 11       | 9,10        | 0.85                         | 0.00                    | 26.02        | 5.50                 | 0.0                               | 125.8                           | 43.8                            | 54                            | 1.25%         | 219.              |