-DAWSON COUNTY SENIOR CENTER CIVIL DRAWINGS TO FOLLOW-

ATTACHMENT "E"

## SITE DEVELOPMENT PLANS FOR:

# DAWSON COUNTY SENIOR **CENTER EXPANSION**

201 RECREATION RD

DAWSONVILLE, GA 30534

LAND LOTS 248 & 249, 13TH DISTRICT, PARCEL #: 091035 ZONED: RA

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**PREPARED BY:** 

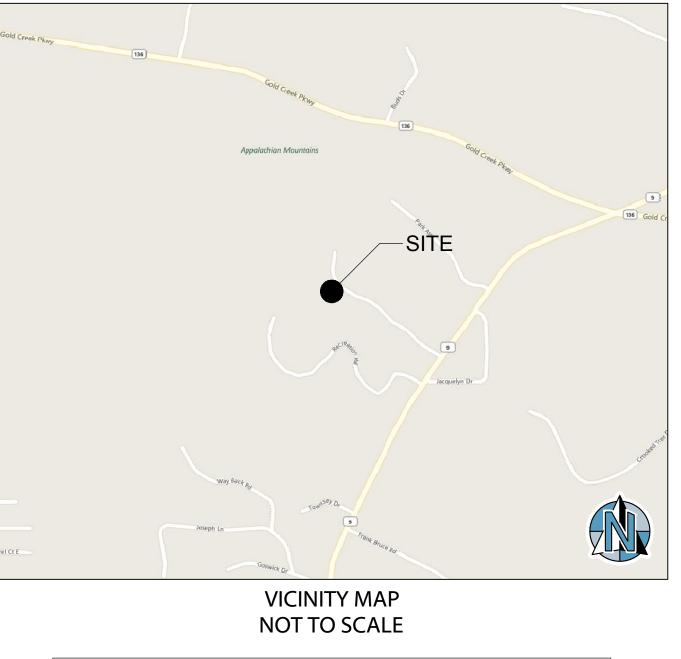


Foresite Group, Inc. **w** | www.fg-inc.net **o** | 770.368.1399 3740 Davinci Ct. Suite 100 **f |** 770.368.1944 Peachtree Corners, GA 30092

24 HR CONTACT: DAVID MCKEE (706) 344-3501

**ISSUED**: MARCH 28, 2018 121.029

CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY UPON COMPLETION OF INITIAL EROSION BMP'S AS SHOWN ON SHEET C-4 IN ORDER FOR ENGINEER TO SCHEDULE THE INITIAL 7 DAY EROSION CONTROL INSPECTION. THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING INITIAL BMP'S ARE INSTALLED PROPERLY. ALL COMPENSATION FOR DESIGN ENGINEER'S REINSPECTION TO VERIFY THAT THE INITIAL BMP'S ARE PROPERLY INSTALLED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.



SITE DISTURBED AREA = 7.5 AC.

|   | ANTICIPATED ACTIVITY SCHEDULE<br>BEGIN CONSTRUCTION: 2019-04-01<br>END CONSTRUCTION: 2020-04-01 |   |          |            |  |            |  |            |  |             |  |             |  |
|---|---|---|----------|------------|--|------------|--|------------|--|-------------|--|-------------|--|
|   | ACTIVITY  | _ | .0<br>TH | 4.0<br>MTH |  | 6.0<br>MTH |  | 8.0<br>MTH |  | 10.0<br>MTH |  | 12.0<br>MTH |  |
| 1 | INSTALL SEDIMENT<br>CONTROLS  |   |          |            |  |            |  |            |  |             |  |             |  |
| 2 | DEMOLITION  |   |          |            |  |            |  |            |  |             |  |             |  |
| 3 | CLEARING, GRUBBING,<br>& GRADING  |   |          |            |  |            |  |            |  |             |  |             |  |
| 4 | GRASS TEMP.   |   |          |            |  |            |  |            |  |             |  |             |  |
| 5 | BUILDING<br>CONSTRUCTION  |   |          |            |  |            |  |            |  |             |  |             |  |
| 6 | MAINTAIN EROSION<br>CONTROL   |   |          |            |  |            |  |            |  |             |  |             |  |
| 7 | PAVING  |   |          |            |  |            |  |            |  |             |  |             |  |
| 8 | FINAL LANDSCAPING   |   |          |            |  |            |  |            |  |             |  |             |  |
| 9 | DISPOSITION OF TEMP.<br>SEDIMENT CONTROLS   |   |          |            |  |            |  |            |  |             |  |             |  |

## **PROJECT DIRECTORY**

### OWNER

**DAWSON COUNTY BOARD OF** COMMISSIONER 25 JUSTICE WAY, SUITE 2223 DAWSONVILLE, GA 30534 (706) 344-3500 CONTACT: MELISSA HAWK

### **CIVIL ENGINEER**

FORESITE GROUP, INC. 3740 DAVINCI COURT, SUITE 100 PEACHTREE CORNERS, GA 30092 (770) 344-3700 **CONTACT: DAWN PRUETT** 

### ARCHITECT

ERIC PEEK 5200 AVOLON BLVD ALPHARETTA, GA 30009 (770) 209-9393 CONTACT: WAKEFIELD BEASLEY & ASSCIATES, INC.

## **UTILITY PROVIDERS**

### WATER SERVICE PROVIDER

ETOWAH WATER AND SEWER AUTHORITY 1162 HWY 53 E DAWSONVILLE, GA 30534 (706) 216-8474 CONTACT: JOHN CRONAN

### SANITARY SEWER SERVICE

PROVIDER DAWSON CO. ENVIRONMENTAL HEALTH 189 HIGHWAY 53 WEST, SUITE 102 P.O. BOX 2020, DAWSONVILLE, GA 30534 (706) 265-2930 **CONTACT: BILL RINGLE** 

#### **CERTIFICATION STATEMENT**

AUTHORIZED AGENT, UNDER MY SUPERVISION."

| Jack Molen Jolen      | 4/0        |
|-----------------------|------------|
| SIGNATURE OF ENGINEER | DATE       |
| 000006080827          | 2019-03-24 |
| CERTIFICATION #       | EXPIRATION |

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

SIGNATURE OF PRIMARY PERMITEE

AS USED HEREIN, THE WORD CERTIFY SHALL MEAN AN EXPRESSION OF THE CONSULTANT'S PROFESSIONAL OPINION TO THE BEST OF ITS INFORMATION, KNOWLEDGE, AND BELIEF, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE BY THE CONSULTANT

**SURVEYOR GEOSURVEY**, LTD 1660 BARNES MILL RD MARIETTA, GA 30062 (770) 795-9900 CONTACT: JOHN NEWMAN

#### **GEOTECHNICAL ENGINEER**

**GEOHYDRO ENGINEERS** 1000 COBB PLACE BLVD, SUITE 290 KENNESAW, GA 30144 (770) 426.7100 **CONTACT: A. MARTY PENINGER** 

**ELECTRICAL SERVICE PROVIDER** 

**GEORGIA POWER COMPANY** 823 JEFFERSON ST. ATLANTA, GA 30318 (404) 506-4569 **CONTACT: IKE COLLINS** 

#### **GAS SERVICE PROVIDER**

**SOUTHEN COMPANY GAS 10 PEACHTREE ST. NE** ATLANTA, GA 30309 (404) 584-4338 **CONTACT: HAYDEN HINTON** 

#### **TELEPHONE SERVICE PROVIDER**

WINDSTREAM COMMUNICATION 750 N. JEFFERSON ST. NE MILLEDGEVILLE, GA 31061 (888) 599-3166

#### LOCAL MUNICIPALITY

**DAWSON COUNTY** 25 JUSTICE WAY, SUITE 2223 DAWSONVILLE, GA 30534 (706) 344-3500 CONTACT: DAVID MCKEE



**Call** before you dig.

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF THE BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001 ADDITIONALLY, I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY

03/19

## WAKEFIELD BEASLEY & ASSOCIATES

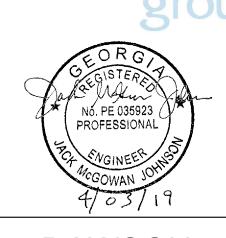
SIGNING ARCHITE

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### DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534

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Print Record

2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS 2019-04-03 COUNTY COMMENTS

#### Revisions

| No. | Date | Description |
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#### RELEASED FOR CONSTRUCTION

DATE

PROJECT NUMBER

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### COVER

G-



TRANS ELECTRIC TRANSFORMER

σ

SIGN

1"= 40'

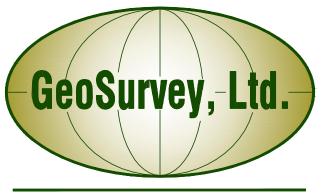


## 8

### **AERIAL IMAGE**







× 1465.6

~BASEBALL FIELD~

× 1464.5

× 1464.1

°CAN

PI ANTER-

60d NAIL 7"x4"PEAR● NORTH: 1,614,918.63

— <del>FAST: 2.3</del>16.092.10

ELEV: 1,457.37

7"x4"PEAR ●

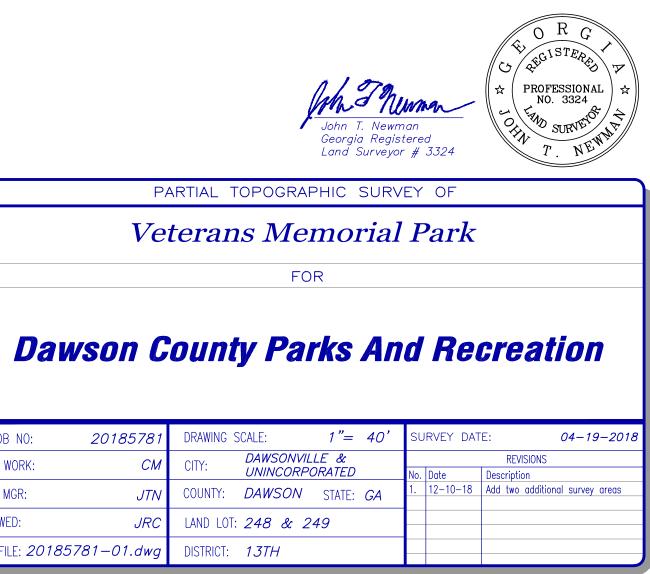
7"ASH 7"ASH

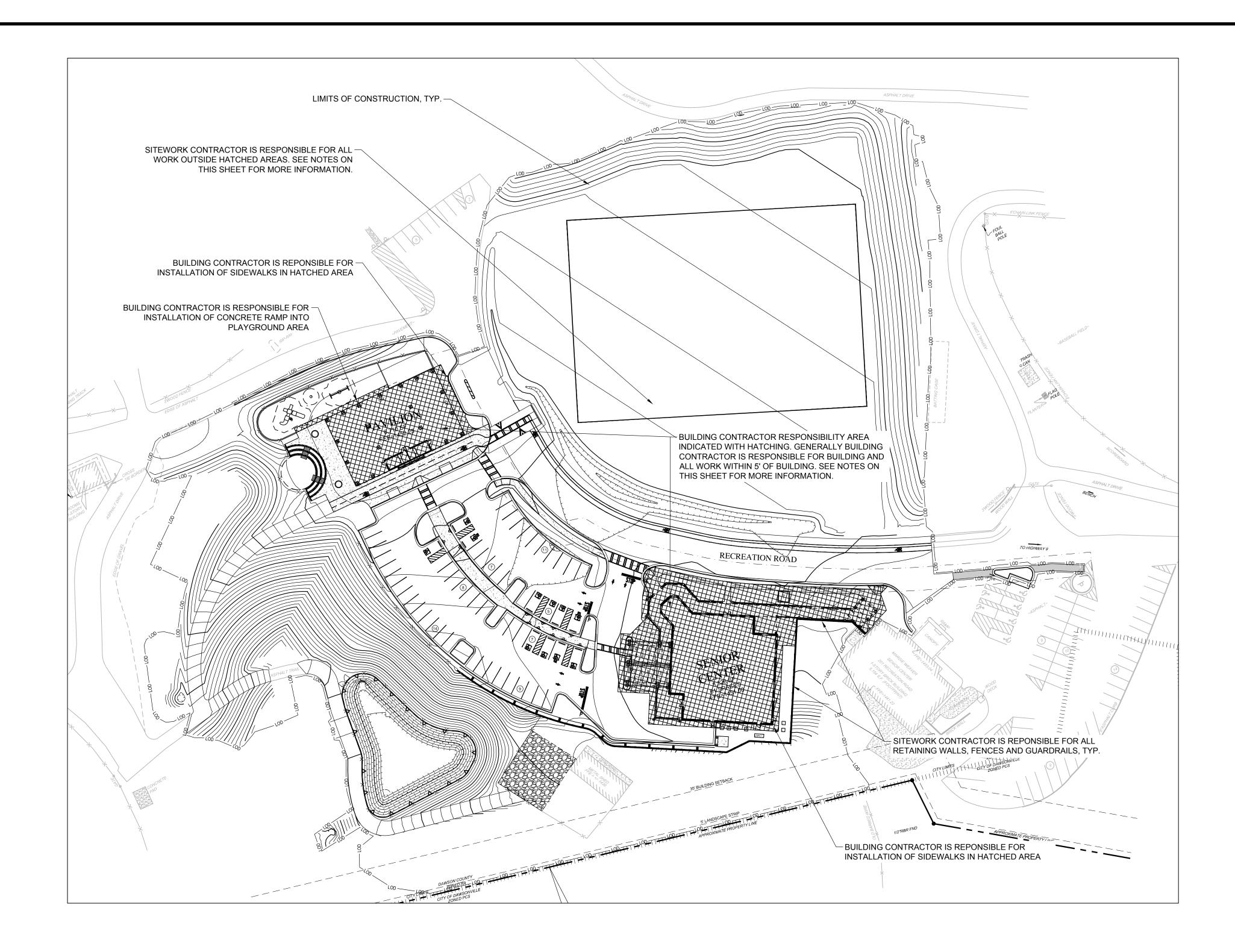
●18"PINE

•15"ASH-

Land Surveying • 3D Laser Scanning 1660 Barnes Mill Road Marietta, Georgia 30062 Phone: (770) 795–9900 (770) 795-8880 Fax: www.geosurvey.com EMAIL: info@geosurvey.com Certificate of Authorization #LSF-000621

| GS JOB NO:      | 20185781    | DRAWING   | SCALE:              |
|-----------------|-------------|-----------|---------------------|
| FIELD WORK:     | СМ          | CITY:     | DAWSONV<br>UNINCORI |
| PROJ MGR:       | JTN         | COUNTY:   | DAWSON              |
| REVIEWED:       | JRC         | LAND LO   | T: 248 &            |
| DWG FILE: 2018: | 5781–01.dwg | DISTRICT: | 1 <i>3TH</i>        |
|                 |             |           |                     |





SITEWORK CONTRACTOR RESPONSIBILITIES:

- BUILDING ENVELOPE.
- APRIL 3, 2018.
- SEE NOTES BELOW.
- 9. ALL CURB AND GUTTER.
- EXHIBIT. 11. ALL ROADWAY, TRAIL, AND PARKING LOT ASPHALT PAVING TO THE BINDER
- CONSTRUCTION. 12. ALL LANDSCAPING AND IRRIGATION.
- CONSTRUCTION.
- ALL OTHER SITEWORK INDICATED IN THE PLANS AND SPECIFICATIONS NOT COVERED BY THE BUILDING CONTRACTOR.

## BUILDING CONTRACTOR RESPONSIBILITIES: 1. COMPLETE BUILDING PER BUILDING PLANS. 2. UTILITY CONNECTIONS TO BUILDING. ABOVE. DURING CONSTRUCTION.



#### CONTRACTOR RESPONSIBILITY NOTES:

ALL DEMOLITION.
 ALL GRADING, EARTHWORK, STORMWATER MANAGEMENT AND DRAINAGE INFRASTRUCTURE INCLUDING ROOF DRAINS STUBBED AT 5' OUTSIDE THE

 SITEWORK CONTRACTOR IS RESPONSIBLE TO BRING THE BUILDING PADS TO GRADE IN ACCORDANCE WITH THE REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING PREPARED BY GEOHYDRO ENGINEERS, DATED

4. ALL UTILITIES STUBBED AT 5' OUTSIDE BUILDING ENVELOPE (INCLUDING UNDERGROUND ROOF DRAINAGE LINES). SITE WORK CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND COORDINATION WITH UTILITY PROVIDERS FOR INSTALLATION OF SERVICES, RELOCATION AND/OR MODIFICATION OF SERVICES. 5. SITEWORK CONTRACTOR IS RESPONSIBLE FOR TRANSFORMER PAD. BUILDING CONTRACTOR RESPONSIBLE FOR ALL OTHER BUILDING UTILITY EQUIPMENT PADS,

 ALL RETAINING WALLS, FENCES AND GUARDRAILS (SEE BUILDING STRUCTURAL PLANS FOR FENCE CONNECTION DETAIL TO TOP OF RETAINING WALL). 7. ALL PLAYGROUND INFRASTRUCTURE UNLESS OTHERWISE NOTED HERE ON. 8. ALL AMPHITHEATER INFRASTRUCTURE.

10. ALL CONCRETE SIDEWALK, UNLESS OTHERWISE NOTED IN THE RESPONSIBILITY

COURSE OF ASPHALT. THE BUILDING CONTRACTOR WILL BE RESPONSIBLE TO INSTALL THE FINISH COURSE OF ASPHALT AT THE COMPLETION OF

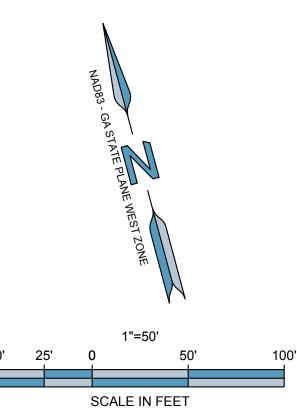
ALL PAVEMENT STRIPING AND SIGNAGE.
 REPLACEMENT OF ANY IMPROVEMENTS INSTALLED BY THE BUILDING

CONTRACTOR THAT ARE DAMAGED BY SITEWORK CONTRACTOR DURING

3. HVAC AND OTHER EQUIPMENT PADS EXCEPT TRANSFORMER PAD. SEE NOTES

 DOWNSPOUT CONNECTIONS TO UNDERGROUND ROOF DRAINAGE LINES.
 CONCRETE PAVEMENT IN PORTE COCHERE AREA. 6. PORTIONS OF CONCRETE SIDEWALK INDICATED IN THE RESPONSIBILITY EXHIBIT.

 FOR HONS OF CONCRETE SIDEWALK INDICATED IN THE RESPONSIBILITY EXHIBIT.
 INSTALLATION THE FINISH COURSE OF ASPHALT AT THE COMPLETION OF CONSTRUCTION.
 REPLACEMENT OF ANY SIDEWALK, CURBS OR OTHER IMPROVEMENTS INSTALLED BY THE SITEWORK CONTRACTOR THAT ARE DAMAGED BY BUILDING CONTRACTOR



## WAKEFIELD BEASLEY & ASSOCIATES

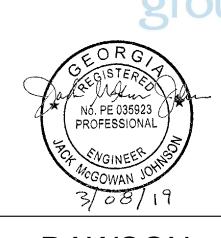
DESIGNING ARCHITECT

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Print Record

2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS

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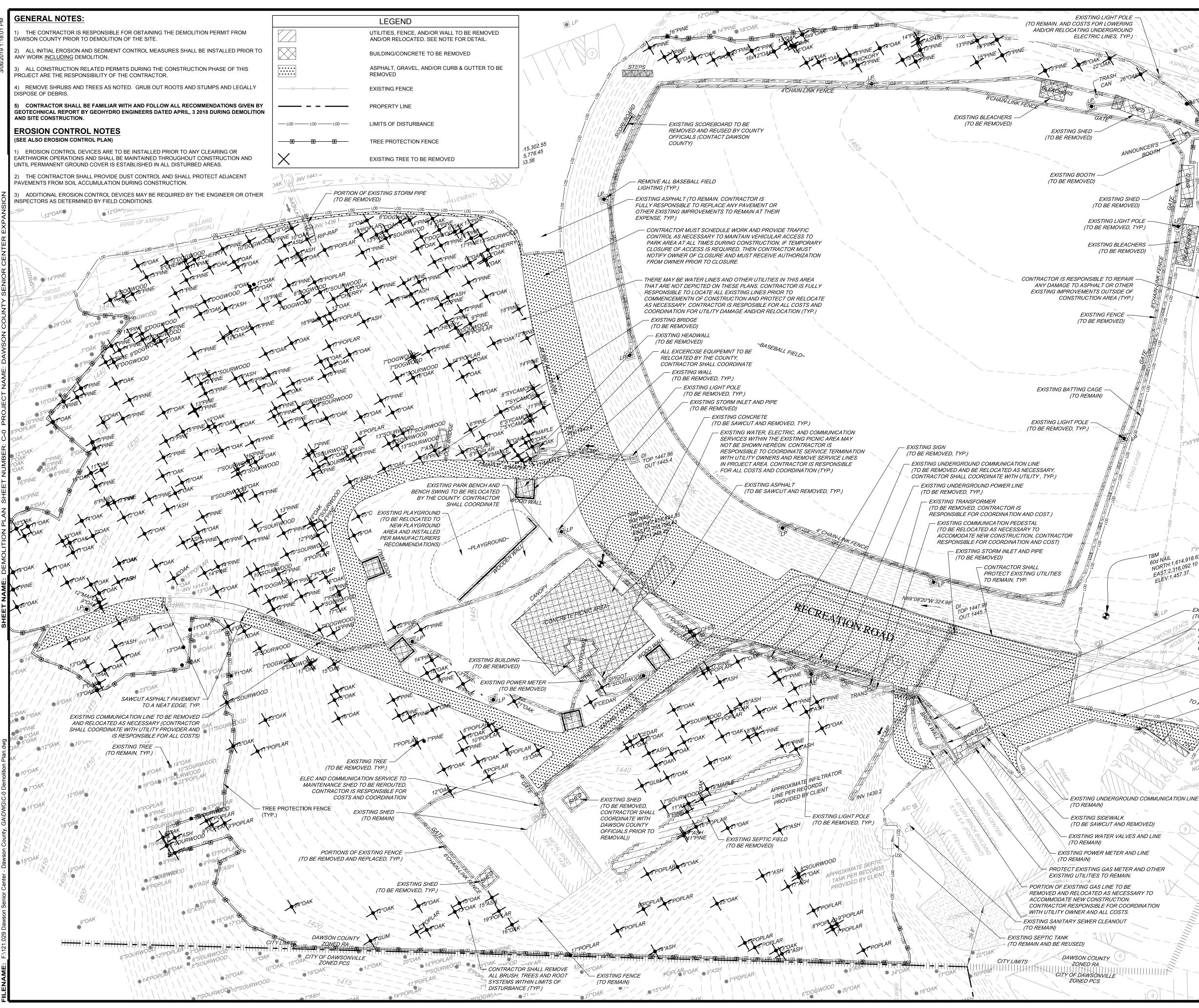
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DATE

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**G-2** 



#### **DEMOLITION NOTES:**

1) ALL NEW WORK SHOWN IN THESE SHEETS SHALL COMPLY WITH ÁPPLICABLE STATE, FEDERAL, AND LOCAL BUILDING AND UTILITY INSTALLATION CODES.

2) ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH <DOT> STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES EXCEPT IN CASES WHERE, WITHIN DAWSON COUNTY JURISDICTION, THE COUNTY STANDARD SPECIFICATIONS ARE MORE STRINGENT

THERE MAY BE ADDITIONAL UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND TO NOTIFY THE OWNER IN CASE OF DISCREPANCIES THAT AFFECT THE CONSTRUCTION PROJECT

4) THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATION AND RELOCATION OF AND TIE-IN TO PUBLIC UTILITIES.

5) CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO ANY ADJACENT STRUCTURES OR PROPERTY, OR ANY EXISTING STRUCTURES WITHIN LIMITS OF CONSTRUCTION THAT ARE DESIGNATED ON THE PLANS TO REMAIN AND SHALL REPAIR OR REPLACE SUCH DAMAGED PROPERTY TO THE PROPERTY OWNER'S SATISFACTION AT NO COST TO THE OWNER.

6) THE CONTRACTOR SHALL NOT DEVIATE FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN CONSENT OF THE FNGINFFR

CONTRACTOR IS RESPONSIBLE FOR CONTACTING DAWSON COUNTY AND ALL EXISTING UTILITY PROVIDERS BEFORE REMOVING ANY/ALL UTILITIES FROM THEIR EXISTING LOCATION ON THE SITE. THE CONTRACTOR SHALL PERFORM ALL UTILITY DEMOLITION OR RELOCATION ACTIVITIES IN ACCORDANCE WITH THE EXISTING UTILITIES SPECIFICATIONS, MATERIALS, AND REQUIREMENTS.

8) THE CONTRACTOR SHALL SEQUENCE THE WORK AND PROVIDE TEMPORARY MEASURES AS NECESSARY TO MAINTAIN ACCESS TO THE SITE THROUGH ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION. TEMPORARY PROVISIONS MAY INCLUDE, BUT ARE NOT LIMITED TO: BARRICADES, FLASHING LIGHTS, FLAGMAN, TEMPORARY PAVEMENT, AND DIRECTIONAL SIGNAGE AS NECESSARY TO ACCOMPLISH THE WORK.

9) CONTRACTOR SHALL CONSIDER COORDINATION ASPECTS OF CRANES AND CONSTRUCTION EQUIPMENT OPERATIONS DURING DEMOLITION ACTIVITY.

10) COORDINATE WITH DAWSON COUNTY AS REQUIRED DURING ALL DÉMOLITION AND NEW CONSTRUCTION ACTIVITIES.

11) APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY DAWSON COUNTY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.

12) ALL BUFFERS AND SAVE AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

13) THE CONTRACTOR SHALL DISPOSE OF ANY HAZARDOUS MÁTERIALS IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS

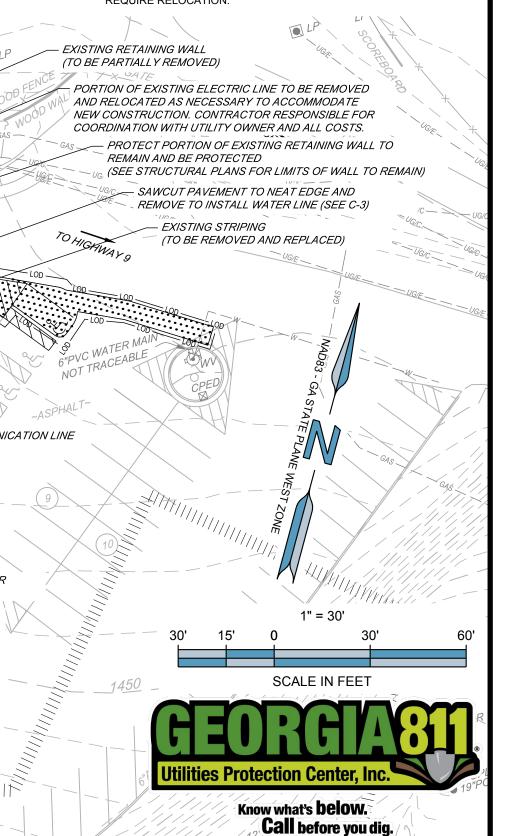
14) ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE LEGALLY

DISPOSED OF, OFF SITE. 15) CONTRACTOR TO CONTACT UTILITIES PROTECTION CENTER

PRIOR TO ANY EXCAVATION.

16) UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THESE PLANS. CONTRACTOR IS FULLY RESPONSIBLE TO LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND IS RESPONSIBLE FOR COORDINATION WITH UTILITY OWNERS FOR ANY UTILITY RELOCATIONS REQUIRED TO ACCOMMODATE THE PROPOSED CONSTRUCTION AND ALL ASSOCIATED COSTS

17) CONTRACTOR TO POT HOLE EXISTING WATER LINE, UNDERGROUND ELECTRICAL LINES, GAS LINE, UNDERGROUND TELEPHONE, FIBER OPTIC, AND ANY OTHER UTILITY LINES WITHIN THE LIMITS OF DISTURBANCE DURING DEMOLITION ACTIVITIES AND COORDINATE FIELD LOCATIONS AND DEPTHS OF THESE UTILITIES WITH ENGINEER FOR PROPOSED UTILITY CROSSINGS AND PROPOSED PAVEMENT OVER EXISTING LINES. THESE LINES MAY REQUIRE RELOCATION.

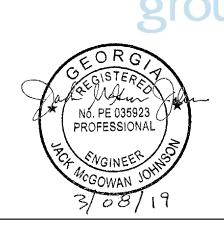




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## DAWSON COUNTY **SENIOR** CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534

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|-------------------------------------|---|
| 2019-02-04 BID PACKAGE              |   |
| 2019-03-08 GRANT REVIEW DOCUMENTS   |   |
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Revisions

| No. | Date | Description |
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#### RELEASED FOR CONSTRUCTION

DATE

PROJECT NUMBER

SHEET TITLE

### **DEMOLITION PLAN**

**C-**(

| ENERAL NOTES:  |
|--|
| ALL PROPOSED DIMENSIONS USED TO SHOW THE GEOMETRIC LAYOUT OF |
| E PROPOSED PARKING LOT ARE SHOWN AT THE FACE OF CURB. ALL    |
| OPOSED DIMENSIONS USED TO SHOW THE GEOMETRIC LAYOUT OF THE   |

PROPOSED DIMENSIONS USED TO SHOW THE GEOMETRIC LAYOUT OF THE PROPOSED BUILDING LOCATION ARE GIVEN AT THE OUTSIDE FACE OF THE

BUILDING CORNERS. ALL CURB RADII ARE GIVEN AT THE FACE OF CURB.
2) CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE SURVEY SHOWN ON THE PLANS BEFORE PROCEEDING WITH ANY NEW CONSTRUCTION.

3) CONTRACTOR IS RESPONSIBLE FOR CORRECT HORIZONTAL AND VERTICAL ALIGNMENT OF ALL TIES BETWEEN PROPOSED AND EXISTING PAVEMENTS, CURB AND GUTTER, SIDEWALKS, WALLS, AND UTILITIES.

SITE NOTES:

1) TRACT IS ZONED: RA (RESIDENTIAL EXURBAN/AGRICULTURAL)

2) SEE ARCHITECTURAL PLANS FOR BUILDING FLOOR PLAN DIMENSIONS, DOOR LOCATIONS, SITE LIGHTING PLAN, AND OTHER ARCHITECTURAL DETAILS.

3) NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL SITE IMPROVEMENTS HAVE BEEN COMPLETED ON THE SITE.

4) ALL BUFFERS, TREE SAVE AREAS, AND UNDISTURBED AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

5) SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR ON-SITE SIGNAGE.

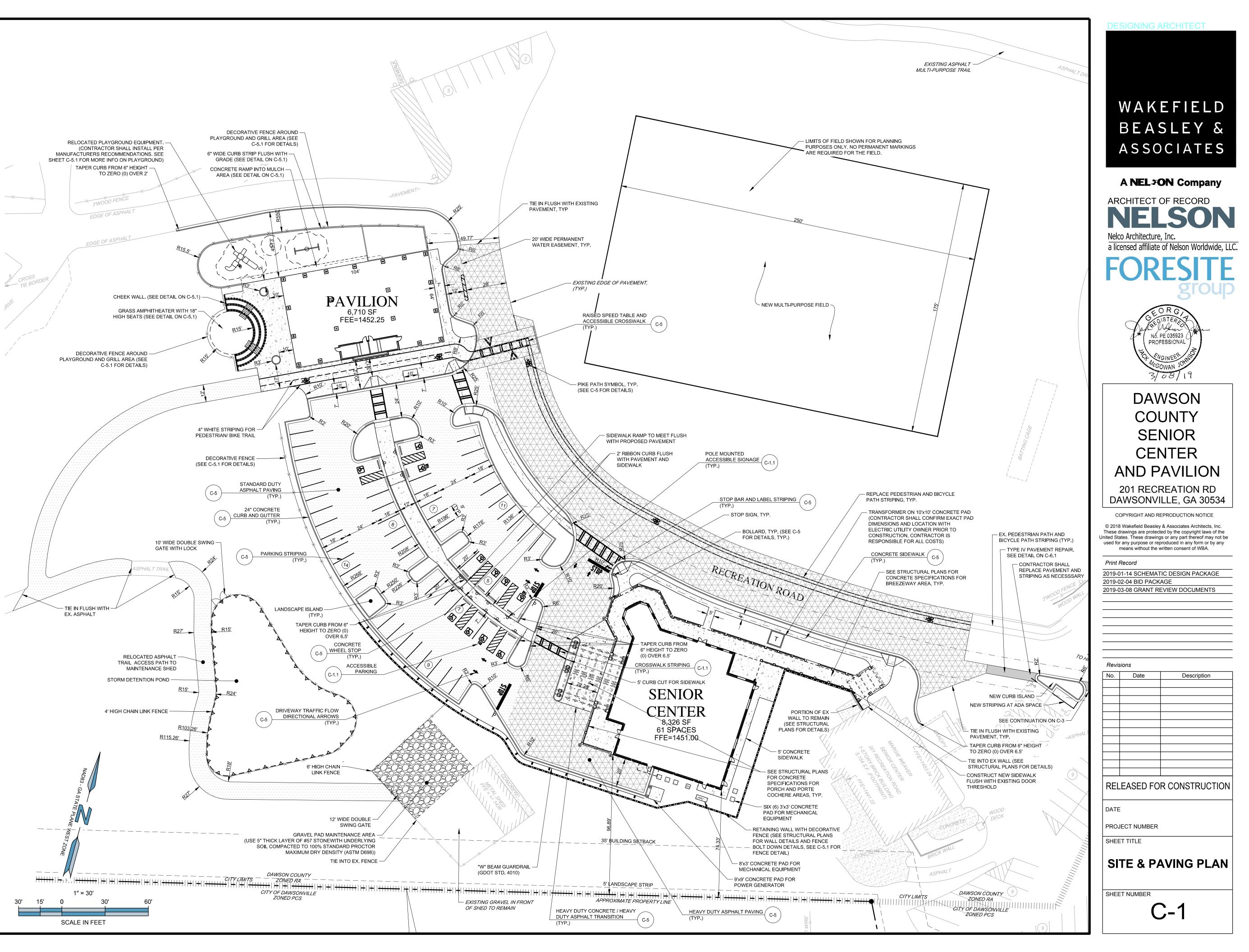
6) ALL CONSTRUCTION RELATED PERMITS DURING THE CONSTRUCTION PHASE OF THIS PROJECT ARE THE RESPONSIBILITY OF THE OWNER, HOWEVER A CONTRACTOR/DEVELOPER CAN DO PERMITTING WITH AGENT AUTHORIZATION.

7) ALL EROSION, SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING.

3) MAXIMUM CUT OR FILL SLOPE=2H:IV

CONTRACTOR SHALL COORDINATE WITH THE CITY/COUNTY JURISDICTION, WATER AND SEWER JURISDICTION, AND DEPARTMENT OF TRANSPORTATION INSPECTORS REGARDING ALL CERTIFICATE OF OCCUPANCY REQUIREMENTS AND COORDINATE WITH THE ENGINEER APPROXIMATELY 8 WEEKS PRIOR TO ANTICIPATED CERTIFICATE OF OCCUPANCY DATE REGARDING ANY ITEMS REQUIRING APPROVAL OR CERTIFICATIONS BY THE ENGINEER.

| SITE DATA                        |  |  |  |  |  |  |  |  |  |  |
|----------------------------------|--|--|--|--|--|--|--|--|--|--|
| ZONING: RA (RES                  | IDENTIAL EXURBAN/AGRICULTURAL)                   |  |  |  |  |  |  |  |  |  |
| PARCEL IDENTIFICATION            | 091035   |  |  |  |  |  |  |  |  |  |
| NUMBER:                          | 091035   |  |  |  |  |  |  |  |  |  |
|                                  |  |  |  |  |  |  |  |  |  |  |
| DISTURBED AREA:                  | 7.5 AC.  |  |  |  |  |  |  |  |  |  |
| IMPERVIOUS SURFACE AREA PROPOSED | D (%): 1.434 AC.                                 |  |  |  |  |  |  |  |  |  |
| LANDSCAPE STRIP - FRONT:         | 10 FT  |  |  |  |  |  |  |  |  |  |
| SIDE:                            | 10 F 1<br>5 F T                                  |  |  |  |  |  |  |  |  |  |
| SIDE:<br>                        | 5F15FT   |  |  |  |  |  |  |  |  |  |
|                                  | ••••   |  |  |  |  |  |  |  |  |  |
| BUILDING SETBACK - FRONT:        | 40 FT  |  |  |  |  |  |  |  |  |  |
| SIDE:                            | 20 FT  |  |  |  |  |  |  |  |  |  |
| REAR:                            | 35 FT  |  |  |  |  |  |  |  |  |  |
|                                  |  |  |  |  |  |  |  |  |  |  |
| SENIOR CENTER BUILDING           | 8,326 S.F.                                       |  |  |  |  |  |  |  |  |  |
| FLOOR AREA (GROSS):              |  |  |  |  |  |  |  |  |  |  |
| BUILDING HEIGHT:                 | 27' - 1.5"                                       |  |  |  |  |  |  |  |  |  |
| BUILDING HEIGHT (MAX.):          | 35'  |  |  |  |  |  |  |  |  |  |
|                                  |  |  |  |  |  |  |  |  |  |  |
| PARKING RATIO REQUIRED -         | (1 SPACE / 10 SENIORS) + (1 SPACE /<br>EMPLOYEE) |  |  |  |  |  |  |  |  |  |
| SENIOR CENTER PARKING REQUIRED:  | 24 SPACES  |  |  |  |  |  |  |  |  |  |
| 100 SENIORS + 14 EMPLOYEES =     |  |  |  |  |  |  |  |  |  |  |
| PARKING PROVIDED:                | 61 SPACES  |  |  |  |  |  |  |  |  |  |
| ACCESSIBLE PARKING REQUIRED:     | 3 SPACES   |  |  |  |  |  |  |  |  |  |
| ACCESSIBLE PARKING PROVIDED:     | 11 SPACES  |  |  |  |  |  |  |  |  |  |



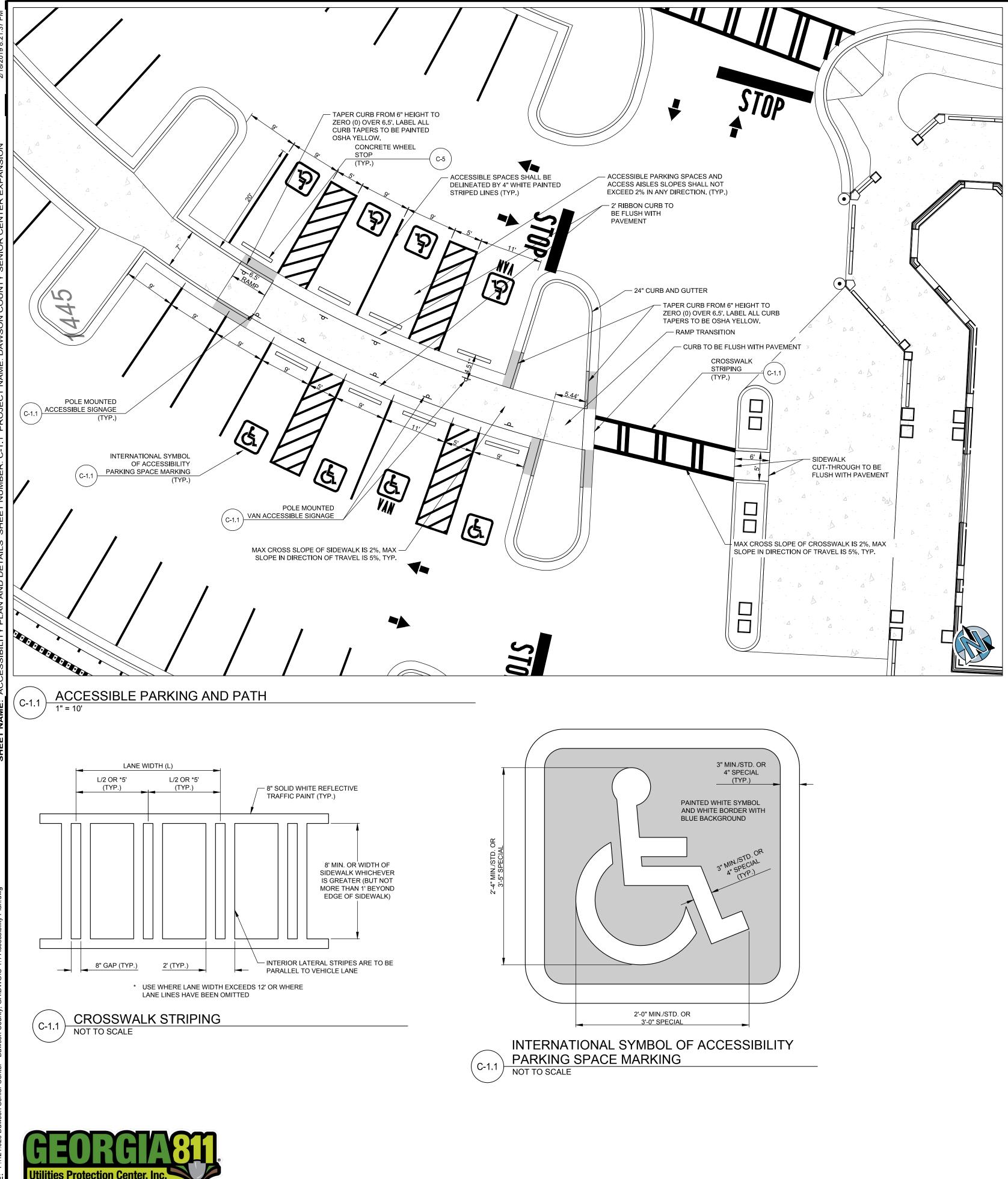
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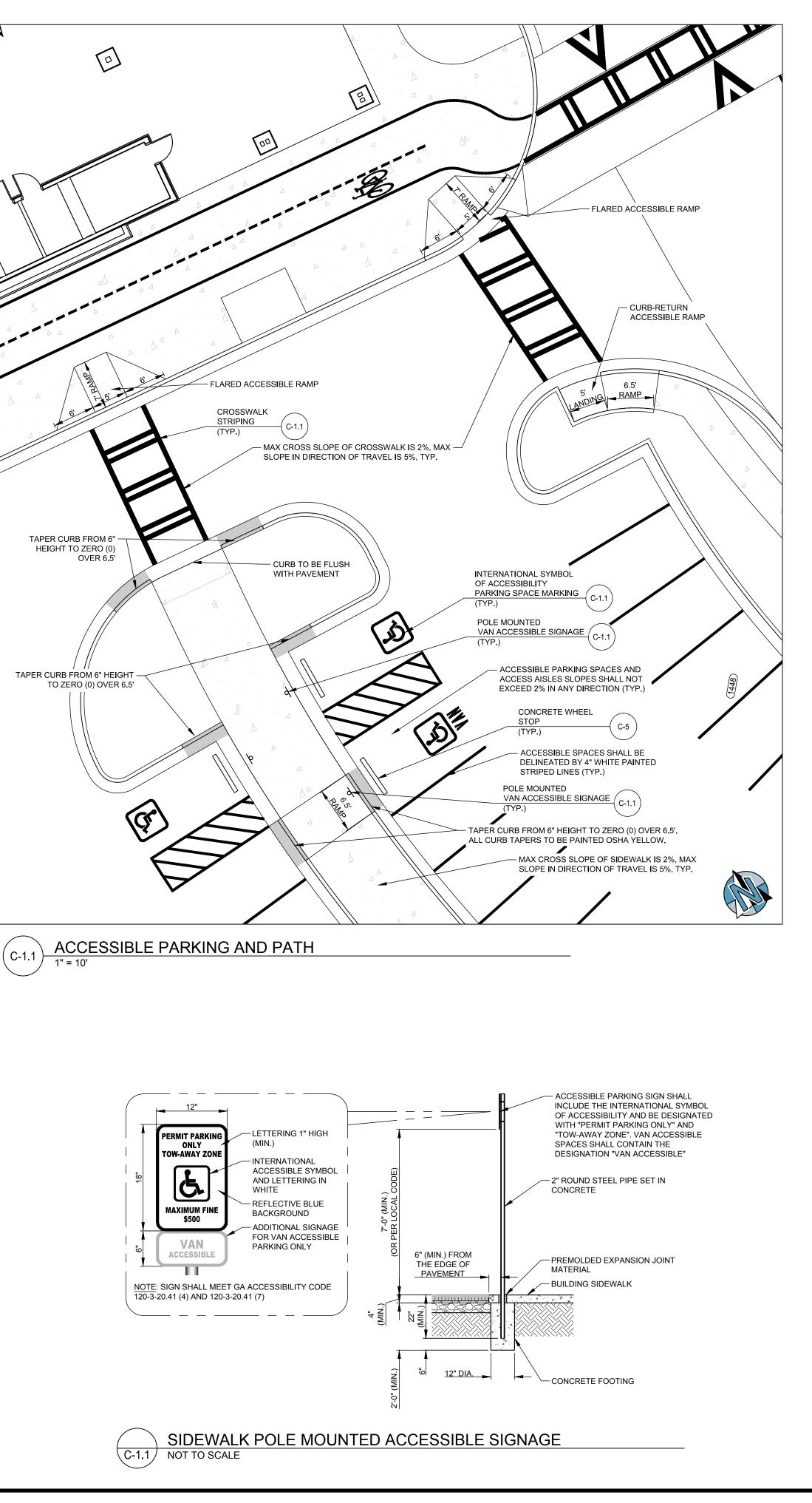
|   | LEGEND  |
|---|---|
|   | STANDARD DUTY ASPHALT PAVING                    |
|   | HEAVY DUTY ASPHALT PAVING                       |
|   | ASPHALT PAVEMENT REPAIR<br>(TYPE IV, SEE C-6.1) |
|   | CONCRETE SIDEWALK PAVING                        |
|   | HEAVY DUTY CONCRETE PAVING                      |
|   | PROPERTY LINE                                   |
|   | PARKING COUNT                                   |
|   | TRAFFIC SIGN                                    |
| → | PAINTED TRAFFIC ARROWS                          |
|   | TRAFFIC FLOW LANE DESIGNATION                   |
|   |   |

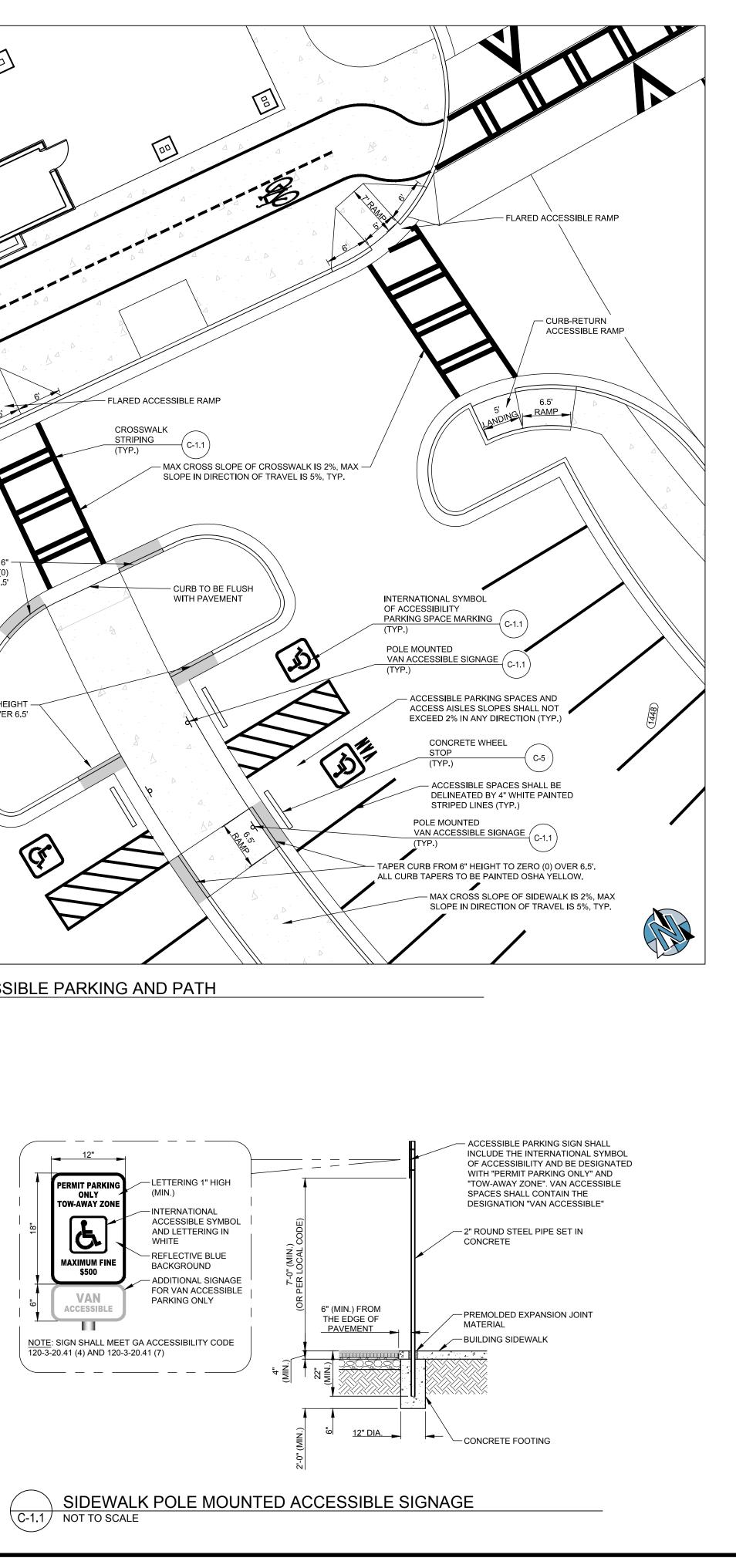




Know what's **below**.

**Call** before you dig.





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SIGNING ARCHITEC

#### GENERAL NOTES:

ALL SPOT ELEVATIONS SHOWN ARE AT THE EDGE OF PAVEMENT JNLESS OTHERWISE NOTED ALL PROPOSED SIDEWALKS SHALL BE BUILT WITH A 1.5%

ALL HEAD WALL SECTIONS SHALL BE CONSTRUCTED TO BE FLUSH VITH THE EXISTING DITCH BANK AND PROPOSED EMBANKMENT SLOPES.

CROSS-SLOPE AWAY FROM THE BUILDING AND NOT EXCEED 2%.

#### SITE NOTES:

THE CONTRACTOR SHALL CLEAN OUT ACCUMULATED SILT IN STORM WATER CONVEYANCE CHANNELS AND PIPES AT END OF CONSTRUCTION WHEN DISTURBED AREAS HAVE BEEN STABILIZED

COORDINATE WITH DAWSON COUNTY INSPECTIONS DURING CONSTRUCTION. CONSTRUCT EROSION CONTROL BARRIERS PER DAWSON COUNTY

NSPECTOR AND MAINTAIN UNTIL PERMANENT VEGETATION IS STABLISHED. ) THE CONTRACTOR SHALL RE-ESTABLISH ALL RIGHT OF WAY AREA

WHICH IS DAMAGED OR DISTURBED TO ORIGINAL CONDITIONS OR BETTER DURING AUTHORIZED WORK. ALL WORK IN DAWSON COUNTY RIGHT OF WAY SHALL COMPLY WITH GDOT SPECIFICATIONS.

ALL CURBED LANDSCAPE ISLANDS SHALL BE FILLED TO TOP OF URB WITH TOPSOIL AND SEEDED.

MAXIMUM CUT OR FILL SLOPES IS 2H:1V

TREE PROTECTION FENCE SHALL BE INSTALLED PRIOR TO ANY EARING OR GRADING ACTIVITIES.

ALL PLASTIC STORM PIPE SHOWN ON THIS PLAN SHALL BE RAPPED WITH LOCATION WIRE AND TAPE.

ALL CMP STORM PIPE SHALL BE TYPE 2 ALUMINIZED. ALL HDPE HALL BE AASHTO TYPE "S" AND SHALL BE INSTALLED IN ACCORDANCE TO ASTM D2321 OR AASHTO SECTION 30 STANDARD PRACTICES AND AS RECOMMENDED BY THE MANUFACTURER. ALL RCP STORM PIPE SHALL BE CLASS III.

0) IN ALL AREAS OF FILL OR OTHERWISE DISTURBANCE OF EXISTING CONDITIONS, UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL ULLY AND COMPLETELY REMOVE AND LEGALLY DISPOSE OFF-SITE, ALL PLANT MATERIALS INCLUDING BUT NOT LIMITED TO ROOT SYSTEMS CONCRETE REINFORCED CONCRETE ASPHALT DEBRIS UNDERBRUSH, TOPSOIL, AND OTHER DELETERIOUS MATERIAL. THE SUBGRADE TO REMAIN SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY FOLLOWING FULL REMOVAL OF THESE MATERIALS.

) REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL INGINEERING EVALUATION REPORTS AS PROVIDED BY OWNER FOR ECOMMENDATIONS ASSOCIATED WITH: GENERAL SITE PREPARATION, BUILDING PAD PREPARATION, SUBGRADE PREP, AREAS TO RECEIVE FILL AREAS TO BE OVEREXCAVATED PAVEMENT SECTIONS FILL SLOPES AND EXCAVATION. THE CONTRACTOR SHALL HAVE THIS REPORT ON THE JOB SITE FOR REFERENCE AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE EARTHWORK OPERATIONS AND CONSTRUCTION PHASE MONITORING TO ENSURE THAT ALL COMPACTION IS COMPLETED IN ACCORDANCE WITH THE SEOTECHNICAL REPORT. THE CONTRACTOR SHALL PROVIDE TESTING REPORTS TO THE OWNER REGARDING COMPACTION TESTING PER THE ESTING PROTOCOL IN THE GEOTECHNICAL REPORT

 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN QUALIFIED PROFESSIONAL ADVICE WHEN QUESTIONS ARISE CONCERNING DESIGN AND EFFECTIVENESS OF EROSION CONTROL DEVICES. 24 HR. CONTACT: DAVID MCGHEE (706) 344-3501

) NO PORTION OF THIS PROPERTY LIES WITHIN A SPECIAL FLOOD HÁZARD AREA PER PANEL 13085C0103C DATED 2018-04-04

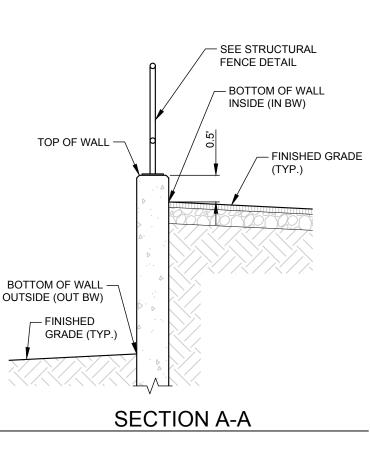
14) DETENTION FACILITIES AND EROSION CONTROL MEASURES ARE TO BE ACCOMPLISHED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

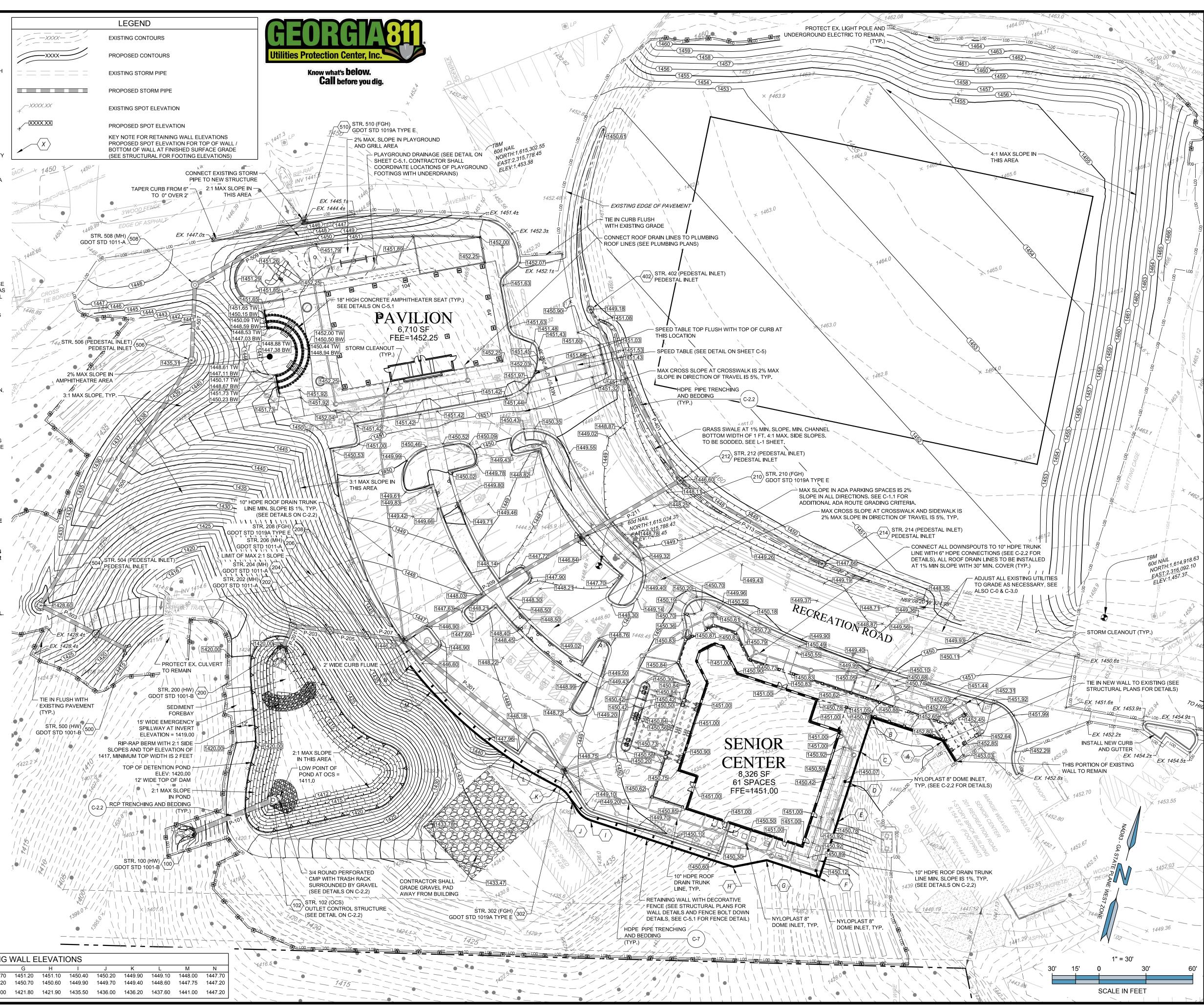
15) EXTREME CAUTION SHALL BE USED WHEN WORKING WITHIN THE VICINITY OF THE EXISTING OVERHEAD POWER LINES. CONTRACTORS SHALL NOTIFY/COORDINATE WITH GEORGIA POWER COMPANY PRIOR TO CONSTRUCTION.

STORM WATER MANAGEMENT SHALL BE IN ACCORDANCE WITH OUNTY, STATE, AND OTHER APPROPRIATE ORDINANCES AND REGULATIONS IN EFFECT AT TIME OF CONSTRUCTION PLAN PPROVAI

7) IN HEAVY DUTY PAVEMENT AREAS G.A.B. SHALL EXTEND UNDER E GUTTER TO PROVIDE ADDITIONAL STABILITY FOR TRUCK TRAVEL

CONTRACTOR SHALL INSTALL DOWNSTREAM STORM PIPE ONNECTION PRIOR TO INSTALLATION OF ON-SITE STORM PIPING ND/OR STORM WATER DETENTION FACILITY. CONTRACTOR SHALL IELD VERIFY ALL EXISTING UTILITIES SHOWN ON THE PLANS BY POT HOLING THE LINES. THE CONTRACTOR SHALL HAVE THE LINES SURVEYED, INCLUDING HORIZONTAL AND VERTICAL LOCATION, AND THE SURVEYED POINTS SENT TO THE PROJECT ENGINEER TO DETERMINE IF ANY UTILITY CONFLICTS WILL AFFECT THE CURRENT STORM DRAINAGE DESIGN.





|           | RETAINING WALL ELEVATIONS |         |         |         |         |         |         |         |         |         |         |         |         |         |
|-----------|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|           | А                         | В       | С       | D       | Е       | F       | G       | Н       | I       | J       | K       | L       | М       | Ν       |
| TW        | 1453.30                   | 1451.55 | 1451.26 | 1450.65 | 1451.40 | 1450.70 | 1451.20 | 1451.10 | 1450.40 | 1450.20 | 1449.90 | 1449.10 | 1448.00 | 1447.70 |
| IN BW     | 1452.80                   | 1451.05 | 1450.76 | 1450.15 | 1450.90 | 1450.20 | 1450.70 | 1450.60 | 1449.90 | 1449.70 | 1449.40 | 1448.60 | 1447.75 | 1447.20 |
| OUT<br>BW | 1441.20                   | 1441.30 | 1440.60 | 1440.10 | 1439.00 | 1439.00 | 1421.80 | 1421.90 | 1435.50 | 1436.00 | 1436.20 | 1437.60 | 1441.00 | 1447.20 |

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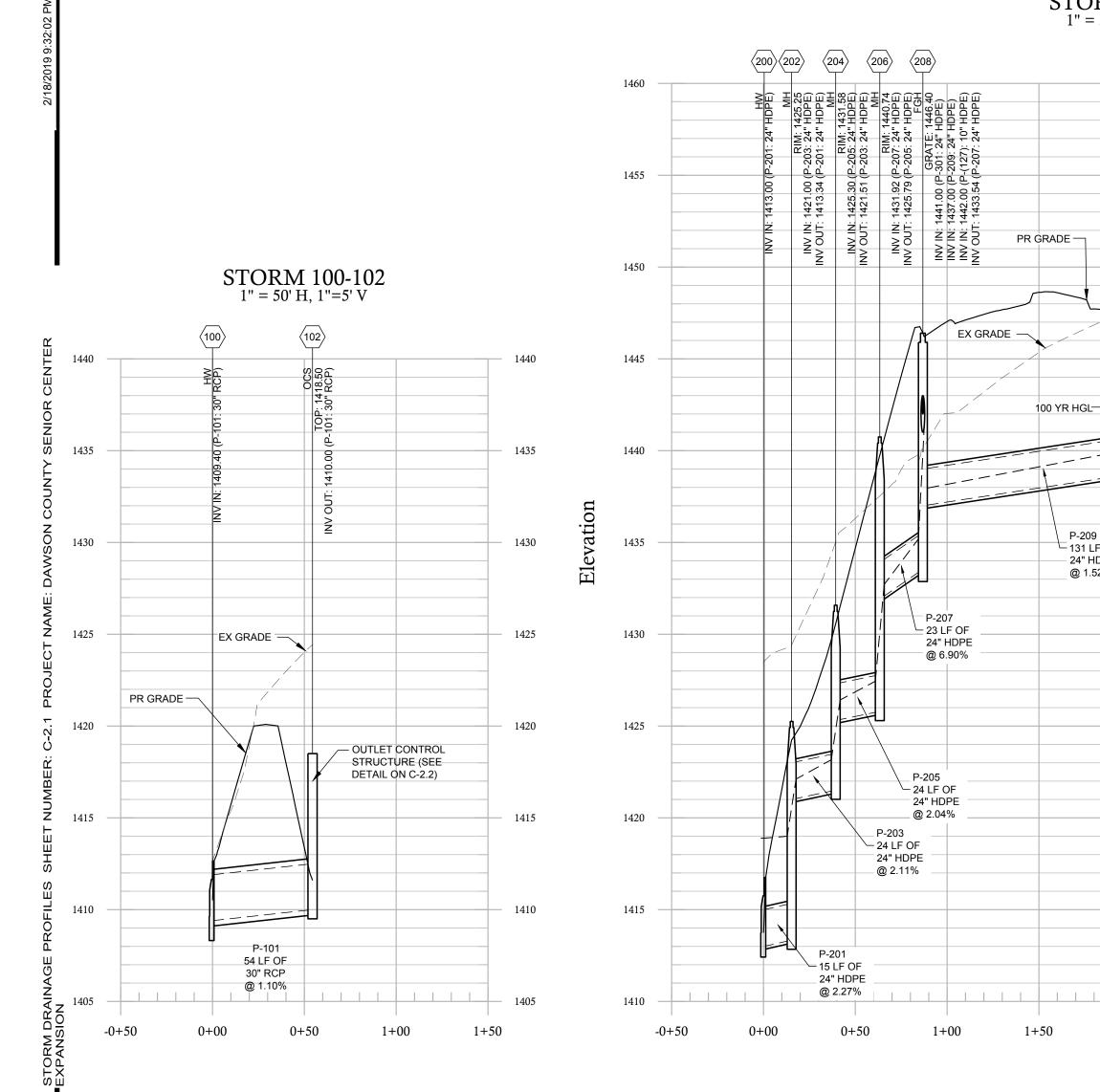
STORM 200-214 1" = 50' H, 1"=5' V

P-209

131 LF OF

— 24" HDPE

@ 1.52%



#### **100-YR PIPE CHART:**

| Line<br>No. | Line<br>ID | Drng<br>Area | Inlet<br>Time | Runoff<br>Coeff | Incr<br>Q | Line<br>Length | Line<br>Type | Line<br>Slope | n-val<br>Pipe | HGL<br>Up | HGL<br>Dn | Vel<br>Ave | Line<br>Size |  |
|-------------|------------|--------------|---------------|-----------------|-----------|----------------|--------------|---------------|---------------|-----------|-----------|------------|--------------|--|
|             |            | (ac)         | (min)         | (C)             | (cfs)     | (ft)           |              | (%)           |               | (ft)      | (ft)      | (ft/s)     | (in)         |  |
| 1           | 201        | 0.00         | 0.0           | 0.00            | 0.00      | 14.959         | Cir          | 2.27          | 0.012         | 1419.00   | 1418.89   | 6.73       | 24           |  |
| 2           | 203        | 0.00         | 0.0           | 0.00            | 0.00      | 24.000         | Cir          | 2.13          | 0.012         | 1423.16   | 1422.11   | 9.75       | 24           |  |
| 3           | 205        | 0.00         | 0.0           | 0.00            | 0.00      | 24.000         | Cir          | 2.04          | 0.012         | 1427.44   | 1426.42   | 9.66       | 24           |  |
| 4           | 207        | 0.72         | 5.0           | 0.80            | 5.73      | 23.462         | Cir          | 6.90          | 0.012         | 1435.19   | 1432.71   | 13.02      | 24           |  |
| 5           | 301        | 0.46         | 5.0           | 0.81            | 3.71      | 133.000        | Cir          | 1.14          | 0.012         | 1443.19   | 1441.51   | 4.94       | 24           |  |
| 6           | 209        | 0.35         | 5.0           | 0.78            | 2.72      | 131.296        | Cir          | 1.52          | 0.012         | 1440.36   | 1437.96   | 7.86       | 24           |  |
| 7           | 211        | 1.64         | 5.0           | 0.34            | 5.55      | 72.796         | Cir          | 2.06 0.012    |               | 1441.75 j | 1440.36   | 5.62       | 2            |  |
| 8           | 213        | 2.64         | 5.0           | 0.37            | 9.72      | 105.000        | Cir          | 1.52          | 0.012         | 1443.80   | 1441.92   | 7.49       | 1            |  |
| 9           | 401        | 0.23         | 5.0           | 0.20            | 0.46      | 123.000        | Cir          | 2.52          | 0.012         | 1444.35 j | 1441.75   | 1.44       | 1            |  |
|             |            |              | I             |                 |           |                |              | 1             | I             |           | I         |            |              |  |
| Line<br>No. | Line<br>ID | Drng<br>Area | Inlet<br>Time | Runoff<br>Coeff | Incr<br>Q | Line<br>Length | Line<br>Type | Line<br>Slope | n-val<br>Pipe | HGL<br>Up | HGL<br>Dn | Vel<br>Ave | Line<br>Size |  |
|             |            | (ac)         | (min)         | (C)             | (cfs)     | (ft)           |              | (%)           |               | (ft)      | (ft)      | (ft/s)     | (in)         |  |
| 1           | 501        | 0.00         | 0.0           | 0.00            | 0.00      | 21.397         | Cir          | 1.07          | 0.012         | 1415.00   | 1415.00   | 0.42       | 2            |  |
| 2           | 503        | 0.00         | 0.0           | 0.00            | 0.00      | 39.717         | Cir          | 1.86          | 0.012         | 1420.26   | 1419.39   | 4.09       | 2            |  |
| 3           | 505        | 0.00         | 0.0           | 0.00            | 0.00      | 184.369        | Cir          | 1.99          | 0.012         | 1428.85   | 1425.05   | 4.35       | 2            |  |
| 4           | 507        | 0.00         | 0.0           | 0.00            | 0.00      | 48.197         | Cir          | 4.75          | 0.012         | 1432.94   | 1430.44   | 5.42       | 2.           |  |
|             | 509        | 0.45         | 5.0           | 0.48            | 1.81      | 81.000         | Cir          | 1.31          | 0.012         | 1439.57   | 1438.39   | 4.14       | 2            |  |

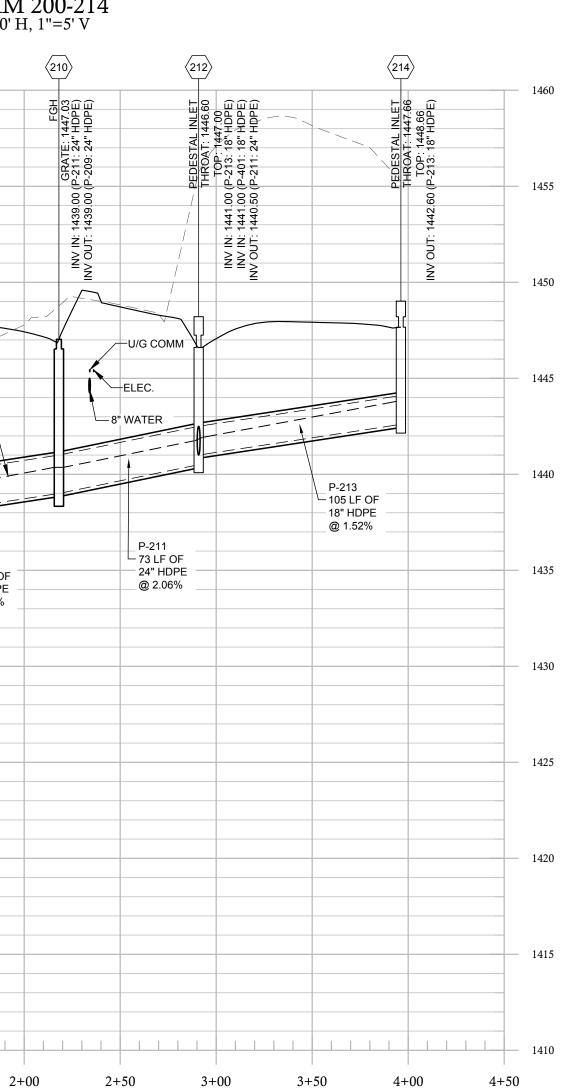
1455 1450 1445

1460

1440 1435

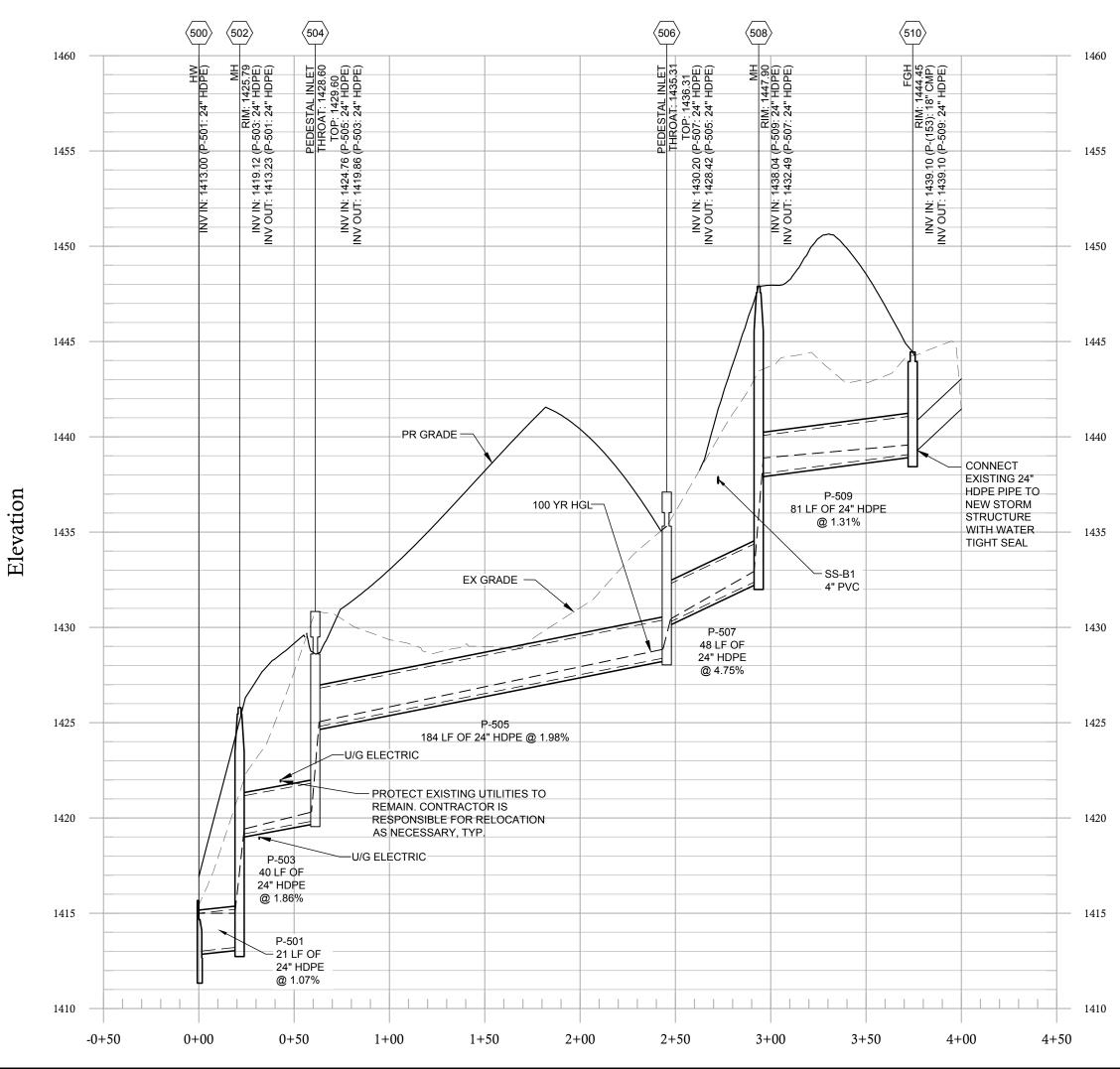
1430

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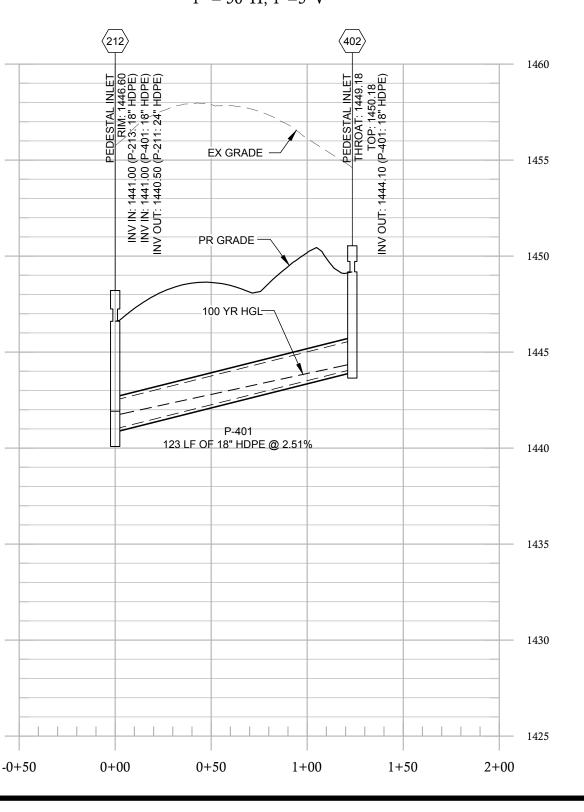


#### STORM 208-302 1" = 50' H, 1"=5' V 208 302 1460 FGH 1448.75 HDPE) HDPE) HDPE) FG ATE: 1446.4 24" HDPE) 24" HDPE) 24" HDPE) ): 10" HDPI 7: 24" HDPI . 10 17 10 17 17 17 17 501: 304: 301: GRA GRA 00 (P-301: 2 00 (P-209: 2 00 (P-(127): 3 54 (P-2077) 1445.20 (P-5 1445.20 (P-5 1442.52 (P-5 1455 1455 1441 1437 1422 1433 ZZZZ 1450 1450 PR GRADE -EX GRADE --ELEC 1445 1445 —100 YR HGL P-301 1440 1440 133 LF OF 24" HDPE @ 1.15% COMPACT FILL BELOW UTILITIES TO -98% MODIFIED PROCTOR, TYP. 1435 1435 ∽ SS-7 - 4" DIP 1430 1430 1425 1425 0+00 0+50 1 + 001 + 502+00-0+50

## STORM 500-508 1" = 50' H, 1"=5' V



STORM 212-402 1" = 50' H, 1"=5' V



#### **GENERAL NOTES:**

1) PIPE LENGTHS REFLECT THE PIPES LINEAR LENGTH AND ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

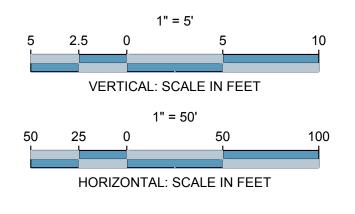
2) EXISTING UTILITY DEPTHS ARE APPROXIMATED BASED ON 4 FT COVER FROM THE EXISTING GROUND SURFACE. PROPOSED UTILITY DEPTHS ARE BASED ON 4 FT OF COVE FROM THE PROPOSED GROUND SURFACE. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY DEPTHS AT CROSSING AND CONTACT ENGINEER IMMEDIATELY IF CONFLICTS AI ENCOUNTERED.

3) CONTRACTOR TO FIELD VERIFY EXISTING ELEVATIONS OF UTILITIES IN RIGHT OF WAY TO AVOID CONFLICTS. CONTACT ENGINEER IMMEDIATELY IF FIELD ELEVATIONS DIFFER FROM THE DESIGN DRAWINGS.

4) MAINTAIN MINIMUM 2' OF COVER OVER METAL AND PLASTIC PIPES DURING CONSTRUCTION ACTIVITIES.

5) CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY INFORMATION OF THE CONTROL STRUCUTRE TO THE ENGINEER 4 WEEKS PRIOR TO REQUESTING FINAL ACCEPTANCE. AS-BUILT INFORMATION SHOULD INCLUDE ALL RIM, INVERT, ORIFICE, WEIR, AND BOX DIMENSIONS FOR THE CONTROL STRUCTURES ALONG WITH AS-BUILT TOPOGRAPHY O THE STORMWATER POND, INCLUDING TOPOGRAPHY BELOW THE WATER SURFACE ELEVATION TO THE BOTTOM OF THE POND. THE AS-BUILT SURVEY INFORMATION SHOULD ALSO INCLUDE THE AS-BUILT INFORMATION FOR THE DISCHARGE PIPE FROM THE OUTLET CONTROL STRUCTURE TO WHERE IT DISCHARGES INTO THE RIGHT OF WAY OR ON-GRADE. ONE REVIEW OF THE AS-BUILT SYSTEM AND STORM MODELING IS COVERED BY THE OWNER. ADDITIONAL ENGINEERING COSTS FOR AS-BUILT REVIEW AN STORM MODELING OF THE DETENTION SYSTEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

6) IN ORDER TO ADDRESS SAFETY CONSIDERATIONS ASSOCIATED WITH THE DETENTION POND, CONTRACTOR SHOULD INSTALL A 4' HIGH BLACK VINYL COATED CHAIL LINK FENCE AROUND THE DETENTION POND.





Call before you dig.

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**DESIGNING ARCHITECT** 

| No.                       | Date | Description |  |  |  |  |  |  |  |
|---------------------------|------|-------------|--|--|--|--|--|--|--|
|                           |      |             |  |  |  |  |  |  |  |
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| RELEASED FOR CONSTRUCTION |      |             |  |  |  |  |  |  |  |

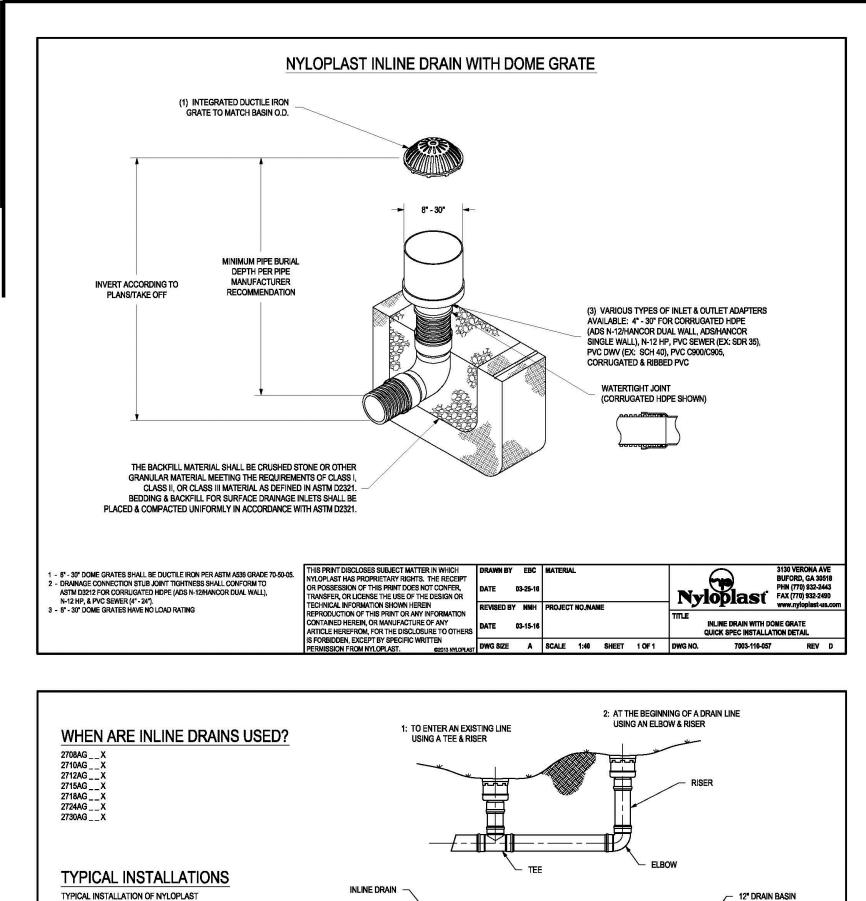
DATE

PROJECT NUMBER

SHEET TITLE

### **STORM DRAINAGE** PROFILES

C-2.1



WATERTIGHT ADAPTERS AVAILABLE

CORRUGATED HDPE PIPE

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER,

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OM NYLOPLAST.

2: TO CHANGE PIPE DIAMETER

FOR MOST COMMON PLASTIC PIPING SYSTEMS

3: TO CHANGE PIPE TYP

DRAWN BY

8-10-0

REVISED BY EBC P

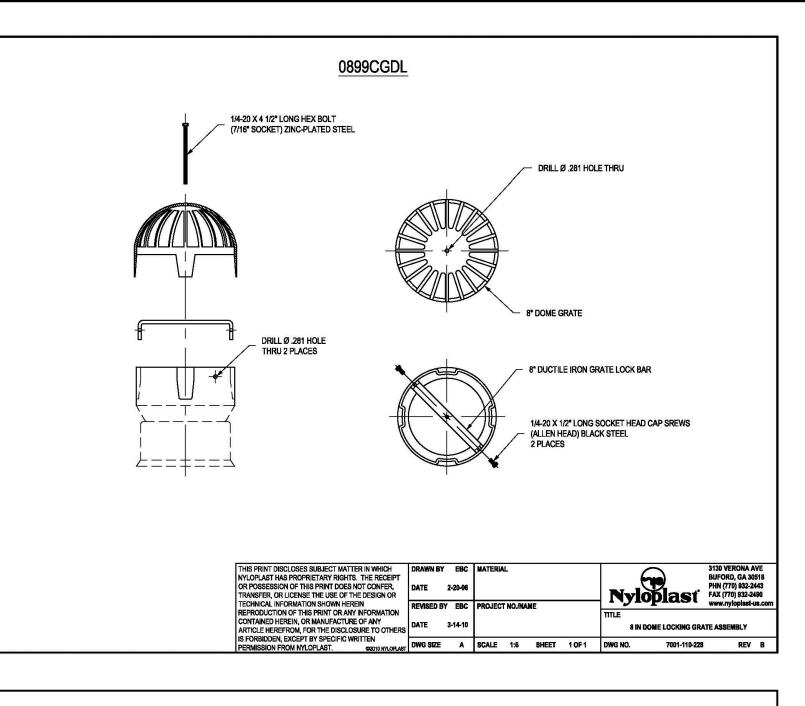
DATE 1-6-1

10" INLINE DRAIN

4: FOR SHALLOW

APPLICATIONS

DWG SIZE A SCALE 1:40 SHEET 1 OF 1 DWG NO.



#### GENERAL

PVC surface drainage inlets shall be of the inline drain type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS

The inline drain required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the furnished configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the inline drain body by use of a swage mechanical joint. The raw material used to manufacture the pipe stock that is used to manufacture the inline drain body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates furnished for all surface drainage inlets shall be ductile iron grates for sizes 8", 10", 12", 15", 18", 24" and 30" shall be made specifically for each fitting so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for inline drains shall be capable of supporting H-20 wheel loading for traffic areas or H-10 loading for pedestrian areas. 12" and 15" square grates will be hinged to the frame using pins. Metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron. Grates shall be provided painted black.

#### INSTALLATION

The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in <u>ASTM D2321</u>. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to <u>ASTM D2321</u> guidelines.

DRAIN BASIN AND INLINE DRAI

2808AG \_ \_ X 2810AG \_ \_ X 2812AG \_ \_ X 2815AG \_ \_ X 2818AG \_ \_ X 2824AG \_ \_ X 2830AG \_ \_ X

(3) VARIABLE ELEVATIO

: TO CHANGE ELEVATION

WHEN ARE DRAIN BASINS USED?

ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012 DRAWI BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 84° DUE TO SHIPPING RESTRICTIONS

- STRUCTURES & ADAPTERS AVAILABLE IN SIZES 8" - 30"

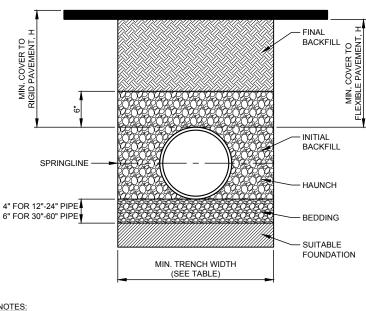
ilities Protection Center.

Know what's **below**.

**Call** before you dig.

SEE DRAWING NO. 7001-110-065





(2) INLET & OUTLET

ADAPTERS CAN BE

PUT ON ANY ANGL

BUFORD, GA 30518 PHN (770) 932-2443

FAX (770) 932-2490

REV D

10" INLINE DRAIN

5: TO CHANGE DIRECTION

Nyloblast

8 IN - 30 IN TYPICAL INSTALLATION OPTIONS

7001-110-042

OTES: ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS
- SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm);
- 6" (150mm) FOR 30"-60" (750mm-900mm). 111TIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED 100 DEDUCTOR DATA PORTO LATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT

HDPE BEDDING, TRENCHING, AND BACKFILI (C-2.2) NOT TO SCALE

PIPE DIAM. H-25

54" - 60" 24"

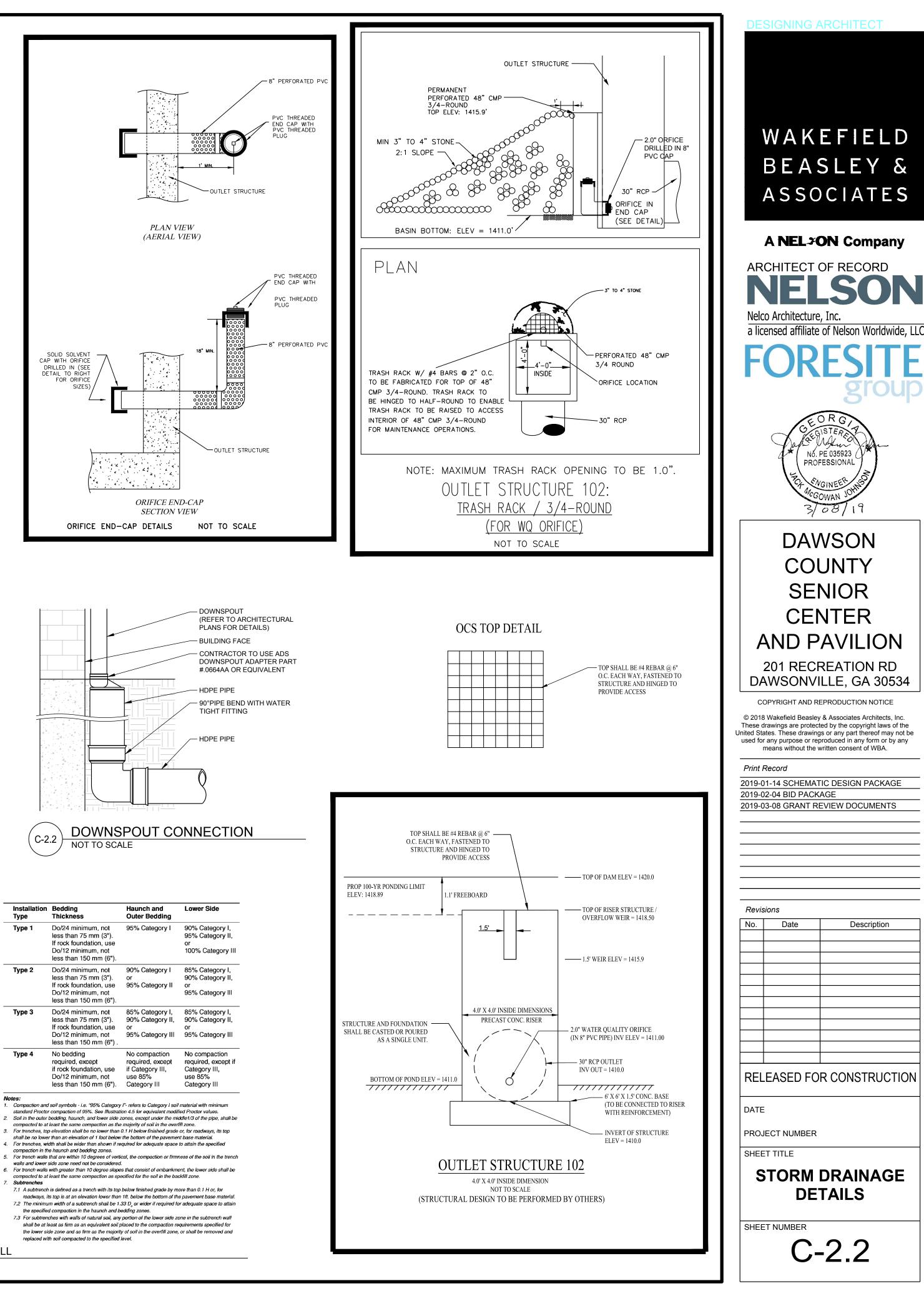
ADDITIONAL COVER

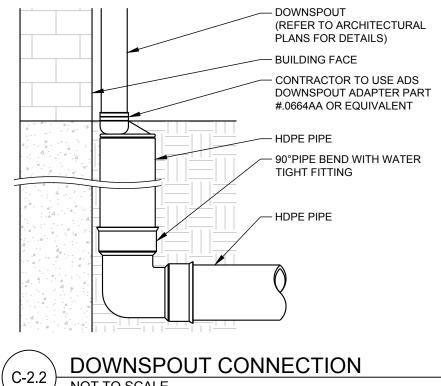
12" - 48"

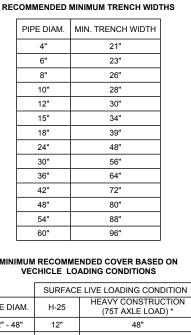
#### Section 2722

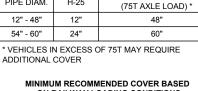
#### Engineered Surface Drainage Products

| THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH   | DRAWN BY  | CJA      | MATERIA | ۱L       |       |               |            | $\overline{}$        | 3130 VERONA A   |        |
|--|-----------|----------|---------|----------|-------|---------------|------------|----------------------|-----------------|--------|
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| TECHNICAL INFORMATION SHOWN HEREIN             | REVISED B | Y NMH    | PROJECT | T NO./NA | ME    |               | ייעיין     | PIGO                 | www.nyloplast-  | us.com |
| REPRODUCTION OF THIS PRINT OR ANY INFORMATION  |           |          |         |          |       |               | TITLE      |                      |                 |        |
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| ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS |           |          |         |          |       |               | 0111-3     | O IN INLINE DRAIN S  | PECIFICATIONS   |        |
| IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN       |           | Α        | 004LE   | 4.4      | OUFFT | 1 OF 1        | DWG NG     | 7003 440 000         | 00/             |        |
| PERMISSION FROM NYLOPLAST. ©2013 NYLOPLAST.    | DWG SIZE  | A        | SCALE   | 1:1      | SHEET | 1 <b>UF</b> 1 | DWG NO.    | 7003-110-009         | REV             | н      |

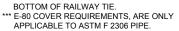








| ON RAILWAY LOADING CONDITIONS            |               |                  |  |  |  |  |  |  |  |  |  |
|--|---------------|------------------|--|--|--|--|--|--|--|--|--|
|  | PIPE DIAM.    | COOPER<br>E-80** |  |  |  |  |  |  |  |  |  |
|  | UP TO 24" 24" |                  |  |  |  |  |  |  |  |  |  |
|  | 30"-36"       | 36"              |  |  |  |  |  |  |  |  |  |
|  | 42"-60"       | 48"              |  |  |  |  |  |  |  |  |  |
| ** COVER IS MEASURED FROM TOP OF PIPE TO |               |                  |  |  |  |  |  |  |  |  |  |



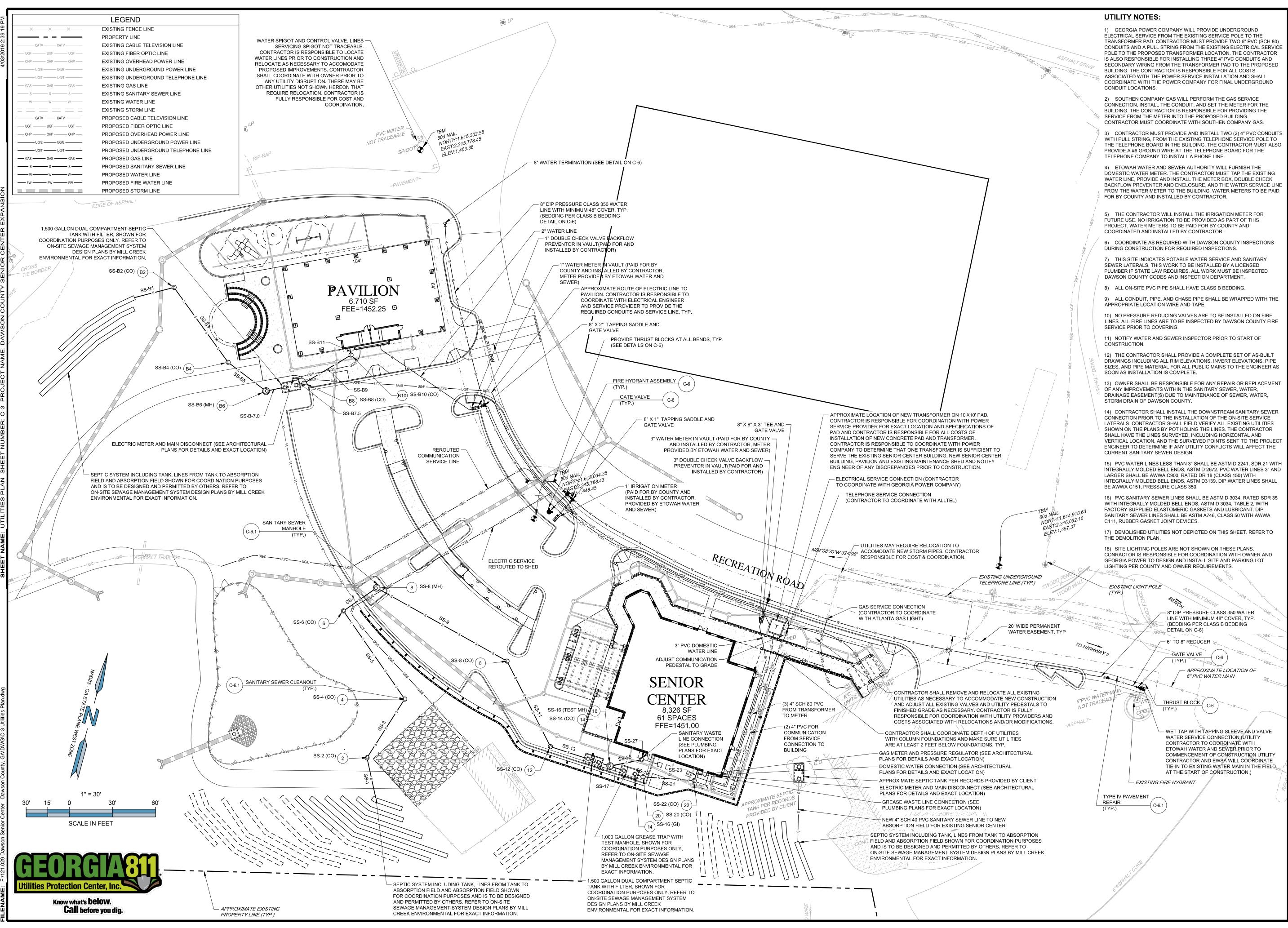
N State Sta Overfill Soil Category I, II, III D<sub>o</sub> (Min.) Haunch - See Illustration 4.4 Springline /Lower Side - Se Illustration 4.4 Middle Bedding loosely See Illustrations 4.4 & 4.5 bedding except Type 4 Outer bedding materials and compaction each side, Foundation same requirements as

Illustration 4.3 Standard Trench/Embankment Installation The SPIDA design runs with the Standard Installations were made with medium compaction of the bedding under the middle-third of the pipe, and with some compaction of the overfill above the springline of the pipe. This middlethird area under the pipe in the Standard Installations has been designated as loosely placed, uncompacted material. The intent is to maintain a slightly yielding bedding under the middle-third of the pipe so that the pipe may settle slightly into the bedding and achieve improved load distribution. Compactive efforts in the

| Installation<br>Type | Bedding<br>Thickness   | Haunch and<br>Outer Bedding  | Lower   |  |  |  |  |  |  |
|----------------------|--|--|---|--|--|--|--|--|--|
| Туре 1               | Do/24 minimum, not<br>less than 75 mm (3").<br>If rock foundation, use<br>Do/12 minimum, not<br>less than 150 mm (6"). | 95% Category I   | 90% C<br>95% C<br>or<br>100% (                  |  |  |  |  |  |  |
| Туре 2               | Do/24 minimum, not<br>less than 75 mm (3").<br>If rock foundation, use<br>Do/12 minimum, not<br>less than 150 mm (6"). | 90% Category I<br>or<br>95% Category II  | 85% C<br>90% C<br>or<br>95% C                   |  |  |  |  |  |  |
| Туре 3               | Do/24 minimum, not<br>less than 75 mm (3").<br>If rock foundation, use<br>Do/12 minimum, not<br>less than 150 mm (6"). | 85% Category I,<br>90% Category II,<br>or<br>95% Category III                    | 85% C<br>90% C<br>or<br>95% C                   |  |  |  |  |  |  |
| Туре 4               | No bedding<br>required, except<br>if rock foundation, use<br>Do/12 minimum, not<br>less than 150 mm (6").              | No compaction<br>required, except<br>if Category III,<br>use 85%<br>Category III | No con<br>require<br>Catego<br>use 85<br>Catego |  |  |  |  |  |  |
|                      |  |  |   |  |  |  |  |  |  |

standard Proctor compaction of 95%. See Illustration 4.5 for equivalent modified Proctor values.

- compacted to at least the same compaction as the majority of soil in the overfill zone. 3. For trenches, top elevation shall be no lower than 0.1 H below finished grade or, for roadways, its top
- 4. For trenches, width shall be wider than shown if required for adequate space to attain the specified
- 5. For trench walls that are within 10 degrees of vertical, the compaction or firmness of the soil in the trench walls and lower side zone need not be considered.
- compacted to at least the same compaction as specified for the soil in the backfill zone. Subtrenches
- 7.2 The minimum width of a subtrench shall be 1.33 D or wider if required for adequate space to attain the specified compaction in the haunch and bedding zones. 7.3 For subtrenches with walls of natural soil, any portion of the lower side zone in the subtrench wall
- shall be at least as firm as an equivalent soil placed to the compaction requirements specified for the lower side zone and as firm as the majority of soil in the overfill zone, or shall be removed and



#### ESIGNING ARCHITE



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## DAWSON COUNTY **SENIOR** CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534

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Print Record

| 2019-01-14 SCHEMATIC DESIGN PACKAGE |  |
|-------------------------------------|--|
| 2019-02-04 BID PACKAGE              |  |
| 2019-03-08 GRANT REVIEW DOCUMENTS   |  |
| 2019-04-03 COUNTY COMMENTS          |  |
|                                     |  |

Revisions

RELEASED FOR CONSTRUCTION

DATE

PROJECT NUMBER

SHEET TITLE

### **UTILITIES PLAN**

#### **GENERAL NOTES:**

1) PIPE LENGTHS REFLECT THE PIPES LINEAR LENGTH AND ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

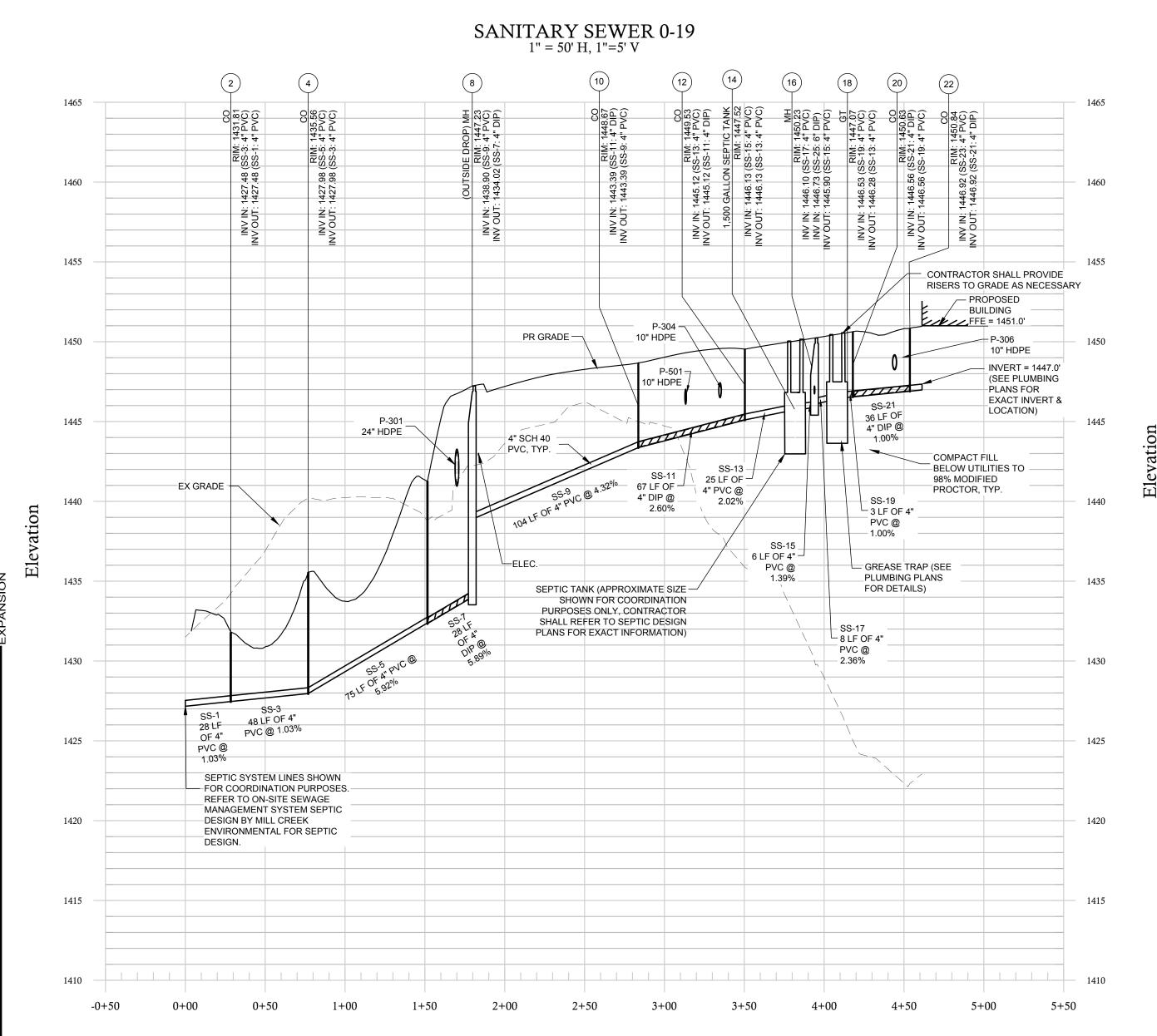
2) EXISTING UTILITY DEPTHS ARE APPROXIMATED BASED ON 4 FT COVER FROM THE EXISTING GROUND SURFACE. PROPOSED UTILITY DEPTHS ARE BASED ON 4 FT OF COVER FROM THE PROPOSED GROUND SURFACE. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY DEPTHS AT CROSSING AND CONTACT ENGINEER IMMEDIATELY IF CONFLICTS ARE

ENCOUNTERED.3) CONTRACTOR TO FIELD VERIFY EXISTING ELEVATIONS OF UTILITIES IN RIGHT OF WAY TO AVOID CONFLICTS. CONTACT ENGINEER IMMEDIATELY IF FIELD ELEVATIONS DIFFER FROM THE DESIGN DRAWINGS.

4) MAINTAIN MINIMUM 2' OF COVER OVER METAL AND PLASTIC PIPES DURING

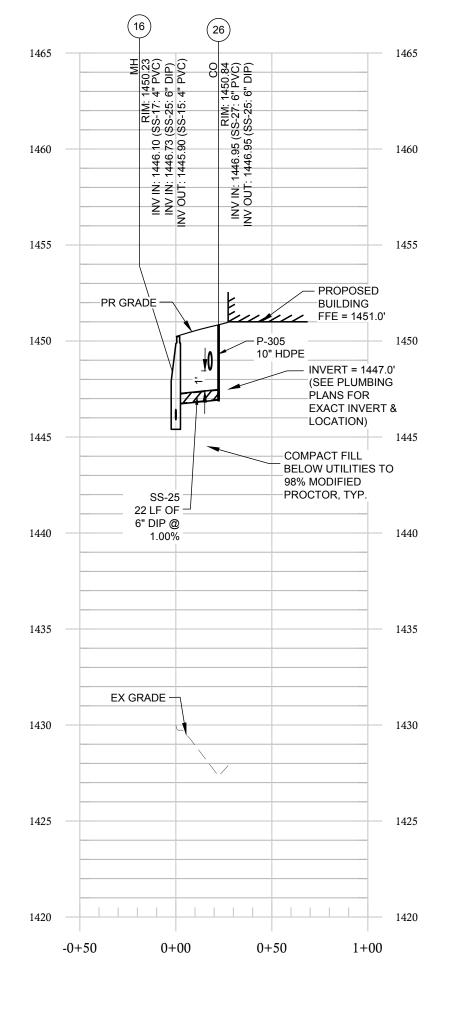
CONSTRUCTION ACTIVITIES.

5) CONTRACTOR SHALL PROVIDE WATER AND SEWER ASBUILT SURVEY A MINIMUM OF 8 WEEKS PRIOR TO CERTIFICATE OF OCCUPANCY.





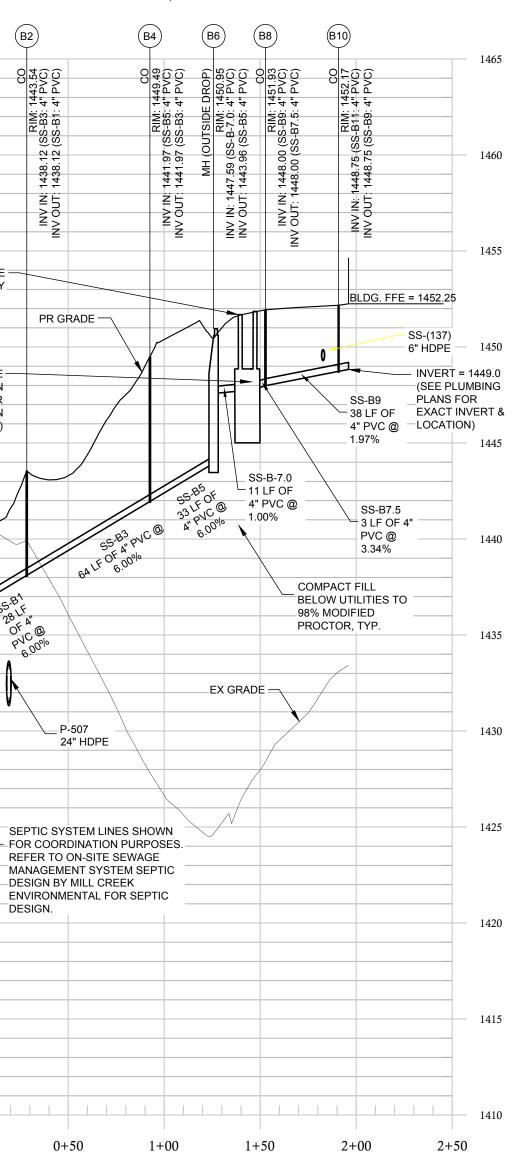
#### SANITARY SEWER12-23 1" = 50' H, 1"=5' V

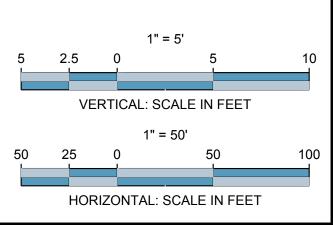


## (B2) 1465 CO 1443.54 4" PVC) 4" PVC) SS SS SS 1460 <u>5</u>2 1438. 1438. ΞŚ ≥ō 1455 CONTRACTOR SHALL PROVIDE -RISERS TO GRADE AS NECESSARY. 1450 SEPTIC TANK (APPROXIMATE SIZE -SHOWN FOR COORDINATION PURPOSES ONLY, CONTRACTOR SHALL REFER TO SEPTIC DESIGN PLANS FOR EXACT INFORMATION) 1445 1440 Elevatio 28 LF OF A @ PVC @ 6.00% 1435 1430 1425 DESIGN. 1420 1415 1410

-0+50

0+00







DESIGNING ARCHITECT

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ARCHITECT OF RECORD NELS Nelco Architecture, Inc. a licensed affiliate of Nelson Worldwide, LLC. oup Mykin Nó. PE 035923 PROFESSIONAL SUGINE JOWAN 5/081 DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534 COPYRIGHT AND REPRODUCTION NOTICE © 2018 Wakefield Beasley & Associates Architects, Inc. These drawings are protected by the copyright laws of the Jnited States. These drawings or any part thereof may not be used for any purpose or reproduced in any form or by any means without the written consent of WBA. Print Record 2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS Revisions Date Description No. RELEASED FOR CONSTRUCTION DATE PROJECT NUMBER SHEET TITLE SANITARY SEWER PROFILES SHEET NUMBER C-3.1

#### SANITARY LINE B (PAVILION) 1" = 50' H, 1"=5' V

## EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLANS (ESPCP) FOR: DAWSON COUNTY SENIOR 'ENTER EXPANSION IN ACCORDANCE WITH GEORGIA NPDES PERMIT GAR #100001 201 RECREATION RD

## DAWSONVILLE, GA 30534 **ESPCP SHEET INDEX**

**EROSION, SEDIMENTATION, & POLLUTION CONTROL COVER** C-4

- C-4.1 EROSION, SEDIMENTATION, & POLLUTION CONTROL NOTES
- C-4.2 EROSION, SEDIMENTATION, & POLLUTION CONTROL NOTES
- C-4.3 INITIAL EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN
- C-4.4 INTERMEDIATE EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN
- C-4.5 FINAL EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN
- C-4.6 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS
- C-4.7 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS C-4.8 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS
- C-4.9 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS

### SITE DETAILS:

- THE PROPOSED SITE IMPROVEMENTS INCLUDE A NEW SENIOR CENTER AND ASSOCIATED
- INFRASTRUCTURE INCLUDING A PARKING LOT, DETENTION FACILITY, AND UTILITIES
- 2) TOTAL AREA OF THE SITE = 7.5 ACRES
- CURVE NUMBER, EXISTING CONDITION = 66 CURVE NUMBER. DEVELOPED CONDITION = 72
- THERE ARE ARE NO KNOWN STATE WATERS PRESENT ON SITE. THERE ARE NO KNOWN STATE WATERS WITHIN 200 FEET OF THE SITE. APPROXIMATE LOCATION OF OFF-SITE WATERS AND RECEIVING WATER ARE SHOWN ON THE LOCATION MAP (THIS SHEET)
- THERE ARE NO KNOWN WETLANDS ON THE SITE. ALL WETLANDS DELINEATED ARE SHOWN IN THIS PLAN.
- 7) NO PORTION OF THE SUBJECT PROPERTY LIES WITHIN A 100 YEAR FLOOD HAZARD AREA PER FIRM MAP NUMBER 13085C0103C DATED 2018-04-04

A COPY OF THIS APPROVED PLAN MUST BE RETAINED ON-SITE OR AT A READILY ACCESSIBLE LOCATION

THIS PLAN SHALL BE AMENDED WHEN A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT (INCLUDING SpB, Sd2, Sd3, Sd4, Rt, Ss, Rd, AND OTHER MEASURES IN CONCENTRATED FLOW AREAS). SUCH AMENDMENTS MUST BE CERTIFIED BY THE ENGINEER.

CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY UPON START OF CONSTRUCTION IN ORDER FOR ENGINEER TO SCHEDULE THE INITIAL 7 DAY EROSION CONTROL INSPECTION. THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING INITIAL BMP'S ARE INSTALLED PROPERLY. ALL COMPENSATION FOR DESIGN ENGINEER'S REINSPECTION TO VERIFY THAT THE INITIAL BMP'S ARE PROPERLY INSTALLED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

### **PREPARED BY:**



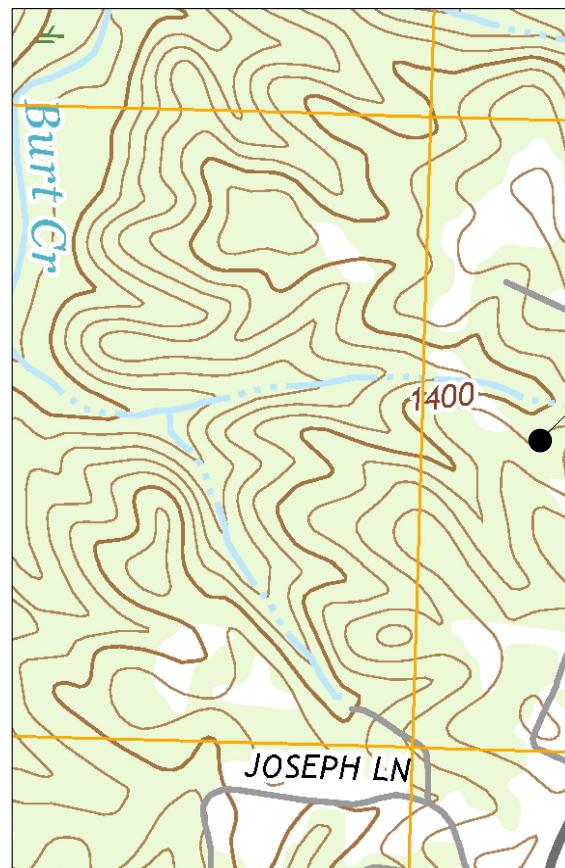
Foresite Group, Inc. 5185 Peachtree Pkwy. Suite 240 Norcross, GA 30092

**o** | 770.368.1399 **f |** 770.368.1944 w www.fg-inc.net

24 HR CONTACT: **DAVID MCGHEE** (706) 344-3501

**ISSUED**: MARCH 28, 2018 121.029

### SITE DISTURBED AREA = 7.5 AC



#### VICINITY MAP,

| MONITORING<br>SITE TYPE OF<br>SITE (SEE KEY) TOTAL BASIN<br>AREA ON-SITE<br>BASIN<br>AREA RECOMMENDED<br>FOR<br>MONITORING |      |      |       | SE-I WATER SAMPLING |       |     |   |  |  |  |
|--|------|------|-------|---------------------|-------|-----|---|--|--|--|
| ACRES SQ. MI. ACRES  |      | SITE | -     |                     | BASIN | FOR | F |  |  |  |
|  |      |      | ACRES | SQ. MI.             | ACRES |     |   |  |  |  |
| MS-A OF 10.09 0.016 10.09 YES  | MS-A | OF   | 10.09 | 0.016               | 10.09 | YES | U |  |  |  |

\*\* O.C.G.A. Sec. 12-7-6 STATES "A discharge of STORMWATER runoff from distur best management practices have not been properly designed, installed, and constitute a separate violation of any land-disturbing permit issued by a local issuin any state general permit issued by the division pursuant to subsection (f) of Code Ser each day on which such discharge results in the turbidity of receiving waters bein more than 25 nephelometric turbidity units for waters supporting warm water fishe than ten nephelometric turbidity units for waters classified as trout waters

\*\*\* Impaired indicates the site discharges into, or is within one mile upstream of and v watershed, as a portion of an impaired stream segment for the criteria voildated Fish Community) and/or "Bio M" (Impaired Macrovertebrate Community), within Cate 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runof published impaired streams list maintained by the Georgia Environmental Protection I

|          | ANTICIPATED ACTIVITY SCHEDULE                                  |     |    |     |  |     |         |     |  |     |   |      |  |  |
|----------|--|-----|----|-----|--|-----|---------|-----|--|-----|---|------|--|--|
|          | BEGIN CONSTRUCTION: 04/01/2019<br>END CONSTRUCTION: 04/01/2020 |     |    |     |  |     |         |     |  |     |   |      |  |  |
| <u> </u> |  | -   | .0 |     |  |     | 6.0 8.0 |     |  | 10  | 0 | 12.0 |  |  |
| ACTIVITY |  | MTH |    | MTH |  | MTH |         | MTH |  | MTH |   | MTH  |  |  |
| 1        | INSTALL SEDIMENT<br>CONTROLS                                   |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 2        | DEMOLITION   |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 3        | CLEARING, GRUBBING,<br>& GRADING                               |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 4        | GRASS TEMP.  |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 5        | BUILDING<br>CONSTRUCTION                                       |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 6        | MAINTAIN EROSION<br>CONTROL                                    |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 7        | PAVING   |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 8        | FINAL LANDSCAPING  |     |    |     |  |     |         |     |  |     |   |      |  |  |
| 9        | DISPOSITION OF TEMP.<br>SEDIMENT CONTROLS                      |     |    |     |  |     |         |     |  |     |   |      |  |  |

#### **DESIGN PROFESSIONAL CERTIFICATION**

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF THE BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT. UNDER MY SUPERVISION.

Jack Mohen John SIGNATURE OF ENGINEER

CERTIFICATION #

#### **OWNER CERTIFICATION**

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM. OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

#### SECON

A COMPLE THE SPAC PROVIDED ACKNOWL REMAIN IN

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DATE

2019-03-24

EXPIRATION

3/08/19

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|-----------------------------------|--|---|
|                                   | nt's <b>below.</b><br><b>before you dig.</b><br>MATION SHOULD BE MAINTAINED IN<br>REVISIONS TO THE PLAN) SHALL BE<br>ERMITTEE SHALL SIGN A WRITTEN | Revisions           No.         Date         Description           Image: Image of the second seco |
|                                   |  |   |
|                                   | ADDRESS  | RELEASED FOR CONSTRUCTION   |
| TE/ZIP LEVEL IA CERTIFICATION NO. | SIGNATURE  | DATE  |
| COMPANY                           | ADDRESS  | PROJECT NUMBER  |
| TE/ZIP LEVEL IA CERTIFICATION NO. | SIGNATURE  | EROSION,  |
| COMPANY                           | ADDRESS  | SEDIMENTATION, & POLLUTION  |
| TE/ZIP LEVEL IA CERTIFICATION NO. | SIGNATURE  |   |
|                                   |  | C-4   |

#### **GENERAL EROSION CONTROL NOTES:**

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT

EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN

PROGRESS. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND BEST MANAGEMENT

PRACTICES. WHETHER TEMPORARY OR PERMANENT.

EROSION CONTROL DEVICES THAT ARE INSTALLED AS DIRECTED BY AN INSPECTOR BUT NOT SHOWN ON THE APPROVED PLAN ARE THE ESPONSIBILITY OF THE CONTRACTOR.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN QUALIFIED PROFESSIONAL ADVICE WHEN QUESTIONS ARISE CONCERNING TIMING, DESIGN AND EFFECTIVENESS OF EROSION CONTROL DEVICES. 24 HR CONTACT: DAVID MCGHEE (706) 344-3501.

8) ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING AS SLOPES ARE CONSTRUCTED.

THE CONTRACTOR SHALL STOCKPILE AND REUSE TOPSOIL TO DRESS FINAL GRADES. CONFIRM THE STOCKPILE LOCATION WITH THE OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE GRADING AND DRAINAGE PLANS FOR NOTES REGARDING EXCESS TOPSOIL AND OTHER UNCLASSIFIED FILL/EXCAVATION.

10) THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANING OUT OF ANY ACCUMULATED SILT IN THE STORM DRAINAGE PIPES AT END OF CONSTRUCTION WHEN DISTURBED AREAS HAVE BEEN STABILIZED.

1) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES UNTIL THE ENTIRE PROJECT HAS UNDERGONE FINAL STABILIZATION AND ALL CONSTRUCTION HAS BEEN COMPLETED.

12) RED LINE COMMENTS ON WORKING SETS OF PLANS SHOULD BE MAINTAINED ON SITE FOR ANY CHANGES MADE TO EROSION CONTROL PLAN. COMMENTS SHOULD INCLUDE DATE AND JUSTIFICATION FOR CHANGES.

13) OFF SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL. DUST CONTROL MEASURES MAY CONSIST OF APPLICATION OF MULCHES, VEGETATIVE COVER, SPRAY-ON ADHESIVES, CALCIUM CHLORIDE: THE USE OF IRRIGATION: AND/OR THE CONSTRUCTION OF BARRIERS TO PROTECT FROM WIND OR SCREEN AIRBORNE PARTICULATES.

14) IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION EXIT PAD DOES NOT SUFFICIENTLY REMOVE MUD FROM VEHICLE TIRES, HE TIRES SHOULD BE WASHED BEFORE LEAVING THE PROJECT SITE. WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON THE CONSTRUCTION PAD OR OTHER AREA STABILIZED WITH CRUSHED STONE. ALL RUNOFF FROM WASHING AREAS BUST BE DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN INCLUDED IN THESE PLANS.

#### STREAMS AND WETLANDS

NO CONSTRUCTION ACTIVITY SHALL BE CONDUCTED WITHIN THE BANKS OF STREAMS OR WITHIN A WETLAND AREA EXCEPT UPON RECEIPT OF AUTHORIZATION FOR SUCH ACTIVITY FROM THE U.S. ARMY CORPS OF ENGINEERS.

EXCEPT AS PROVIDED IN NO. 4 BELOW, NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 25 FOOT BUFFER ALONG THE BANKS OF ALI TATE WATERS, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION, EXCEPT WHERE THE DIRECTOR HAS DETERMINED TO ALLOW A VARIANCE THAT IS AT LEAST AS PROTECTIVE OF NATURAL RESOURCES AND THE ENVIRONMENT IN ACCORDANCE WITH THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE A DRAINAGE STRUCTURE OR A ROADWAY DRAINAGE STRUCTURE MUS BE CONSTRUCTED, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED IN THE PROJECT PLANS AND SPECIFICATIONS AND ARE MPLEMENTED, OR ALONG ANY EPHEMERAL STREAM, OR WHERE BULKHEADS AND SEAWALLS MUST BE CONSTRUCTED TO PREVENT THE EROSION OF THE SHORELINE ON LAKE OCONEE AND LAKE SINCLAIR .. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS ARE IMPLEMENTED:.

#### PUBLIC DRINKING WATER SYSTEM RESERVOIRS;

- STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THAT THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER;
- STREAM CROSSINGS FOR ANY UTILITY LINES OF ANY FLECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL FLECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION. ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1. OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT: (A) THE STREAM CROSSINGS OCCUR AT AN ANGLE AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER. (B) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (C) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT;
- BUFFER CROSSING FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER:
- STREAM CROSSINGS FOR AFRIAL UTILITY LINES, PROVIDED THAT: (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAL FEET. (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCES TO THE BUFFER, (C) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E., DISTURBANCE TO UNDERLYING VEGETATION IS MINIMIZED) AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION;
- UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCED IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION. THE GEORGIA HIGHWAY AUTHORITY OR THE STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY OR MUNICIPALITY PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1.000 SQUARE FEET PER STRUCTURE. (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT
- RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS AND THE REPLACEMENT AND MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION. ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1. OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION TRANSMISSION OR DISTRIBUTION OF POWER PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT AND
- MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE.

NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 50 FOOT BUFFER. AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION AS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION. ALONG THE BANKS OF ANY STATE WATERS CLASSIFIED AS "TROUT STREAMS" EXCEPT WHEN APPROVAL IS GRANTED BY THE DIRECTOR OF EPD FOR ALTERNATE BLIFFER REQUIREMENTS IN ACCORDANCE WITH THE PROVISIONS OF O C G A 12-7-6 OR WHERE A ROADWAY DRAINAGE STRUCTURE MUST BE CONSTRUCTED: PROVIDED HOWEVER THAT SMALL SPRINGS AND STREAMS CLASSIFIED AS TROUT STREAMS" WHICH DISCHARGE AN AVERAGE ANNUAL FLOW OF 25 GALLONS PER MINUTE OR LESS SHALL HAVE A 25 FOOT BUFFER OR THEY MAY BE PIPED. AT THE DISCRETION OF THE PERMITTEE. PURSUANT TO THE TERMS OF A RULE PROVIDING FOR A GENERAL VARIANCE PROMULGATED BY THE BOARD OF NATURAL RESOURCES INCLUDING NOTIFICATION OF SUCH TO EPD AND THE LOCAL ISSUING AUTHORITY OF THE LOCATION AND EXTENT OF THE PIPING AND PRESCRIBED METHODOLOGY FOR MINIMIZING THE IMPACT OF SUCH PIPING SHORT OF THE DOWNSTREAM PERMITTEE'S PROPERTY. AND THE PERMITTEE MUST COMPLY WITH THE BUFFER REQUIREMENT FOR ANY ADJACENT TROUT STREAMS. THE BUFFER SHALL NOT APPLY TO ACTIVITIES LISTED IN 2.a HROUGH 2.h PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS MPLEMENTED.

EXCEPT AS PROVIDED ABOVE, FOR BUFFERS REQUIRED PURSUANT TO NO. 2 . AND 3, NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A BUFFER AND A BUFFER SHALL REMAIN IN ITS NATURAL. UNDISTURBED. STATE OF VEGETATION UNTIL ALL LAND DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED. DURING COVERAGE UNDER THE NPDES PERMIT, A BUFFER CANNOT BE THINNED OR TRIMMED OF VEGETATION AND A PROTECTIVE VEGETATIVE COVER MUST REMAIN TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY MUST BE LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM BED

#### POST-CONSTRUCTION STORMWATER BMP'S (PART IV.D.3.b)

) STORMWATER RUNOFF IS CAPTURED WITHIN THE PROPOSED CLOSED CONDUIT SYSTEM THAT DRAINS SOUTH TO THE REAR OF THE PROPERTY WHERE SITE WILL BE SERVED BY A PROPOSED ABOVE GROUND DETENTION POND WITH SEDIMENT FOREBAY . OFFISTE STORMWATER RUNOFF FROM THE NORHTWEST IS ROUTED AROUND THE PROJECT SITE AND BYPASSES THE ABOVE GROUND DETENTION POND WITH SEDIMENT FOREBAY SERVING THE SITE.

2) THE POND DISCHARGES TO THE SOUTH THROUGH A ENERGY DISSIPATING HEADWALL WITH RIP-RAP OUTLET PROTECTION. NOTE RIP-RAP TO BE MAINTAINED AFTER CONSTRUCTION.



#### **BMP MAINTENANCE (PART IV.D.5)**

1) THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION UPON DISCOVERY OF ANY DEFICIENCIES IN EROSION CONTROL BEST MANAGEMENT PRACTICES. WHETHER OR NOT IT IS INCLUDED IN AN INSPECTION REPORT

1/3 OF THE STORAGE CAPACITY OF THE MEASURE. 3) ALL SILT FENCE STORAGE SHALL BE CLEANED OUT OR RECONSTRUCTED WHEN SEDIMENT VOLUMES EXCEED 1/2 OF THE HEIGHT OF THE SILT

4) SEDIMENT CLEANED OUT FROM STORAGE DEVICES AND SILT FENCE SHOULD BE SPREAD IN UPLAND AREAS, MIXED WITH TOPSOIL, AND MULCHED OR SEEDED IMMEDIATELY. DO NOT SPOIL IN AREAS WHERE STRUCTURAL FILLS ARE REQUIRED (SUCH AS PAVEMENT, BUILDING FOOTPRINTS, ETC.)

PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. 6) WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G., THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE

INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED. 7) REAPPLICATION OF VEGETATIVE BMPS MAY BE REQUIRED TO ACHIEVE FULL COVERAGE. REFER TO VEGETATIVE BMP NOTES AND DETAILS FOR

INSTALLATION AND MAINTENANCE OF VEGETATIVE BMP'S.

**INSPECTIONS (PART IV.D.4)** 

IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE SURE THAT INSPECTIONS ARE BEING PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS PERMIT NOTED BELOW.

2) EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS

ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO SUBMITTED. HE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION 3) MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VILLE AN ELECTRONIC SUBMITTAL IS UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE

4) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS **RETENTION OF RECORDS (PART IV.F):** AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOUDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST); (A) DISTURBED AREAS OF THE PRIMARY THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT PERMITTEE'S CONSTRUCTION SITE : (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION : A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART AND (C) STRUCTURAL CONTROL MEASURES FROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS A) A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A B) A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE C) THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT: CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. D) A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;

5) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E. LINTIL A NOTICE OF TERMINATION IS RECEIVED BY EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLILITANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S) EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

BASED ON THE RESULTS OF EACH INSPECTION. THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

#### SAMPLING REQUIREMENTS (PART IV.D.6):

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

#### SAMPLE TYPE

ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-8-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

- A) SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES. B) SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER. C) LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE
- CLEANED THOROUGHLY TO AVOID CONTAMINATION. MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY D) BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION. UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT. THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
- SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E OF THE NPDES PERMIT.

#### SAMPLING POINTS:

1) FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORM WATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES.

- A) THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY, WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
- THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE
- DOWNSTREAM TURBIDITY VALUE IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER C) OUTFALL CHANNEL(S)
- CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS. PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL. 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS
- APPROPRIATE FOR THE REGION). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING. AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE

#### SAMPLING FREQUENCY:

1) THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE. BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.

- 3) SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
- A) FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED. BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS. IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;
- IN ADDITION TO (a) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL. THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO
- SUBMITTAL OF A NOT. IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST; AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (a) AND (b) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS\* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED
- WHERE SAMPLING PURSUANT TO (a), (b) OR (c) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (a), (b) OR (c) ABOVE; AND

2) ALL STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE CLEANED OUT OR RECONSTRUCTED WHEN SEDIMENT VOLUMES EXCEED

5) WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE IS

WITH THE STANDARD SET FORTH IN PARTS 111.D.3. OR 111.D.4 . ., WHICHEVER IS APPLICABLE.

2) HOWEVER. WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL,

E) EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (a) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (b) . THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (b) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (c) ABOVE. NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (a) AND (b) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

#### **REPORTING (PART V.E)**

1) THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART 11.C. OF THE PERMIT BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION. EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2 OF THE PERMIT. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE PERMIT.

2) ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

- A) SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
- B) THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS; THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- D) THE DATE(S) ANALYSES WERE PERFORMED;
- E) THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- G) REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED; THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS
- I) RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
- J) CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

- E) A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT: F) A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
- G) DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(1)(C) OF THIS PERMIT.

) COPIES OF ALL NOI'S, NOT'S, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS. REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

#### RISK REDUCTION/POLLUTION CONTROL (PART IV.D.3.c)

GENERA

- AN EFFORT SHALL BE MADE TO MAINTAIN THE MINIMUM AMOUNT OF MATERIAL NEEDED TO COMPLETE THE JOB ONSITE
- ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS.
- 3) PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL
- 4) SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER
- 5) WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER
- 6) MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED

7) THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

BULK STORAGE BULK STORAGE INCLUDES THE STORAGE OF RAW OF FINISHED PRODUCTS AND BYPRODUCTS STORED IN LARGE PILES OR STACKS ON A TEMPORARY OR PERMANENT BASIS, INCLUDING GRAVEL, COMPOST, CHEMICALS, LOGS, TREATED WOOD, SAWDUST, WOOD CHIPS, COAL, BUILDING MATERIALS, CONCRETE, AND METAL PRODUCTS. FOR BULK STORAGE OF TOPSOIL, REFER TO TOPSOIL STOCKPILING BMP'S.

BULK MATERIALS SHOULD NOT BE ALLOWED TO WASH OFF THE SITE OR DISCHARGE INTO SURFACE WATERS. PROTECT STOCKPILES WITH A WATERPROOF COVER, WHERE FEASIBLE.THE COVER SHOULD BE ADEQUATELY SECURED AND REMAIN IN PLACE AT ALL TIMES WHEN STOCKPILE MATERIALS ARE NOT BEING USED. WHEN INFEASIBLE. RUNOFF FROM THE STOCKPILE SHOULD BE DIVERTED TO STRUCTURAL EROSION & SEDIMENT CONTROL BMP'S

3) LOCATE STOCKPILES A MINIMUM OF 50 FEET FROM CONCENTRATED FLOW AREAS.

4) INSPECT DAILY FOR EROSION AND/OR LEACHING OF STOCKPILES OF RAW MATERIALS

LIQUID STORAGE

1) LIQUID STORAGE CONTAINERS MUST HAVE TIGHT FITTING LIDS AND BE PROPERLY LABELED WITH THE CONTENTS AND ANY POSSIBLE HAZARDS.

2) ALL LIQUID STORAGE CONTAINERS SHOULD BE PLACED IN A DESIGNATED AREA WITH A SECONDARY CONTAINMENT SYSTEM, SUCH AS CURBING, BERMS, DIKES, LINERS, OR USE OF SPILL PALLETS SUCH THAT CONTENTS WILL NOT DISCHARGE, FLOW, OR BE WASHED INTO THE STORMWATER DRAINAGE SYSTEM IF THE CONTAINER LEAKS OR RUPTURES. SECONDARY CONTAINMENT SHOULD BE DESIGNED TO STORE 110% OF THE VOLUME OF THE LARGEST CONTAINER OR 10% OF THE VOLUME OF ALL CONTAINERS, WHICHEVER IS GREATER.

RUNOFF BEYOND SECONDARY STORAGE AREAS SHOULD BE DIVERTED TO EROSION CONTROL BMP'S. IF BMP'S WITH A SKIMMER DEVICE ARE CONSTRUCTED ON THE PROPERTY, LIQUID STORAGE CONTAINMENT RUNOFF SHOULD BE DIVERTED TO SUCH MEASURES.

4) PROVIDE BARRIERS AROUND LIQUID STORAGE AREAS TO PREVENT DAMAGE FROM VEHICLES OR EQUIPMENT.

6) ADDITIONAL REQUIREMENTS ARE INCLUDED IN THE PLAN FOR OIL/PETROLEUM STORAGE.INSPECT DAILY FOR LEAKS AND SPILLS.

7) USE DRY ABSORBENTS, SUCH AS ABSORBENT GRANULES, SOCKS, AND PADS TO CLEAN UP ANY SPILLS OR LEAKING FLUIDS.

#### WASTE DISPOSAL

1) ALL WASTE MATERIALS WILL BE COLLECTED AND STORED TO BE PROPERLY DISPOSED OF AT A LICENSED SOLID WASTE MANAGEMENT COMPANY LOCATE WASTE COLLECTION AREAS AWAY FROM STREETS, GUTTERS, WATERCOURSES, AND STORM DRAINS, WASTE COLLECTION AREAS, SUCH AS DUMPSTERS, ARE OFTEN BEST LOCATED NEAR CONSTRUCTION SITE ENTRANCES OR THE SOURCE OF DISPOSAL TO MINIMIZE TRAFFIC ON DISTURBED

- SOIL. DISPOSAL SHALL BE PERIODICALLY AS NEEDED.
- 3) COVER TEMPORARY WASTE PILES WITH A WATERPROOF COVER WHEN FEASIBLE TO DO SO.
- 4) NO CONSTRUCTION MATERIALS WILL BE BURIED ONSITE.

ALL PERSONNEL WILL BE INSTRUCTED CONCERNING WASTE DISPOSAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR THIS INSTRUCTION, AND WILL BE RESPONSIBLE FOR SEEING THAT THESE INSTRUCTIONS ARE FOLLOWED.

INSPECT SOLID WASTE DISPOSAL AREAS DAILY TO ENSURE THERE ARE NO LEAKS OR SPILLS, AND THERE IS NO LOOSE/UNSECURED TRASH OR SOLID WASTE MATERIAL

#### HAZARDOUS MATERIALS

1) THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

- A) PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE-SEALABLE. B) ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED.
- C) IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED

2) ALL HAZARDOUS WASTE MATERIALS (AS DEFINED IN 40 CFR PART 261) WILL BE SEPARATED FROM CONSTRUCTION WASTE AND WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

MATERIAL DATA SAFETY SHEETS FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF THE MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

HAZARDOUS WASTE STORAGE AREAS SHOULD, AT A MINIMUM, BE SHELTERED FROM PRECIPITATION AND RAISED OFF THE GROUND WITH SECONDARY CONTAINMENT (SUCH AS SPILL PALLETS) TO PREVENT LEACHING AND DELIVERY FROM RUNOFF. ALL STORAGE MUST COMPLY WITH STATE AND FEDERAL REGULATIONS.

SANITARY WASTE

ALL SANITARY WASTE TO BE DISPOSED OF PROPERLY ACCORDING TO STATE AND FEDERAL CODE.

3) A MINIMUM OF ONE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON SITE OR AS OTHERWISE REQUIRED BY LOCAL REGULATIONS.

ON-SITE VEHICLE MAINTENANCE SPILLS AND DRIPS.

2) AVOID CHANGING MOTOR OIL OR OTHER VEHICLE FLUIDS, OR PERFORMING HEAVY EQUIPMENT MAINTENANCE NEAR A STORMWATER DRAIN, DRAINAGE DITCH. SURFACE WATER. OR ANYWHERE WHERE THE CONTAMINANTS COULD COME INTO CONTACT WITH RAIN OR STORMWATER RUNOFF.

3) ALWAYS USE FUNNELS WHEN POURING LIQUIDS, AND USE DRIP PANS UNDER A VEHICLE WHEN UNCLIPPING HOSES, UNSCREWING FILTERS, AND REMOVING OTHER PARTS THAT ARE SUBJECT TO LEAKS. CLEAN UP VEHICLE FLUIDS WITH RAGS OR ABSORBENT MATERIALS IMMEDIATELY.

CONCRETE WASHOUT 1) WASHOUT OF THE DRUM OF A CONCRETE TRUCK ON THE CONSTRUCTION SITE IS PROHIBITED. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS, AND THE REAR OF VEHICLES WILL ONLY BE ALLOWED IN DESIGNATED CONCRETE WASHDOWN AREAS SHOWN IN THIS PLAN, AND CONCRETE WASHDOWN AREAS MUST HAVE THE CW RMP INSTALLED IN ACCORDANCE WITH PLAN REQUIREMENTS AND DETAILS. IF NO CONCRETE WASHOUL AREA IS SHOWN, THE PLAN MUST BE AMENDED FOR CONCRETE WASHOUT TO BE ALLOWED AT THE LOCATION THAT IS DESIGNATED ON THE PLAN.WASHDOW MUST ADDITIONALLY MEET THE FOLLOWING PRACTICES:

A) PREVENT WASHDOWN WATER FROM FLOWING OUT OF THE WASHDOWN AREA;

B) USE THE MINIMUM AMOUNT OF WATER TO WASH DOWN TOOLS, MIXER CHUTES, HOPPERS, AND THE REAR OF ANY VEHICLES; REMOVE ANY CONCRETE SEDIMENT FROM THE AREA SURROUNDING THE WASHOUT AREA BEFORE IT HARDENS: AND

REMOVE ANY CONCRETE RESIDUE FROM THE AREA ONCE IT HAS HARDENED

#### PETROLEUM / OIL PRODUCTS

OPERATIONS.

FERTILIZERS

FUNGICIDES/PESTICIDES

INSTRUCTIONS FOR SPILLS AND LEAKS.

WITHIN 24 HOURS AT (800) 426-2675

CONTACT WITH A HAZARDOUS SUBSTANCE.

TO SITE PERSONNEL

ASSESSMENT

PAINT PRODUCT

INSPECT VEHICLES AND EQUIPMENT DAILY FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

THERE SHALL BE NO ON-SITE STORAGE OF PETROLEUM FOR FUELING, MOBILE PETROLEUM TRUCKS SHALL BE USED TO FUEL CONSTRUCTION EQUIPMENT ON-SITE. ON-SITE FUELING SHOULD BE PERFORMED AT A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORMWATER, STORMWATER DRAINS, DRAINAGE DITCHES, AND SURFACE WATERS, PLACE TEMPORARY CAPS OVER NEARBY CATCH BASINS AND OPEN MANHOLES SO THAT IF A SPILL OCCURS IT IS PREVENTED FROM ENTERING THE STORMWATER DRAINAGE SYSTEM. WHERE POSSIBLE, DESIGNATE AREAS FOR FUELING WHERE RUNOFF DISCHARGES TO A SEDIMENT STORAGE AREA WITH A SKIMMER DEVICE.

3) ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. ) A SPILL PREVENTION, CONTROL, AND COUNTERMEASURES (SPCC) PLAN TO MEET THE EPA OIL SPILL PROGRAM REGULATIONS MAY BE REQUIRED IF ANY SINGLE PETROLEUM STORAGE UNIT EXCEEDS 660 GALLONS, OR A TOTAL OF MORE THAN 1,320 GALLONS OF FUEL ARE STORED ON SITE. THIS PLAN WAS PREPARED WITH THE UNDERSTANDING THRESHOLDS FOR THE PREPARATION OF AN SPCC PLAN WOULD NOT BE EXCEEDED, AND THAT ON-SITE FUEL STORAGE WILL NOT BE PROVIDED.

ALL SANITARY WASTE WILL BE MANAGED APPROPRIATELY BY PERMANENT EXISTING ON-SITE FACILITIES OR PORTABLE UNITS.

1) FOR ALL OUTDOOR MAINTENANCE ACTIVITIES. A TARP OR GROUND CLOTH AND DRIP PANS SHOULD BE PLACED BENEATH THE VEHICLE TO CAPTURE

NEVER DISCHARGE OR DUMP RAW, EXCESS OR WASTE MATERIALS, SLURRY, OR RINSE WATER INTO A STORMWATER DRAIN, DRAINAGE DITCH, OR SURFACE WATER. APPROPRIATELY DISPOSE OF ANY SOLID CONCRETE OR ASPHALT WASTE, INCLUDING DUST PRODUCED FROM SAWCUTTING/MILLING

5) NOTHING IN THIS PERMIT SHALL BE CONSTRUED TO PRECLUDE THE INSTITUTION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEE FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT, O.C.G.A. 12-8-60, ET SEQ. OR UNDER CHAPTER 14 OF TITLE 12 OF THE OFFICIAL CODE OF GEORGIA ANNOTATED; NOR IS THE OPERATOR RELIEVED FROM ANY RESPONSIBILITIES LIABILITIES OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER SECTION 311 OF THE CLEAN WATER ACT OR SECTION 106 OF COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT.

1) FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A CLEAN, DRY PLACE. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

2) AVOID FERTILIZER APPLICATION WHEN IT IS RAINING OR WHEN HEAVY RAIN IS FORECAST

3) FERTILIZER GRANULES SHOULD BE WORKED INTO THE SOIL RATHER THAN BROADCAST AND LEFT ON THE SURFACE.

4) SWEEP UP DRY FERTILIZER GRANULES THAT FALL ON PAVEMENT OR OTHER HARD SURFACES. DO NOT HOSE OR BLOW OFF

1) DO NOT MIX OR PREPARE PESTICIDES OR FUNGICIDES NEAR A STORMWATER DRAIN, DRAINAGE DITCH, OR SURFACE WATER. PREPARE THE MINIMUM AMOUNT OF PESTICIDE NEEDED FOR THE JOB AND USE THE LOWEST RATE THAT WILL EFFECTIVELY CONTROL PESTS/UNDESIRABLE VEGETATION.

2) READ AND FOLLOW THE LABEL DIRECTIONS AND APPLY ALL FUNGICIDES AND PESTICIDES AS DIRECTED. FOLLOW FEDERAL. STATE, AND LOCAL LAWS AND REGULATIONS GOVERNING THE USE, STORAGE, AND DISPOSAL OF PESTICIDES AND TRAINING OF APPLICATORS AND PEST CONTROL ADVISORS. 3) DO NOT APPLY FUNGICIDES OR PESTICIDES WHEN IT IS RAINING OR RAIN IS FORECAST.

4) PESTICIDES SHOULD NEVER BE APPLIED DIRECTLY TO SURFACE WATERS OR WITHIN 100' OF A STREAM BANK OR SHORELINE.

5) SWEEP UP DRY PESTICIDE THAT FALLS ONTO PAVEMENT OR OTHER IMPERVIOUS SURFACES. DO NOT HOSE OFF. FOLLOW MANUFACTURER

1) ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

2) FOR WATER-BASED PAINTS, CLEAN PAINTING EQUIPMENT IN A SINK OR BASIN CONNECTED TO THE SANITARY SEWER OR IN THE CONCRETE WASHOUT AREA. CLEAN UP NON-WATER BASED PAINTS. FINISHES, AND OTHER MATERIALS IN A MANNER THAT ENABLES COLLECTION OF WASTE PAINT AND SOLVENTS FOR RECYCLING AND PROPER DISPOSAL. NEVER POUR WASTE PAINT DOWN A STORM DRAIN OR INTO A CONCENTRATED FLOW AREA.

#### SPILL CLEANUP AND CONTROL

FOR SPILLS THAT IMPACT SURFACE WATER, OR FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED

FOR SPILLS GREATER THAN 25 GALLONS WITH NO SURFACE WATER IMPACT, GEORGIA EPD MUST BE CONTACTED WITHIN 24 HOURS.

FOR SPILLS LESS THAN 25 GALLONS WITH NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS

LOCAL STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES MADE AVAILABLE

2) MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN OR NEAR MATERIAL STORAGE AREAS. THIS INCLUDES BUT IS NOT LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, SORBENTS, AND CLEARLY LABELED WASTE CONTAINERS. 3) ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY.

4) THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM

5) FOLLOWING A SPILL, MEASURES WILL BE TAKEN/PROCEDURES ADJUSTED TO PREVENT THIS TYPE OF SPILL FROM RE-OCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL. WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL BE INCLUDED IN THE

## WAKEFIELD BEASLEY &

#### A NEL FON Company

ASSOCIATES

ARCHITECT OF RECORD

a licensed affiliate of Nelson Worldwide, LL



### DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534

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Print Record

2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS

Revisions

| No. | Date | Description |
|-----|------|-------------|
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#### RELEASED FOR CONSTRUCTION

DATE

PROJECT NUMBER

**EROSION**, **SEDIMENTATION, &** POLLUTION CONTROL NOTES

| ≥ CONSTRUCTION SEQUENCE (PART IV.D.1)  |   | GEORGI   |                 | RM CODING SYSTEM FOR EF  |       | N AND SEDIMENT C   |  |          | TICES  |                            |   | GASW   |
|--|---|--|-----------------|--|-------|--|--|----------|--|----------------------------|---|--|
| THE FOLLOWING SEQUENCE OF ACTIVITIES ARE TO BE IMPLEMENTED IN THE ORDER SHOWN, UNLESS INCLEMENT WEATHER, SITE CONDITIONS,<br>REVISIONS, RECOMMENDATIONS FROM THE PRE-CONSTRUCTION CONFERENCE, OR OTHER REASON JUSTIFIES A DEVIATION FROM THIS SCHED  | и F   |  | JRAL PRACT      |  |       |  |  | RAL PRAC |  | SHEE                       | Γ Y/N NO                                | ).   |
| G IF A DEVIATION IS UNDERTAKEN OR ANTICIPATED, THE LOCAL JURISDICTION SHALL BE NOTIFIED AND THE CHANGE OF SEQUENCE RECORDED IN<br>DAILY LOG.   |   | DETAIL   | SYMBOL          | DESCRIPTION  | CODE  |  | DETAIL                                   | SYMBOL   | DESCRIPTION  | C-4.2<br>C-4.0             | Y 1.)                                   | The applicable Erosion, Sedimentation a<br>which the land-disturbing activity was pe<br>Level II certification number issued by the    |
| PHASE-I: CLEARING, GRADING, DEMOLITION, AND INSTALLATION OF INITIAL BMP'S <ol> <li>OBTAIN AND POST A COPY OF THE LAND DISTURBANCE PERMIT ON THE SITE. A COPY OF THE FILED NOTICE OF INTENT (NOI) AND DELIVERY</li> </ol>   | Са Снеск дам  |  | $\mathbf{\vee}$ | A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.  | Sd2-P | INLET SEDIMENT TRAP  | Colon Basin<br>Curbing                   |          |  | C-4.0                      | Y 3.)                                   | Limit of disturbance shall be no greater the EPD approves the request to disturb 50 a  |
| RETURN RECEIPT SHOULD BE STORED WITH THE APPROVED CONSTRUCTION PLANS ON-SITE, ALONG WITH SETTING UP STORAGE FOR THE DAIL<br>SAMPLING LOG AND FILING FOR REPORTS REQUIRED BY THE NPDES PERMIT. LAND DISTURBANCE CANNOT COMMENCE LESS THAN 14 DAYS FRO<br>THE DATE ON THE DELIVERY RECEIPT.  | M CHECK DAM   |  | $\mathbf{V}$    | A small temporary barrier or dam constructed across a swale, drainage  | Sd3   | TEMPORARY SEDIMENT BASIN                                       |  | Sd3      | A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to  | C-4.0<br>C-4.0             | Y 4.)                                   | of this checklist.*<br>The name and phone number of the 24-1<br>Provide name, address, email address a                                 |
| 2) SET UP A PRE-CONSTRUCTION CONFERENCE ON-SITE WITH THE OWNER, CONTRACTOR, DESIGN TEAM MEMBERS AS NEEDED, AND LOCAL ISSUING AUTHORITY TO REVIEW CONSTRUCTION REQUIREMENTS.  |   |  | •               | ditch or area of concentrated flow.  |       |  |  |          | drop out.<br>A small temporary pond that drains a disturbed area so that sediment  | C-4.3 - C-4<br>C-4.0       | . ,                                     | Note total and disturbed acreage of the p<br>Provide the GPS location of the construct   |
| 3) COORDINATE THE DISCONNECTION AND REMOVAL OF ANY EXISTING UTILITIES ON-SITE TO BE REMOVED OR ABANDONED. FIELD CONFIRM DISCATION OF ALL EXISTING UTILITIES BY POTHOLING.  | THE Cd-Hb CHECK DAM<br>STRAW-BALE CHECK DAMS                            |  | $\mathbf{\vee}$ | A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.  | Sd4   | TEMPORARY SEDIMENT TRAP  |  | Sd4      | can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.   | C-4.0<br>C-4.0             | Y 9.)                                   | Initial date of the Plan and the dates of a<br>Description of the nature of construction   |
| <ul><li>4) STAKE LIMITS OF DISTURBED AREA AND TREE PROTECTION AREAS.</li></ul>   | Cd-Fs CHECK DAM<br>COMPOST FILTER SOCK                                  |  | $\mathbf{\vee}$ | A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.  | Sd4-A | TEMPORARY SEDIMENT TRAP  |  | Sd4-A    | A small temporary pond that drains a disturbed area so that sediment<br>can settle out. The principle feature distinguishing a temporary sediment  | C-4.0<br>C-4.0             | Y         10.)           Y         11.) | Provide vicinity map showing site's relati<br>Identify the project receiving waters and<br>which may be affected.                      |
| <ul> <li>5) INSTALL TREE SAVE FENCING TO DELINEATE BUFFER AND TREE SAVE AREAS AS SHOWN ON THE PLAN.</li> <li>6) CONSTRUCT THE CONSTRUCTION ENTRANCE(S) AT THE PROPOSED LOCATION(S) SHOWN ON THE PLANS. (TEMPORARY STREET ACCESS)</li> </ul>  |   |  |                 | Improving, constructing or stabilizing an open channel, existing stream,   |       | TEMPORARY SEDIMENT TRAP  |  |          | trap from a temporary sediment basin is the lack of a pipe or riser.<br>A small temporary pond that drains a disturbed area so that sediment   | C-4.0                      | Y 12.)                                  | Design Professional's certification statem<br>Part IV page 19 of the permit.   |
| PERMITS MAY BE REQUIRED.)  | Ch CHANNEL STABILIZATION  |  | Ch              | or ditch.  | Sd4-B | COMBINATION STRAW BALE<br>AND SILT FENCE OUTLET                |  | Sd4-B    | can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.<br>A small temporary pond that drains a disturbed area so that sediment | C-4.0                      | Y 13.)                                  | Design Professional's certification staten<br>comprehensive system of BMP's and sa<br>Clearly note the statement that "The des         |
| <ul> <li>7) INSTALL ALL PERIMETER SILT BARRIERS AS SHOWN ON THE PHASE-I PLAN SHEETS.</li> <li>8) CLEAR AND GRUB ROUTES TO THE MINIMUM EXTENT NEEDED TO CONSTRUCT STRUCTURAL BEST MANAGEMENT PRACTICES IN</li> </ul>  | Ch-1 CHANNEL STABILIZATION<br>CATEGORY 1 (0-5 FT/S)<br>VEGETATED LINING |  | Ch-1            | Improving, constructing or stabilizing an open channel, existing stream, or ditch.   | Sd4-C | TEMPORARY SEDIMENT TRAP<br>ROCK OUTLET                         |  | Sd4-C    | can settle out. The principle feature distinguishing a temporary sediment<br>trap from a temporary sediment basin is the lack of a pipe or riser.  | C-4.0                      | Y 14.)                                  | sediment storage requirements and period   |
| CONCENTRATED FLOW AREAS SHOWN ON THE INITIAL PHASE PLAN. THIS INCLUDES EXCAVATED SEDIMENT TRAPS, SEDIMENT BASINS, ROCK<br>DAMS, SILT GATES, AND DIVERSIONS.  | Ch-2 CHANNEL STABILIZATION<br>CATEGORY 2 (2-10 FT/S)                    |  | Ch-2            | Improving, constructing or stabilizing an open channel, existing stream, or ditch.   | (Sk)  | FLOATING SURFACE SKIMMER                                       |  | Sk       | A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.   | C-4.0                      | Y 16.)                                  | Provide a description of any buffer encro  |
| 비 9) INSTALL STRUCTURAL BMP'S IN CONCENTRATED FLOW AREAS WITH MINIMAL DISTURBANCE TO ADJACENT AREAS.<br>또 10) INSTALL SKIMMER DEVICES ON STRUCTURAL BMP'S AS SHOWN ON THE INITIAL PHASE PLANS.   | CHANNEL STABILIZATION   |  |                 | Improving, constructing or stabilizing an open channel, existing stream,   |       |  |  |          | Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating  | C-4.0                      | Y 17.)                                  | Clearly note the statement that "Amendn<br>component must be certified by the design   |
| <ul> <li>L</li> <li>H</li> <li>H</li></ul>  | Ch-3 CATEGORY 3 (> 10 FT/S)<br>CONCRETE LINING                          |  | Ch-3            | or ditch.  | SpB   |  |  | SpB      | multiple sedimentation chambers with the employment of intermediate dikes.   | C-4.0                      | Y 18.)                                  | Clearly note the statement that "Waste n<br>permit."*<br>Clearly note statement that "The escape                                       |
| Q<br>12) COMMENCE DEMOLITION ACTIVITY CONCURRENT WITH CLEARING AND GRUBBING ACTIVITY. CONSTRUCTION DEBRIS SHOULD BE SORTED I<br>VEGETATIVE DEBRIS FOR PROPER DISPOSAL.   | ROM Co CONSTRUCTION EXIT  |  | Co              | A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.                                | Sr    | TEMPORARY STREAM<br>CROSSING                                   |  | Sr       | A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.  | C-4.0                      | Y 19.)                                  | measures and practices prior to land dist<br>Clearly note statement that "Erosion con  |
| Q 13) APPLY TEMPORARY VEGETATION (Ds1/Ds2) IN ACCORDANCE WITH PLANS AND NOTES FOR CLEARED AREAS.   | Cr CONSTRUCTION ROAD  |  | Cr              | A travel way constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle                                 | Sr-B  | CROSSING   |  | Sr-B     | A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.  | C-4.1                      | Y 20.)                                  | provide for effective erosion control, addi<br>sediment source."<br>Clearly note the statement "Any disturbe                           |
| <ul> <li>PHASE-II: GRADING AND UTILITY CONSTRUCTION</li> <li>CONSTRUCT ALL STRUCTURAL BMP'S SHOWN ON THE PHASE-II PLAN WHERE COMPLETION OF GRADING AND UTILITY CONSTRUCTION IS NO</li> </ul>   |   |  |                 | transportation routes.   |       | BRIDGE CROSSING           TEMPORARY STREAM                     |  |          | A temporary bridge or culvert-type structure protecting a stream or  | C-4.1                      | Y 22)                                   | Any construction activity which discharge<br>same watershed as, any portion of a Bio   |
| NECESSARY FOR INSTALLATION.<br>M<br>Z 2) COMMENCE ROUGH GRADING ON-SITE. INSTALL STRUCTURAL AND VEGETATIVE BMP'S AS SHOWN ON THE PHASE-II PLAN AS EACH AREA IS   |   |  |                 |  | Sr-C  |  |  | Sr-C     | watercourse from damage by crossing construction equipment.  |                            |   | Appendix 1 listing all the BMP's that will<br>If a TMDL implementation Plan for sedim  |
| COMPLETED. FOR LARGE FILLS AND MAJOR EARTH MOVING ACTIVITIES THAT CHANGE CONVEYANCE OF STORMWATER RUNOFF, THE INSTALLAT<br>OF DIVERSIONS, DOWN DRAINS, AND STRUCTURES ON THE PLANS SHOULD BE CONSTRUCTED TO MAINTAIN THE PROTECTION OF SLOPES AND<br>ROUTING OF WATER TO THE PHASE-II STRUCTURAL STORAGE LOCATIONS. THIS MAY INCLUDE PHASED INSTALLATION OF DOWN DRAINS WITH   | ON DC STREAM DIVERSION CHANNE   |  | Dc              | A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.  | St    | STORM DRAIN OUTLET<br>PROTECTION                               |  | St       | A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.  | C-4.1<br>C-4.1             | Y 23.)                                  | months prior to submittal of a NOI, the E<br>Plan.*<br>BMP'S for concrete washdown of tools, o   |
| Ш DIVERSIONS ALONG THE FACE OF LARGE FILL AREAS.<br>Т<br>ОГ 3) INSTALL PERMANENT STORMWATER MANAGEMENT AREAS AS SHOWN. WHERE PERMANENT STORMWATER MANAGEMENT AREAS HAVE WA   | TER DC-A STREAM DIVERSION CHANNE<br>(0-2.5 FT/S) GEOTEXTILE,            |  | Dc-A            | A temporary channel constructed to convey flow around a construction<br>site while a permanent structure is being constructed.   | Su    | SURFACE ROUGHENING   |  | Su       | A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.   | C-4.1                      | Y 25.)                                  | construction site is prohibited.*<br>Provide BMP's for the remediation of all<br>Description of the measures that will be i            |
| QUALITY COMPONENTS, INSTALL SKIMMER OR RETROFITTING DEVICES AS SHOWN ON THE PLAN AND DO NOT CONSTRUCT WATER QUALITY DEV<br>UNTIL FINAL STABILIZATION HAS TAKEN PLACE. WHERE INFILTRATION IS A PART OF A STORMWATER MANAGEMENT COMPONENT, MAINTAIN THE<br>BOTTOM OF THE INFILTRATION AREA A MINIMUM OF SIX INCHES ABOVE FINAL GRADE, TO BE EXCAVATED ONCE FINAL STABILIZATION OF THE SIT  | ICES POLYETHYLENE FILM, OR SO   | 11   |                 | A temporary channel constructed to convey flow around a construction   |       |  |  |          | A floating or staked barrier installed within the water (it may also be  | C-4.1<br>C-4.1             | Y 26.)<br>Y 27.)                        | Construction operations have been comp<br>Description of practices to provide cover  |
| COMPLETE.<br>2<br>4) CONSTRUCT TEMPORARY AND PERMANENT DRAINAGE STRUCTURES AS NECESSARY FOR CONVEYANCE DURING GRADING ACTIVITIES. INS  | ALONE   |  | Dc-B            | site while a permanent structure is being constructed.   | Тс    | /  |  | Tc       | referred to as a floating boom, silt barrier, or silt curtain).  | C-4.1<br>C-4.1             |   | Description of the practices that will be u<br>Description and chart or timeline of the ir<br>initial perimeter and sediment storage B |
| <ul> <li>4) CONSTRUCT TEMPORARY AND PERMANENT DRAINAGE STRUCTORES AS NECESSART FOR CONVETANCE DURING GRADING ACTIVITIES. INS</li> <li>STORM OUTLET PROTECTION CONCURRENT WITH CONSTRUCTION OF ANY DRAINAGE OUTFALL.</li> <li>5) AS FINAL GRADE OF SLOPES ARE ACHIEVED. TRACK OR BENCH AS SHOWN ON THE PLANS. INSTALL SLOPE STABILIZATION REQUIRED IN THE</li> </ul>  | (0-2.5 FT/S) CLASS I RIPRAP<br>AND GEOTEXTILE                           |  | Dc-C            | A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.  | Tc-F  | FLOATING TURBIDITY   |  | Tc-F     | A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).  | C-4.1                      | ,                                       | stabilization).<br>Provide complete requirements of inspec   |
| PLANS CONCURRENT WITH THE ESTABLISHMENT OF FINAL GRADE OF SLOPES AND CONVEYANCE CHANNELS.  | Di DIVERSION  | · · · · · · · · · · · · · · · · · · ·  |                 | An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.   | Tc-S  |  |  | Tc-S     | A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).  | C-4.1<br>C-4.1             | Y 32.)                                  | Provide Complete requirements of samp<br>Provide complete details for retention of   |
| C (i) INSTALL INLET SEDIMENT TRAPS CONCURRENT WITH THE CONSTRUCTION OF STORM DRAIN STRUCTURES. PROTECT INLETS WHERE<br>O EXCAVATION HAS NOT BEEN BACKFILLED AND INLET PROTECTION ESTABLISHED BY DIVERTING TO COMPLETED INLET SEDIMENT TRAPS.<br>E Z  |   |  |                 | A flexible conduit of heavy-duty fabric or other material designed to  |       |  |  |          | The practice of stripping off the more fertile soil, storing it, then  | C-4.1<br>C-4.1<br>C-4.1    | Y 34.)                                  | Description of analytical methods to be u<br>Appendix B rationale for NTU values at a<br>Delineate all sampling locations, perenni     |
| > O 7) SPREAD FERTILIZER AND GRASS SEED/SODDING ALONG WITH RECOMMENDED MULCHING (IF SEEDED) AS SOON AS FINAL GRADE IS ACHIE<br>→ O IN ACCORDANCE WITH THE PHASE-III PLAN SHEETS AND ANY APPLICABLE LANDSCAPE PLAN.<br>O Z  | PED Dn1 TEMPORARY DOWN DRAIN<br>STRUCTURE                               |  | Dn1             | safely conduct surface runoff down a slope. This is temporary and inexpensive.   | (Tp)  | TOPSOILING   |  | Тр       | spreading it over the disturbed area after completion of construction activities.  | C-4.2                      | Y 36.)                                  | A description of the appropriate controls storage requirements and perimeter controls  |
| COMMENCE FINAL GRADING OF ALL ROADS, PARKING LOTS, AND BUILDING PADS.<br>S = S = S = S = S = S = S = S = S = S =   | LACE  |  | Dn2             | A paved chute, pipe, sectional conduit or similar material designed to<br>safely conduct surface runoff down a slope.  | Tr    | TREE PROTECTION  | $(\cdot)$                                | ¥        | <ul> <li>To protect desirable trees from injury during construction activity.</li> </ul>   | C-4.3 - C-4                | .5 Y 37.)                               | sites where there will be no mass gradin<br>BMP's are the same, the plan may comb<br>Graphic Scale and North Arrow                     |
| Z W PERMANENT SEEDING IN ACCORDANCE WITH PHASE-III PLANS.<br>O W<br>テ H PHASE-III - FINAL CONSTRUCTION, LANDSCAPING, AND PERMANENT STABILIZATION   | Fr FILTER RING  |  | Fr              | A temporary stone barrier constructed at storm drain inlets and pond outlets.  | Wt    | VEGETATED WATERWAY OR<br>STORMWATER CONVEYANCE                 |  | Wt       | Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.  |                            |   | Existing and proposed contour lines with<br>SCALE: 1"=100' OR LARGER<br>Ground Slope (%) C   |
| C Z 1) AS SOON AS CONCRETE BUILDING PADS ARE POURED, ALL AREAS AROUND THE PADS AND STREET/PARKING AREAS ARE TO BE TEMPORAF<br>Z U VEGETATED.   | $\bigcirc$  |  |                 | Rock filter baskets which are hand-placed into position forming soil   |       | CHANNEL  |  |          |  | C-4.X                      | Y 38.)                                  | Flat (0-2%)<br>Rolling (2-8%)<br>Steep (8%+)   |
| $\Sigma$ (CONSTRUCT BUILDING PAD AND FOUNDATIONS.<br>$\Omega$ $\Omega$<br>$\Pi$ Z 3) CONSTRUCT ALL LEVEL SPREADERS AND MAINTAIN STORM OUTLET PROTECTION AT PIPE OUTLETS AS SHOWN ON THE PLANS.   |   |  | Ga              | stabilizing structures.<br>Permanent structures installed to protect channels or waterways where   |       |  | VEGETAT                                  | IVE PRAC | TICES  |                            | N/A 39.)                                | Use of alternative BMPs whose performa<br>Design Professional (unless disapproved  |
| $O$ $\square$ $O$ $\square$ $O$ 4) PLACE GRADED AGGREGATE BASE FOR ROADS AND DRIVES. MODIFY ALL CURB INLET SEDIMENT TRAPS AS NEEDED, BOTH FOR DIVERSION $O$ $\supseteq$ WATER INTO THE RAISED THROATS AND FOR THE INLET. (Sd2-P MAY BE INSTALLED ON THE GUTTER IN MOST CASES).   | OF Gr GRADE STABILIZATION<br>STRUCTURE                                  |  | Gr              | otherwise the slope would be sufficient for the running water to form gullies.   | CODE  | PRACTICE [   | DETAIL                                   | SYMBOL   |  |                            | N/A 40.)                                | Alternative BMP Guidance Document for<br>Use of alternative BMP for application to<br>Control in Georgia 2016 Edition.*                |
| O = 1<br>O = 5<br>O | LV LEVEL SPREADER   |  | Lv              | A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.                                      | Bf    | BUFFER ZONE  | TATT                                     | Bf       | Strip of undisturbed original vegetation, enhanced or restored existing<br>vegetation or the reestablishment of vegetation surrounding an area of<br>disturbance or bordering streams.                                 | C-4.3 - C-4                |   | Delineation of the applicable 25-foot or 5<br>local issuing authority. Clearly note and  |
| <ul> <li>a FTER A CURING TIME OF NO LESS THAN SEVEN DAYS. BACKFILL CURBS AND SMOOTH SHOULDER GRADES. PLACE FINAL</li> </ul>  |   |  | Pd              | A permanent or temporary stone filter dam installed across small   | Cs    | COASTAL DUNE<br>STABILIZATION                                  | JEZEFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF  | Cs       | Planting vegetation on dunes that are denuded, artificially constructed,<br>or re-nourished.   |                            | Y 43.)                                  | Delination of on-site wetlands and all sta<br>Delineation and acreage of contributing of<br>Provide hydrology study and maps of dra    |
| LANDSCAPING/STABILIZATION ON SHOULDERS AS SOON AS SEASON AND CONSTRUCTION ACTIVITY ALLOWS. IF FINAL STABILIZATION WILL NOT E<br>IMMEDIATE, PLACE TEMPORARY SEEDING OR MULCH ON THE SHOULDERS.  |   | · · · · · · · · · · · · · · · · · · ·  |                 | streams or drainage ways.<br>A wall installed to stabilize cut and fill slopes where maximum   | Ds1   | DISTURBED AREA<br>STABILIZATION (WITH                          |  | Ds1      | Establishing temporary protection for disturbed areas where seedlings  | C-4.3 - C-4                | ,                                       | An estimate of hte runoff coefficient or pu  |
| <ul> <li>7) PAVE ALL STREETS AND PARKING AREAS. SEDIMENT INLET TRAP PROTECTION MAY REQUIRE MODIFICATION TO MATCH PHASE-III PLAN.</li> <li>8) ALL SEDIMENT PONDS AND PERIMETER SILT FENCE IS TO BE MAINTAINED FOR THE DURATION OF BUILDING AND SITE CONSTRUCTION. AT</li> </ul>   | Re RETAINING WALL   |  | Re              | permissible slopes are not obtainable. Each situation will require special design.   |       | MULCHING ONLY) DISTURBED AREA                                  |  | 031      | may not have a suitable growing season to produce an erosion retarding cover.  | C-4.3 - C-4<br>C-4.3 - C-4 | 5 Y 47.)                                | storm water discharge points.<br>Soil series for the project site and their d<br>The limits of disturbance for each phase              |
| <ul> <li>all sediment ponds and perimeter silt pence is to be maintained for the doration of building and she construction. At completion of building/site infrastructure construction, all areas are to be permanently vegetated.</li> <li>upon final stabilization to stormwater management areas. Installation of water quality and/or infiltration measures.</li> </ul>  | Rt RETROFITTING   |  | Rt              | A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.                                   | Ds2   | STABILIZATION (WITH  |  | Ds2      | Establishing a temporary vegetative cover with fast growing seeding on disturbed areas.  | 0-4.3 - 0-4                |   | Provide a minimum of 67 cubic yards of and/or excavated inlet sediment traps for   |
| SHALL BE COMPLETED. IMMEDIATELY UPON COMPLETION, AS-BUILT SURVEYS OF THESE SHOULD BE COMPLETED AND PROVIDED TO THE ENGINE<br>FOR REVIEW. NOTE THAT IMPROPERLY CONSTRUCTED STORMWATER MANAGEMENT AREAS MAY RESULT IN ADDITIONAL LAND DISTURBANCE.   | EER RETROFITTING<br>Rt-P PERFORATED HALF-ROUND                          |  | Rt-P            | A device or structure placed in front of a permanent stormwater  | Ds3   | DISTURBED AREA<br>STABILIZATION (WITH<br>PERMANENT VEGETATION) | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | Ds3      | Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.  | C-4.3 - C-4                | .5 Y 49.)                               | all land disturbance activities until final si<br>equivalent controls when a sediment ba<br>sediment basin is not provided. A written  |
| CORRECTIVE ACTION, IF REQUIRED, SHOULD BE TAKEN BEFORE A NOTICE OF TERMINATION IS FILED.<br>10) UPON FINAL STABILIZATION OF 100% OF THE CONTRIBUTING ON-SITE DRAINAGE AREAS, REMOVE THE RESPECTIVE TEMPORARY STRUCTURE   | AL RETROFITING  |  |                 | A device or structure placed in front of a permanent stormwater  | Ds4   | DISTURBED AREA   |  | Ds4      | A permanent vegetative cover using sods on highly erodible or critically   |                            |   | Worksheets from the Manual must be ind<br>required sediment storage when using every<br>required to utilize outlet structures that w   |
| BMP'S USE PERMANENT VEGETATIVE BMP'S AND LANDSCAPING SHOWN ON THE PHASE-III AND LANDSCAPE PLAN TO STABILIZE DISTURBED ARE/<br>FROM STRUCTURAL BMP'S AS THEY ARE REMOVED.   | S Rt-B SLOTTED BOARD DAM WITH<br>STONE OR FILTER FABRIC                 | ·   N/271  | Rt-B            | detention pond outlet structure to serve as a temporary sediment filter.   |       |  |  |          | eroded lands.  | C-4.3 - C-4                | .5 Y 50.)                               | the surface are not feasible, a written jus<br>Location of Best Management Practices   |
| <ul> <li>NOTICE OF TERMINATION (NOT)</li> <li>1) THE PRIMARY PERMITTEE IS TO SUBMIT A NOTICE OF TERMINATION ONCE THE FOUR FOLLOWING CRITERIA ARE MET:</li> </ul>   | RETROFITTING<br>SILT CONTROL GATE                                       |  | Rt-Sg           | A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.                                   | Du    | DUST CONTROL ON<br>DISTURBED AREAS                             |  | Du       | Controlling surface and air movement of dust on construction site, roadways and similar sites.   | C-4.6 - C-4                |   | in Georgia. Use uniform coding symbols<br>Provide detailed drawings for all structure<br>Erosion and Sediment Control in Georgia       |
| <ul> <li>A) THE ENTIRE STANDALONE DEVELOPMENT HAS UNDERGONE FINAL STABILIZATION;</li> <li>B) ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT ARE AUTHORIZED BY THE NPDES PERMIT HAVE CEASE AND</li> </ul>   | ED; Sd1 SEDIMENT BARRIER  |  |                 | A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a                           | FI-Co | FLOCCULANTS AND<br>COAGULANTS                                  |  | FI-Co    | Substance formulated to assist in the solids/liquid separation of<br>suspended particles in solution.  | C-4.3 - C-4                | .5 Y 52.)                               | Provide vegetative plan, noting all tempo<br>lime, and mulching rates. Vegetative pla<br>appropriate geographic region of Georgi       |
| C) THE SITE IS IN COMPLIANCE WITH THIS PERMIT AND ALL TEMPORARY BMP'S HAVE BEEN REMOVED.   | SEDIMENT BARRIER  |  | (               | silt fence.<br>A barrier to prevent sediment from leaving the construction site. It may  | Sb    | STREAM BANK STABILIZATION                                      |  | Sb       | The use of readily available native plant materials to maintain and<br>enhance steam banks, or to prevent, or restore and repair small stream  | * If using this c          | hecklist for a project th               | hat is less than 1 acre and not part of a com  |
| 2) IF THE PRIMARY PERMITTEE HAS ELECTED TO SUBMIT NOI'S FOR SEPARATE PHASES OF THE STANDALONE DEVELOPMENT, THE PHASE OR PHASES OF THE STANDALONE DEVELOPMENT ON THE NOT MUST CORRESPOND TO THE PHASE OR PHASES IN THE NOI.   | Sd1-NS TYPE NS: NONSENSITIVE<br>AREAS                                   |  | Sd1-NS          | be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.  |       | •  | LI-F=T                                   |          | bank erosion problems.<br>A protective covering used to prevent erosion and establish temporary  |                            | SOIL T                                  | ГҮРЕ   |
|  | Sd1-S SEDIMENT BARRIER<br>TYPE S: SENSITIVE AREAS                       |  | (\$d1-\$)       | A barrier to prevent sediment from leaving the construction site. It may<br>be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a<br>silt fence.         | Ss    | SLOPE STABILIZATION  |  | Ss       | or permanent vegetation on steep slopes, shore lines, or channels.   |                            |   | SANDY LOAM, 10 TO 25   |
| 4 ESI  | Sd1-Fs SEDIMENT BARRIER<br>TYPE S: SENSITIVE AREAS                      |  | Sd1-Fs          | A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a                           | Тас   | TACKIFIERS AND BINDERS   |  | Тас      | Substance used to anchor straw or hay mulch by causing the organic material to bind together.  |                            | PERCENT SLOP                            | эЕ   |
|  | COMPOST FILTER SOCK SEDIMENT BARRIER                                    |  |                 | silt fence.<br>A barrier to prevent sediment from leaving the construction site. It may  | Tac-1 |  |  | Tac-1    | Substance used to anchor straw or hay mulch by causing the organic   | / HIE )                    | HAYESVILLE SA<br>PERCENT SLOP           | ANDY LOAM, 10 TO 25<br>IPES  |
| nty, GA  | Sd1-BB BRUSH BARRIER<br>(TIMBER CLEARING ONLY)                          |  | Sd1-BB          | be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.  |       | SYNTHETIC POLYMERS       TACKIFIERS TYPE II:                   |  |          | material to bind together.<br>Substance used to anchor straw or hay mulch by causing the organic   | <u> </u>                   |   |  |
|  | Sd2 INLET SEDIMENT TRAP   |  |                 | An impounding area created by excavating around a storm drain drop<br>inlet. The excavated area will be filled and stabilized on completion of<br>construction activities. | Tac-2 | ORGANIC POLYMERS   |  | Tac-2    | material to bind together.   |                            |   |  |
| - Daws   | Sd2-E INLET SEDIMENT TRAP   | * The second sec |                 | An impounding area created by excavating around a storm drain drop<br>inlet. The excavated area will be filled and stabilized on completion of                             | Tac-3 | TACKIFIERS TYPE III:<br>SYNTHETIC/ORGANIC BLENDS               |  | Tac-3    | Substance used to anchor straw or hay mulch by causing the organic material to bind together.  | CODE                       | PRACT                                   | TICE DETAIL  |
| Center   | Sd2-F FILTER FABRIC WITH  | * * * * * * * * * * * * * * * * * * *  |                 | construction activities.<br>An impounding area created by excavating around a storm drain drop<br>inlet. The excavated area will be filled and stabilized on completion of | Гас-4 |  |  | Tac-4    | Substance used to anchor straw or hay mulch by causing the organic material to bind together.  | N/A                        | BASIN DELIN                             | NEATION N/A  |
|  | SUPPORTING FRAME  | ······································   |                 | An impounding area created by excavating around a storm drain drop   |       |  |  |          | Substance used to anchor straw or hay mulch by causing the organic   | N/A                        | LIMITS OF DIST                          | TURBANCE N/A   |
|  | Sd2-B INLET SEDIMENT TRAP<br>BAFFLE BOX                                 |  |                 | inlet. The excavated area will be filled and stabilized on completion of construction activities.  | Tac-5 | SYNTHETIC/ORGANIC BLENDS<br>WITH SYNTHETIC FIBERS              |  | Tac-5    | material to bind together.   | N/A                        | SOIL DELIN                              | IEATION N/A  |
| Utilities Protection Center, Inc.  | Sd2-Bg INLET SEDIMENT TRAP<br>BLOCK AND GRAVEL DROP<br>INLET PROTECTION | X ', ', ', ', ', ', ', ', ', ', ', ', ',   |                 | An impounding area created by excavating around a storm drain drop<br>inlet. The excavated area will be filled and stabilized on completion of<br>construction activities. |       |  |  |          |  |                            |   |  |
| Know what's below.   | Sd2-G GRAVEL DROP INLET   | * • • • • • • • • • • • • • • • • • • •  |                 | An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of                                |       |  |  |          |  |                            |   |  |
| Call before you dig.   | PROTECTION  | ¥ + + + + + + + + + + + + + + + + + + +  |                 | An impounding area created by excavating around a storm drain drop   |       |  |  |          |  |                            |   | SEE SHEE   |
|  | Sd2-S         INLET SEDIMENT TRAP           SOD INLET PROTECTION        | v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v<br>v  |                 | inlet. The excavated area will be filled and stabilized on completion of construction activities.  |       |  |  |          |  |                            |   | SEDIN  |

|                          | GASW   | CC CHECKLIS  | ST   |  | DE    | SIGNING A            | ARCHITECT  |
|--------------------------|--|--|--|--|-------|----------------------|--|
| licable Er               | osion, Sedimentation a                                 |  | DESCRIPTION<br>Checklist established by the Commission as  | of January 1of the year in                       |       |                      |  |
| certificatio             |  | ne Commission, signature a   | and seal of the certified design professional.<br>ne without prior written authorization from th   | EPD district office. If                          |       |                      |  |
| proves the<br>necklist.* | e request to disturb 50                                | acres or more at any one t   | ime, the plan must include at least 4 of the B ible for erosion, sedimentation and pollution   | MP's listed in Appendix 1                        |       |                      |  |
| name, ad<br>al and dis   | dress, email address a turbed acreage of the           | and phone number of prima<br>project or phase under con                                    | ry permittee.<br>struction.  |  |       |                      | EFIELD   |
| te of the                |  | any revisions made to the P  | the Latitude and Longitude in decimal degre<br>Plan including the entity who requested there   |  |       |                      |  |
|                          | t receiving waters and                                 |  | nclude designation of specific phase, if nece<br>cent areas including streams, lakes, resident   | -  |       |                      | SLEY &   |
| Profession<br>age 19 o   | nal's certification stater<br>f the permit.            | -  | site was visited prior to development of the permittee's ES&PC Plan provides for an app  |  |       | ASSC                 | CIATES   |
| nensive synote the s     | ystem of BMP's and sa<br>tatement that "The des        | impling to meet permit requisign professional who prepa                                    | irrements as stated on Part IV page 19 of the<br>ared the ES&PC Plan is to inspect the install<br>7 days after installation." in accordance with   | permit.*<br>ation of the initial                 |       |                      |  |
| note the s               | tatement that "Non-exe                                 | empt activities shall not be   | conducted within the 25 or 50-foot undisturbing the necessary variances and permits."  | -  |       |                      |  |
| note the s               | tatement that "Amendr                                  | ments/revisions to the ES&   | ether a buffer variance is required.<br>PC Plan which have a significant effect on B   | MP's with a hydraulic                            |       |                      | OF RECORD  |
| note the s               |  | naterials shall not be disch   | arged to waters of the State, except as author   |  | _     | co Architecture      |  |
| es and pra               | actices prior to land dis<br>ment that "Erosion cor    | turbing activities."<br>htrol measures will be main  | shall be prevented by the installation fo erosi<br>tained at all times. If full implementation of the  | ne approved plan does not                        |       |                      | of Nelson Worldwide, Ll  |
| t source.                | ,  |  | nt control measures shall be implemented to<br>eriod greater than 14 days shall be stabilized  |  | F     | <b>NR</b>            | FSITF  |
| atershed                 | as, any portion of a Bio                               | ota Impaired Stream Segme  | aired stream segment, or within 1 linear mile<br>ent must comply with Part III.C of the Permit.  | Include the completed                            |       |                      | grour  |
| L implem                 | entation Plan for sedin                                | nent has been finalized for  | the site which discharge to the Impaired Str<br>the Impaired Stream Segment (identified in i<br>any site-specific conditions or requirements i   | tem 21 above) at least six                       |       |                      | Sicel  |
| tion site i              | s prohibited.*   | concrete mixer chutes, hop<br>petroleum spills and leaks.                                  | opers, and the rear of the vehicles. Washout   | of the drum at the                               |       | GE                   | ISTERES  |
| ion of the<br>tion oper  | measures that will be<br>ations have been com          | installed during the construpleted.*   | iction process to control pollutants in stormw   | ater that will occur after                       |       |                      | PE 035923  |
| ion of the<br>ion and c  | practices that will be un<br>hart or timeline of the i | ntended sequence of majo   | ts in stormwater discharges.*<br>r activities which disturb soils for the major p  |  |       | FRC4 EN              | GINEER HAST  |
| tion).                   |  | MP's, clearing & grubbing a<br>ctions and record keeping l                                 | activities, excavation activities, utility activitie   | s, temporary and final                           |       | 31                   | 08/19  |
| complete                 | details for retention of                               | bling frequency and reportin<br>records as per Part IV.F of<br>used to collect and analyze |  |  |       | DAV                  | VSON   |
| e all sam                | pling locations, perenn                                |  | where applicable.*<br>s, and other water bodies into which stormwa<br>implemented at the construction site includir  | =  |       | CO                   | UNTY   |
| requirem<br>ere there    | ents and perimeter cor<br>will be no mass gradir       | ntrol BMPs, (2) intermediate   | e grading and drainage BMPs, and (3) final B<br>control BMPs, intermediate grading and drain   | MPs. For construction                            |       | SE                   | NIOR   |
| Scale an<br>and prop     | d North Arrow  |  | interval in accordance with the following:   |  |       | CEI                  | NTER   |
| Slope (%<br>%)<br>2-8%)  |  | Contour Intervals (ft)<br>0.5 or 1<br>1 or 2   |  |  |       | AND P                | AVILION  |
| 6%+)<br>Iternative       |  | 2, 5, or 10<br>ance has been documente   | d to be equivalent to or superior to conventio<br>oil and Water Conservation Commission). P  |  |       |                      | REATION RD   |
| ve BMP (<br>Iternative   | Guidance Document fo                                   | ound at www.gaswcc.org   | Please refer to Appendix A-2 of the Manual f   |  |       |                      | EPRODUCTION NOTICE   |
| ion of the<br>uing auth  | applicable 25-foot or 5<br>ority. Clearly note and     | delineate all areas of impa  | adjacent to state waters and any additional l<br>ict.<br>vithin 200 feet of the project site.  | ouffers required by the                          | These | drawings are protec  | / & Associates Architects, Inc.<br>ted by the copyright laws of the                            |
| ion and a<br>hydrology   | creage of contributing<br>v study and maps of dr       | drainage basins on the pro<br>ainage basins for both the                                   |  | a completed                                      |       | or any purpose or re | gs or any part thereof may not be<br>produced in any form or by any<br>written consent of WBA. |
| rain pipe<br>ater disch  | and weir velocities with arge points.                  | n appropriate outlet protecti  | on to accommodate discharges without eros  |  |       | Record               | TIC DESIGN PACKAGE   |
| ts of distu<br>a minimu  |  | of construction.<br>sediment storage per acre  | drained using a temporary sediment basin, r  |  | 2019- | 02-04 BID PACK       |  |
| disturban<br>nt contro   | ce activities until final s<br>s when a sediment ba    | tabilization of the site has has it as in is not attainable must be                        | becation. Sediment storage volume must be i<br>been achieved. A written justification explain<br>be included in the plan for each common drai  | ing the decision to use nage location in which a |       |                      |  |
| eets from<br>sedimen     | the Manual must be in t storage when using e           | cluded for structural BMPs equivalent controls. When a                                     | cubic yards of storage is not attainable must<br>and all calculations used by the design profe<br>discharging from sediment basins and impou<br>face, unless infeasible. If outlet structures th | essional to obtain the ndments, permittees are   |       |                      |  |
| ace are no<br>of Best I  | ot feasible, a written jus<br>Management Practices     | stification explaining this de   | cision must be included in the plan.<br>d no less stringent than the Manual for Erosi  |  |       |                      |  |
| detailed o<br>and Sedi   | Irawings for all structur<br>ment Control in Georgi    | ral practices. Specifications<br>a.  | s must, at a minimum, meet the guidelines se ative practices. Include species, planting da   |  | Revi  | isions               |  |
| d mulchin<br>ate geog    | g rates. Vegetative pla<br>aphic region of Georgi      | an shall be site specific for ia.  | appropriate time of year that seeding will tak   | e place and for the                              | No.   | Date                 | Description  |
|                          |  |  |  |  |       |                      |  |
|                          |  |  |  |  |       |                      |  |
| DAM, 10                  | ) TO 25  |  |  |  |       |                      |  |
| DAM, 10                  | TO 25  |  |  |  |       |                      |  |
|                          |  |  |  |  |       |                      |  |
|                          |  |  |  |  | REI   | LEASED FO            | R CONSTRUCTION   |
|                          | DETAIL   | SYMBOL   | DESCRIPTI  |  | DAT   | E                    |  |
|                          |  | 105  |  |  | PRO   |                      |  |
| CE                       | N/A  | LOD  |  |  |       |                      | DSION,<br>NTATION, &   |
|                          | N/A  |  |  |  |       | POL                  |  |
|                          |  |  |  |  |       |                      | OL NOTES   |
| SE                       | EE SHEE  | T SERIES   | C-4 FOR EROSIC   | N AND  |       | С.                   | -4.2   |
|                          | SEDIM  | <b>IENTATIO</b>  | N CONTROL PLAI   | NS   |       |                      | • •  |

**ELSON** chitecture, Inc. ed affiliate of Nelson Worldwide, LLC. TE group after !! `0(` Mohm Nó. PE 035923 ( PROFESSIONAL WGINEF GOWAN 3/08/19 DAWSON COUNTY SENIOR CENTER

| No. | Date | Description |
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| LAND LOTS 248 8 |
|-----------------|
| TOTAL SITE ARE  |
| TOTAL DISTURB   |
| TOTAL STORAGE   |
| STORAGE PROV    |
| Sd2 STORAG      |
| Sd3 STORAG      |
|                 |

FaE

HIE

| SITE DATA                        |        |    |
|----------------------------------|--------|----|
| ND LOTS 248 & 249, 13TH DISTRICT |        |    |
| TAL SITE AREA =                  | 7.266  | AC |
| TAL DISTURBED AREA =             | 7.5    | AC |
| TAL STORAGE REQUIRED =           | 498.51 | CY |
| ORAGE PROVIDED:                  |        |    |
| Sd2 STORAGE PROVIDED =           | 194    | CY |
| Sd3 STORAGE PROVIDED =           | 668    |    |
| Sd4 STORAGE PROVIDED =           | 593    |    |
| TAL STORAGE PROVIDED =           | 1455   | CY |
|                                  |        |    |

### SOIL TYPE

FANNIN FINE SANDY LOAM, 10 TO 25 PERCENT SLOPE

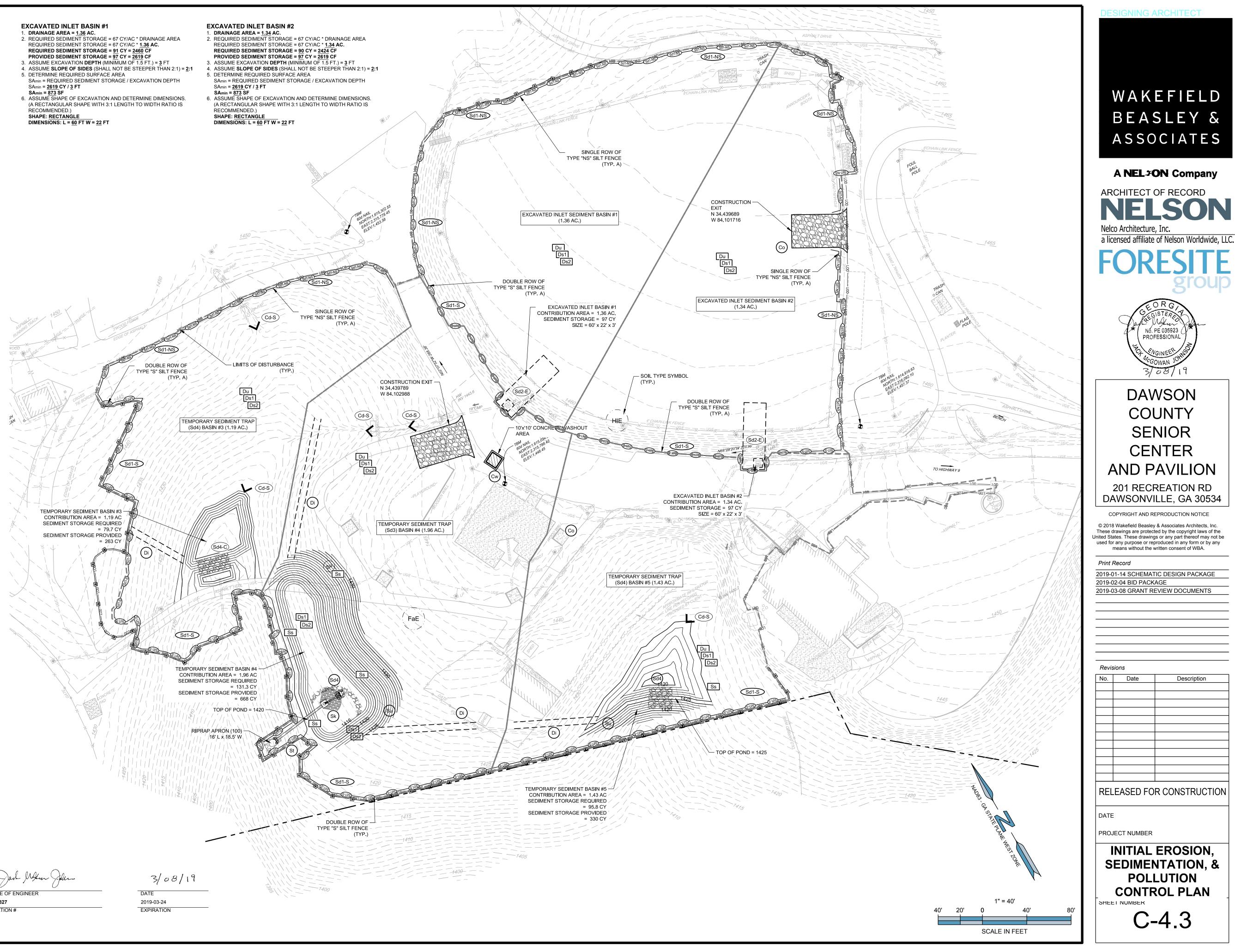
HAYESVILLE SANDY LOAM, 10 TO 25 PERCENT SLOPES

#### **EROSION NOTES:**

- 1. THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO OR CONCURRENT WITH ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT.
- 2. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- 3. EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- 4. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT.
- 5. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE ACCUMULATED SILT IS ONE-THIRD (1/3) FULL FOR ALL EROSION & SEDIMENT CONTROL STRUCTURES.
- 6. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
- . SEE ADDITIONAL EROSION CONTROL NOTES ON SHEETS C-4 THROUGH C-4.2

- REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 1.36 AC. REQUIRED SEDIMENT STORAGE = 91 CY =  $24\overline{60}$  CF
- SAmin = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH
- RECOMMENDED.)

- SAmin = 2619 CY / 3 FT
- RECOMMENDED.)





Call before you dig.

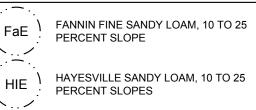
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|            |

| SITE DATA                        |        |    |
|----------------------------------|--------|----|
| ND LOTS 248 & 249, 13TH DISTRICT |        |    |
| TAL SITE AREA =                  | 7.266  | AC |
| TAL DISTURBED AREA =             | 7.5    | AC |
| TAL STORAGE REQUIRED =           | 498.51 | CY |
| ORAGE PROVIDED:                  |        |    |
| Sd2 STORAGE PROVIDED =           | 51.5   | CY |
| Sd3 STORAGE PROVIDED =           | 1435   | CY |
| Sd4 STORAGE PROVIDED =           | 265    | CY |
| SILT FENCE STORAGE =             | 65     | CY |
| TAL STORAGE PROVIDED =           | 1816.5 | CY |
|                                  |        |    |
|                                  |        |    |

### SOIL TYPE



#### **EROSION NOTES:**

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- 2. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR **TEMPORARY SEEDING.**
- EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- 4. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT.
- 5. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE ACCUMULATED SILT IS ONE-THIRD (1/3) FULL FOR ALL EROSION & SEDIMENT CONTROL STRUCTURES.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
- 7. SEE ADDITIONAL EROSION CONTROL NOTES ON SHEETS C-4 THROUGH C-4.2

### SILT FENCE SEDIMENT BASIN #1-A 1. DRAINAGE AREA = 1.31 AC.

- 2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DISTURBED AREA REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 1.31 AC. REQUIRED SEDIMENT STORAGE =  $\underline{87.8}$  CY =  $\underline{2370}$  CF
- PROVIDED SEDIMENT STORAGE = <u>18.75</u> CY = <u>506</u> CF 3. SEDIMENT CLEANOUT DEPTH (MINIMUM OF 1.5 FT.) = <u>1.5</u> FT SLOPES = <u>3</u>:1
- 5. SEDIMENT STORAGE (SF) PER LINEAR FOOT OF SILT FENCE
- SF =  $\frac{1}{2}$ \*B\*H =  $\frac{1}{2}$ \*4.5\*1.5 = 3.375 SF per LF 6. SILT FENCE PROVIDED FOR USE AS STORAGE = 150.0 LF 7. STORAGE VOLUME = <u>506</u> CF = <u>18.75</u> CY

### EXCAVATED INLET BASIN #1-B 1. DRAINAGE AREA = <u>1.31</u> AC.

- 2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 1.31 AC. REQUIRED SEDIMENT STORAGE =  $\frac{87.8}{51.5}$  CY =  $\frac{2370}{1391}$  CF PROVIDED SEDIMENT STORAGE =  $\frac{51.5}{51.5}$  CY =  $\frac{1391}{1391}$  CF
- 3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT.) = 3 FT 4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
- 5. DETERMINE REQUIRED SURFACE AREA SAmin = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH SAmin = <u>1391</u> CY / <u>3</u> FT SAmin = 464 SF
- 6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS. (A RECTANGULAR SHAPE WITH 3:1 LENGTH TO WIDTH RATIO IS
- RECOMMENDED.) SHAPE: <u>RECTANGLE</u> DIMENSIONS: L = <u>50</u> FT W = <u>17</u> FT SHAPE:
- SILT FENCE SEDIMENT BASIN #1-C 1. DRAINAGE AREA = 1.31 AC.
- 2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DISTURBED AREA REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 1.31 AC.
- REQUIRED SEDIMENT STORAGE =  $\frac{87.8}{18.75}$  CY =  $\frac{2370}{506}$  CF PROVIDED SEDIMENT STORAGE =  $\frac{18.75}{18.75}$  CY =  $\frac{506}{506}$  CF
- 3. SEDIMENT CLEANOUT **DEPTH** (MINIMUM OF 1.5 FT.) = 1.5 FT 4. SLOPES = 3:1
- 5. SEDIMENT STORAGE (SF) PER LINEAR FOOT OF SILT FENCE SF = <sup>1</sup>/<sub>2</sub>\*B\*H = <sup>1</sup>/<sub>2</sub>\*4.5\*1.5 = <u>3.375</u> SF per LF
- 6. SILT FENCE PROVIDED FOR USE AS STORAGE = 150.0 LF
- 7. STORAGE VOLUME = <u>506</u> CF = <u>18.75</u> CY

🔨 🛞 MAINTAIN DOUBLE ROW OF -TYPE "S" SILT FENCE



SILT FENCE SEDIMENT BASIN #1-A -CONTRIBUTION AREA = 1.31 AC SEDIMENT STORAGE REQUIRED = 87.8 CY EDIMENT STORAGE PROVIDED = 18.75 CY 🔬

OVER EXCAVATE AROUND THE -INLET TO ALLOW FOR TEMPORARY SEDIMENT STORAGE

RIPRAP APR

(EXIST CULVERT) 6' L x 7 25' EXCAVATED INLET BASIN #1-E

CONTRIBUTION AREA = 1.31 AC. SEDIMENT STORAGE = 51.5 CY SIZE = 50' x 17' x 3' 📡

> SILT FENCE SEDIMENT BASIN #1-C CONTRIBUTION AREA = 1.31 AC SEDIMENT STORAGE REQUIRED = 87.8 CY SEDIMENT STORAGE PROVIDED = 18.75 CY

12 L x 14 5 W

USE DETENTION POND FOR STORAGE BASIN AREA = 5.23 AC SEDIMENT STORAGE REQUIRED = 350 CY SEDIMENT STORAGE PROVIDED = 1435 CY TOP OF POND = 1420

RIPRAP APRON (100) 16' L x 18.5' W



Know what's **below**. Call before you dig.

SIGNATURE OF ENGINEER

000006080827 CERTIFICATION #

3/08/19 DATE 2019-03-24 EXPIRATION

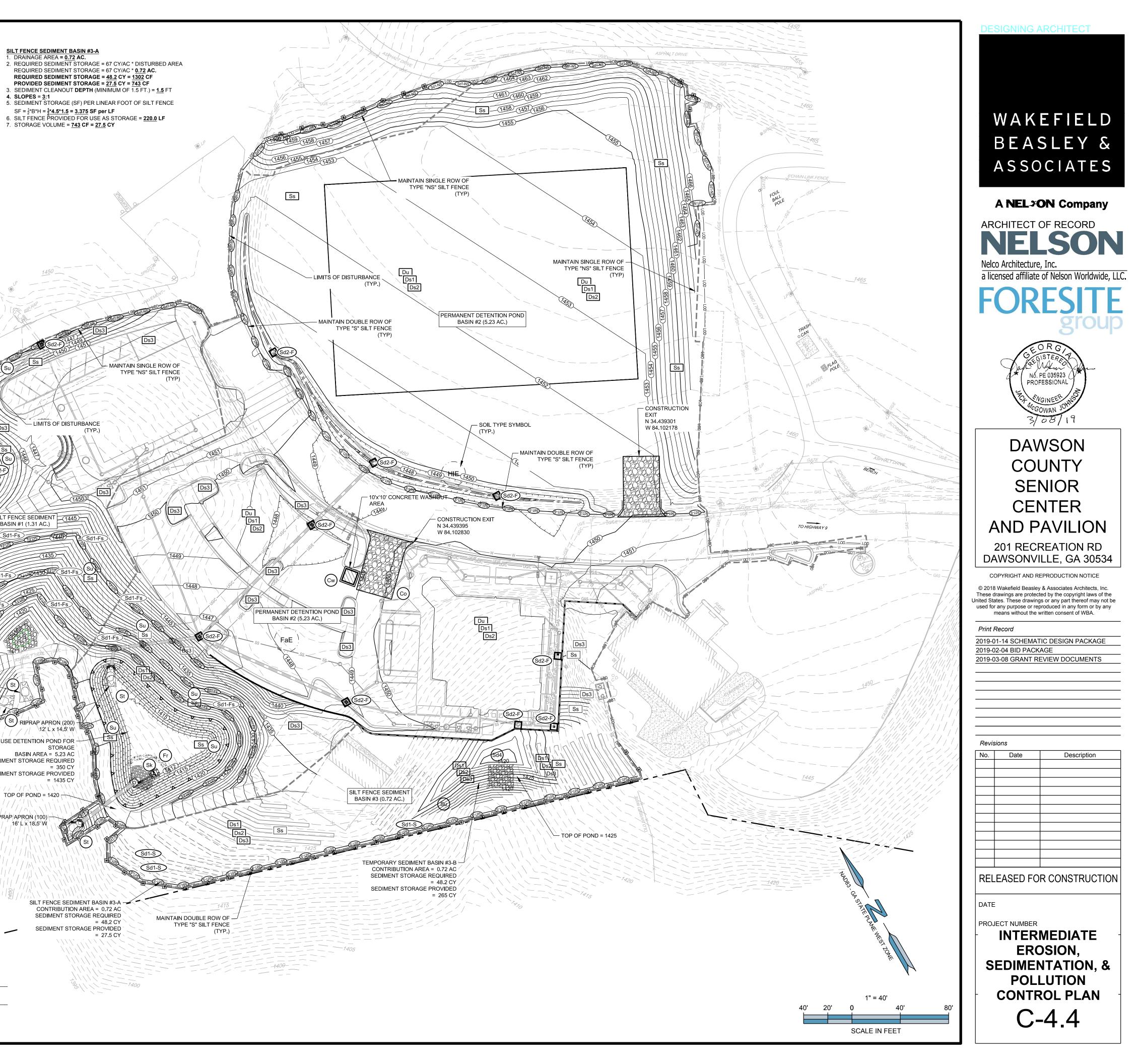
RIPRAP APRON (500) -

6' L × 7/5' W / 1

| su          |      |              | $\sim$ | $\boldsymbol{arepsilon}$ |
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| $\times$ >  |      |              |        |                          |
| su)         | A AA |              |        | K                        |

4. SLOPES = <u>3</u>:1

SILT FENCE SEDIMENT BASIN #1 (1.31 AC.)



PERCENT SLOPE

HAYESVILLE SANDY LOAM, 10 TO 25 PERCENT SLOPES

#### **EROSION NOTES:**

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- SEE ADDITIONAL EROSION CONTROL NOTES ON SHEETS C-4 THROUGH C-4.2



Know what's **below. Call** before you dig.

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TYPE "S" SILT FENCE

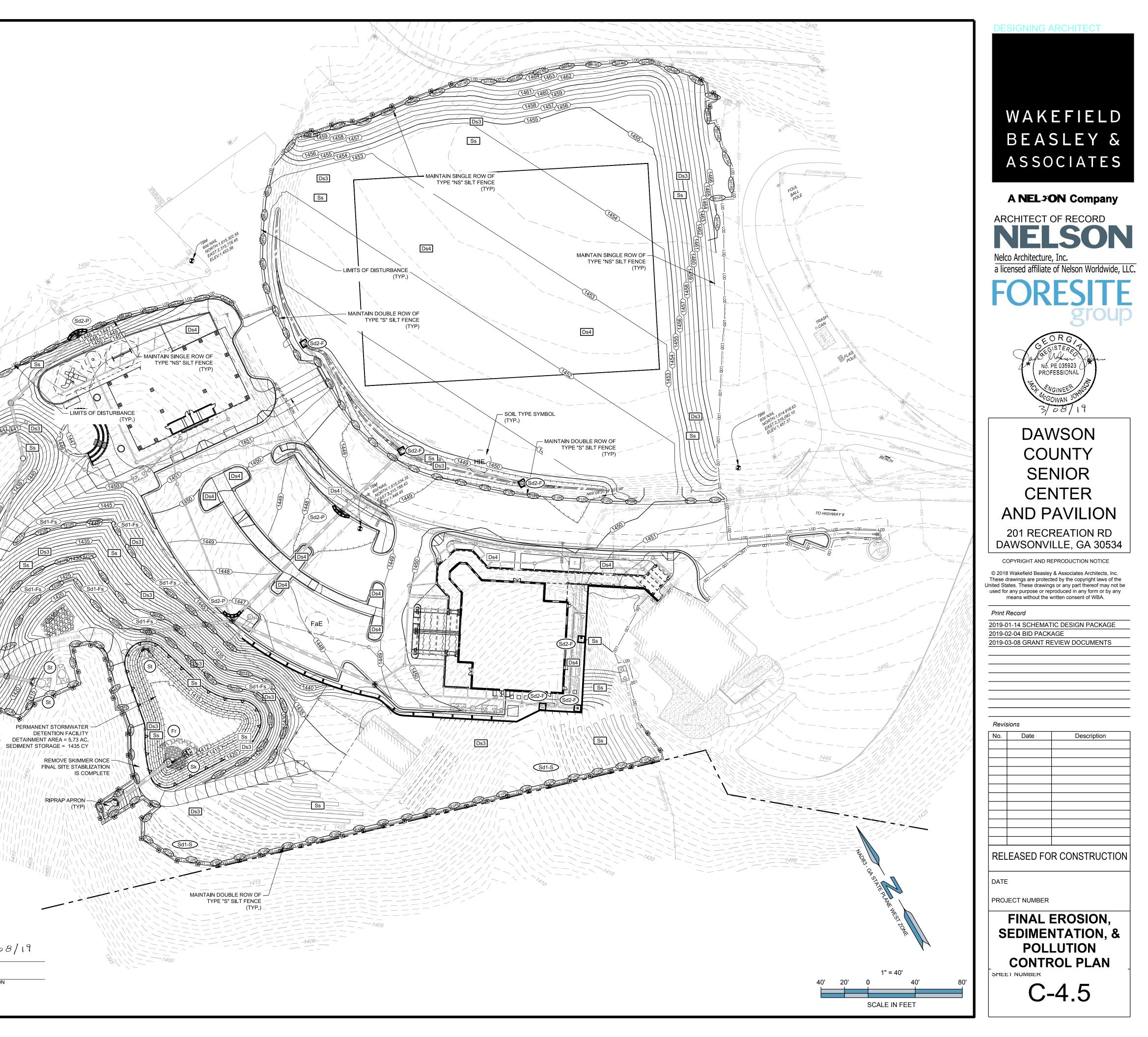
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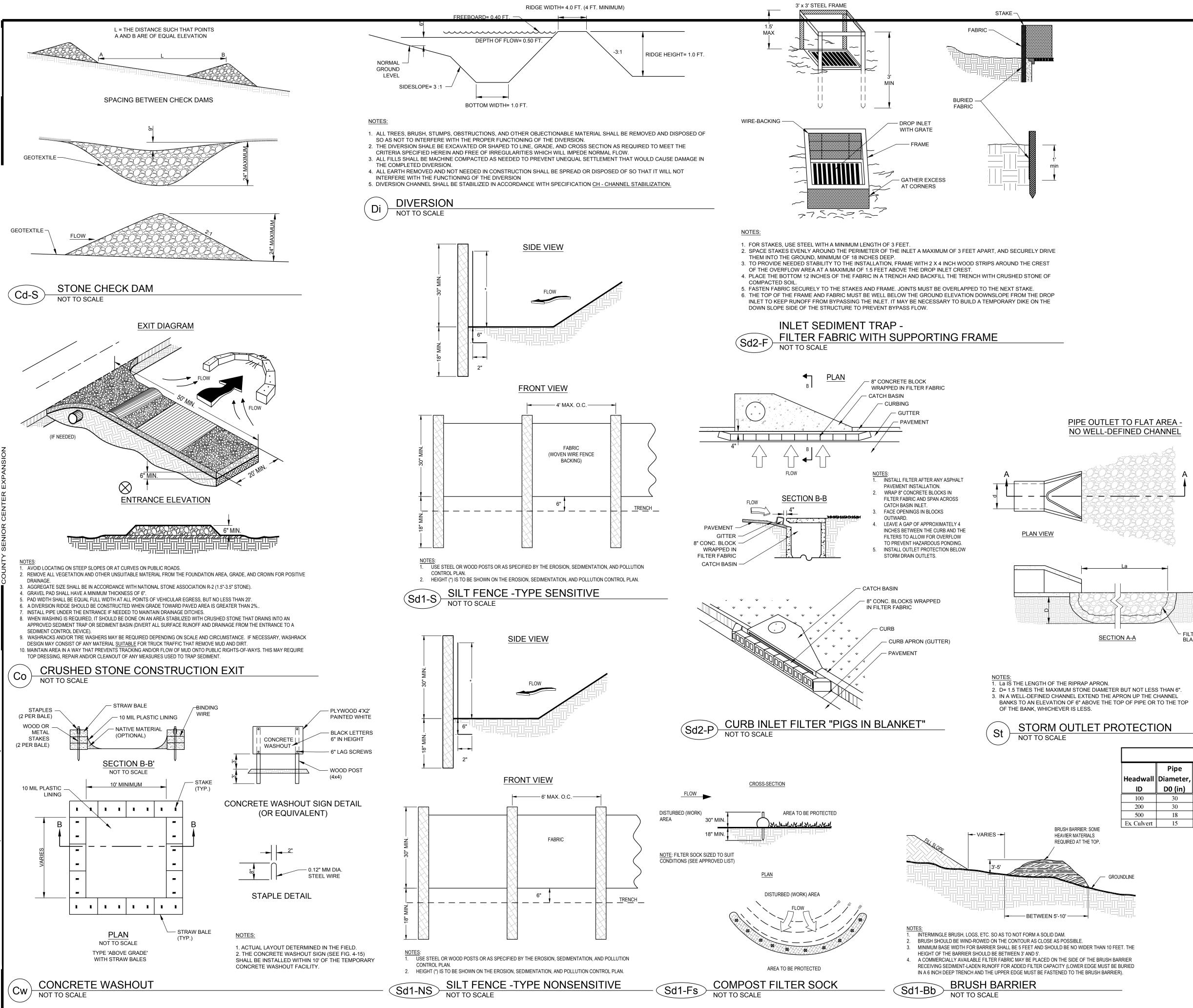
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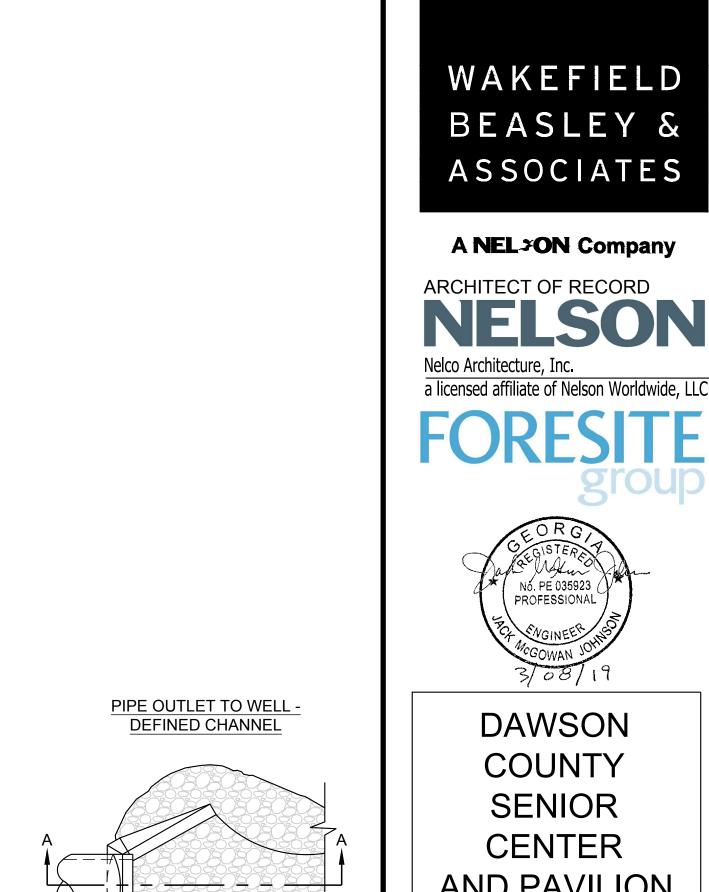
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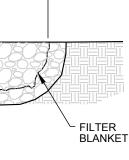
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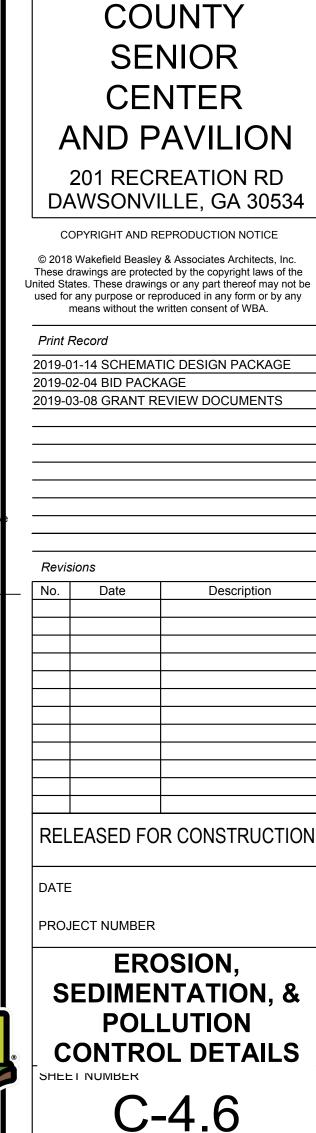




PLAN VIEW SECTION A-A

4. A FILTER BLANKET OR FILTER FABRIC SHELL BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION. 5. GRADED RIPRAP STONE (MIN. 50 LB. STONE) NSA. NO. R-4 - 12" mix. 6" a 6. FILTER STONE NO. FS-2

|           | Rip-Rap Apron Summary   |         |     |      |                     |                    |        |  |  |
|-----------|---|---------|-----|------|---------------------|--------------------|--------|--|--|
| wall      | Pipe25-yearInitialApronApronall Diameter,25-yearVelocityRip-RapApronLength,Width, |         |     |      |                     |                    |        |  |  |
| wali<br>) | Diameter,<br>D0 (in)  | Q (cfs) | -   |      | Apron<br>width (ft) | Length,<br>La (ft) | W (ft) |  |  |
| 0         | 30  | 18.3    | 3.7 | 0.60 | 7.5                 | 16                 | 18.5   |  |  |
| 0         | 30  | 16.7    | 3.4 | 0.60 | 7.5                 | 12                 | 14.5   |  |  |
| 0         | 18  | 1.5     | 0.8 | 0.10 | 4.5                 | 6                  | 7.5    |  |  |
| lvert     | 15  | 2.2     | 1.8 | 0.10 | 3.75                | 6                  | 7.25   |  |  |

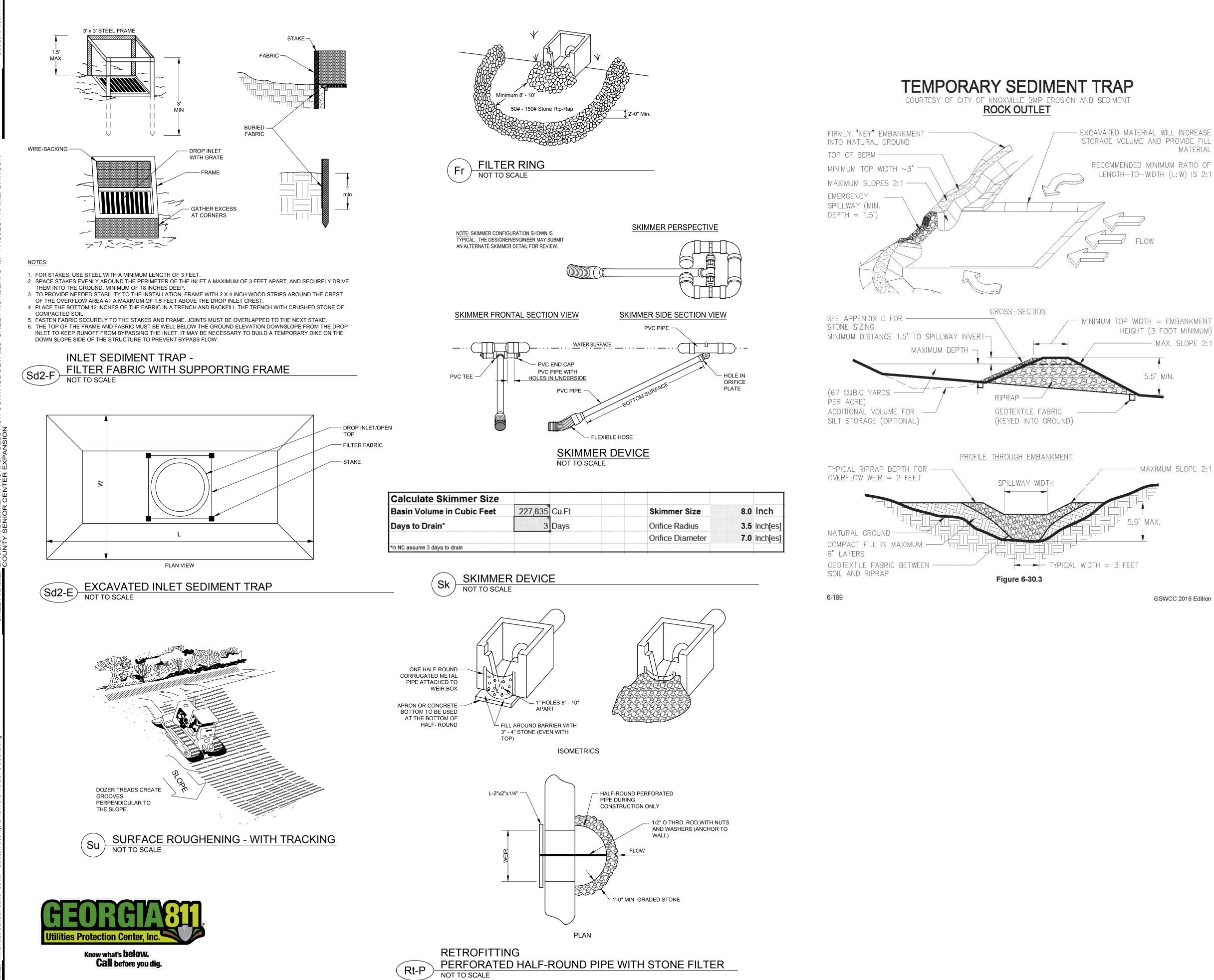


DESIGNING ARCHITECT

Nó. PE 035923 PROFESSIONAL

DAWSON





MATERIAL

- MAX. SLOPE 2:1

- MAXIMUM SLOPE 2:1

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## DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534

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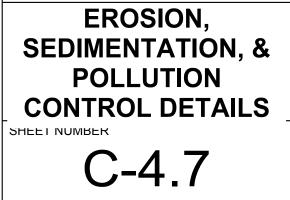
Revisions

| No. | Date | Description |
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#### RELEASED FOR CONSTRUCTION

DATE

PROJECT NUMBER



#### MULCHING FOR TEMPORARY STABILIZATION APPLICATION WITHOUT VEGETATION

WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.

#### SITE PREPARATION

- GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH
- INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS
- DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS. 3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

#### MULCH MATERIALS AND APPLICATION RATES MATERIAL RATE STRAW OR HAY 2-4" DEEP WOOD WASTE, CHIPS, 2-3" DEEP (ABOUT 6-9 TONS/ACRE) SAW DUST, OR BARK MATTING OR NETTING ACCORDING TO MANUFACTURER RECOMMENDATIONS POLYETHYLENE FILM | CAN BE LAID OVER SENSITIVE AREAS AND STOCKPILES, MUST BE SECURED

#### DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING

#### **GRADING AND SHAPING**

- 1. EXCESSIVE WATER RUNOFF SHALL BE REDUCED BY PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, AND OTHERS
- 2. NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED

#### SEEDBED PREPARATION

- 1. WHEN A HYDRAULIC SEEDER IS USED. SEEDBED PREPARATION IS NOT REQUIRED WHEN USING CONVENTIONAL OR HAND-SEEDING SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL
- 2. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE

#### LIME AND FERTILIZER

- 1. SOIL TESTS MUST BE PERFORMED DETERMINE THE REQUIRED AMOUNTS OF FERTILIZER, LIME, AND OTHER AMENDMENTS, SOIL TESTS
- SHOULD INCLUDE RECOMMENDATIONS FOR APPLICATION RATES. 2 APPLY AGRICULTURAL LIME AT A RATE DETERMINED BY SOIL TEST FOR
- PH. QUICK ACTING LIME SHOULD BE INCORPORATED TO MODIFY PH
- DURING THE GERMINATION PERIOD 3. ALL GRADED AREAS REQUIRE LIME APPLICATION UNLESS SOIL TEST
- INDICATE OTHERWISE.
- 4. BIOSTIMULANTS SHOULD ALSO BE CONSIDERED WHEN THERE IS LESS THAN 3% ORGANIC MATTER IN THE SOIL
- 5. FERTILIZER SHOULD BE APPLIED BEFORE SEEDBED PREPARATION AND

- DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED
- UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL
- VEGETATION, ADD 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT.

#### ANCHORING MULCH

- 1 STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK." DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR
- HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE FOUIPMEN MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1. TH ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT PLEASE REFER TO SPECIFICATION TB - TACKIFERS AND BINDERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BI INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
- POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY

INCORPORATED WITH A DISK, RIPPER, OR CHISEL. ON SLOPES TOO STEEP FOR, OR INACCESSIBLE TO EQUIPMENT, FERTILIZER SHALL BE HYDRAULICALLY APPLIED, PREFERABLY IN THE FIRST PASS WITH SEED AND SOME HYDRAULIC MULCH, THEN TOPPED WITH THE REMAINING REQUIRED APPLICATION RATE.

6. FOR LOW FERTILITY SOILS, AGRICULTURAL LIME & FERTILIZER REQUIRED UNLESS SOIL TESTS SHOW IT IS NOT REQUIRED AND THAT SOILS ARE REASONABLY FERTILE. FOR LOW FERTILITY SOILS APPLY 10-10-10 FERTILIZER AT 500-700 LB/ACRE. APPLY AGRICULTURAL LIME AT 1 TON PER ACRE.

#### SEEDING

SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR SEED SHALL BE APPLIED UNIFORMLY BY HAND CYCLONE SEEDER, DRILL, CULTIPACKER-SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER-SEEDERS SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROPRIATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE "RAKED" LIGHTLY TO COVER SEED WITH SOIL IF SEEDED BY HAND.

#### MULCHING

TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH. PROVIDED THERE IS LITTLE TO NO EROSION POTENTIAL HOWEVER THE USE OF MULCH CAN OFTEN ACCELERATE AND ENHANCE GERMINATION AND VEGETATION ESTABLISHMENT. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. REFER TO DS1 - DISTURBED AREA STABILIZATION (Ds1).

DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

#### DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

|                      |                         |                        | <b>`</b>                     |                     | /          |             |  |
|----------------------|-------------------------|------------------------|------------------------------|---------------------|------------|-------------|--|
|                      | 50                      | SEEDING                | SEEDING<br>RATE PER<br>ACRE* | PLANTING DATES      |            |             |  |
| SPECI                | E9                      | RATE PER<br>1,000 S.F. |                              | MTNS./<br>LIMESTONE | PIEDMONT   | COASTAL     |  |
| BARLEY               | (ALONE)<br>(IN MIXTURE) | 3.3 LBS.<br>0.6 LBS.   | 3 bu.<br>1/2 bu.             | 9/1-10/31           | 9/15-11/15 | 10/1-12/31  |  |
| RYE                  | (ALONE)<br>(IN MIXTURE) | 3.9 LBS.<br>0.6 LBS.   | 3 bu.<br>1/2 bu.             | 8/15-10/31          | 9/15-11/30 | 10/1-12/31  |  |
| ANNUAL RYEGRASS      | ALONE                   | 0.9 LBS.               | 40 LBS.                      | 8/15-11/15          | 9/1-12/15  | 9/15-12/31  |  |
| ANNUAL LESPEDEZA     | (ALONE)<br>(IN MIXTURE) | 0.9 LBS.<br>0.2 LBS.   | 40 LBS.<br>10 LBS.           | 3/1-3/31            | 3/1-3/31   | 2/1-2/28    |  |
| WEEPING<br>LOVEGRASS | (ALONE)<br>(IN MIXTURE) | 0.1 LBS.<br>0.05 LBS.  | 4 LBS.<br>2 LBS.             | 4/1-5/31            | 4/1-5/31   | 3/1-5/31    |  |
| SUDANGRASS           |                         | 1.4 LBS.               | 60 LBS.                      | 5/1-7/31            | 5/1-7/31   | 4/1-7/31    |  |
| BROWN TOP MILLET     | (ALONE)<br>(IN MIXTURE) | 0.9 LBS.<br>0.2 LBS.   | 40 LBS.<br>10 LBS.           | 4/15-6/15           | 4/15-6/60  | 4/15-6/30   |  |
| WHEAT                | (ALONE)<br>(IN MIXTURE) | 4.1 LBS.<br>0.7 LBS.   | 3 bu.<br>1/2 bu.             | 9/15-11/30          | 10/1-12-15 | 10/15-12/31 |  |

. UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES. 2. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS. 3. SEE "THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA, SIXTH EDITION" FOR MAJOR LAND

RESOURCE AREAS.

### 4. SEEDING RATES ARE BASED ON PURE LIVE SEED. (PLS)

### DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

NOTE THAT IN THE CASE OF DISCREPANCIES BETWEEN ANY OF THE INFORMATION BELOW AND THE INFORMATION CONTAINED IN TREE **REPLACEMENT AND LANDSCAPE PLANS & DETAILS, THE LATTER** SHALL BE USED.

#### **GRADING AND SHAPING**

- 1. GRADING AND SHAPING MAY NOT BE WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT
- 2. WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION.
- 3. CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS

#### LIME AND FERTILIZER RATES

- 1. AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. ALL GRADED AREAS REQUIRE LIME APPLICATION UNLESS SOIL TEST INDICATE OTHERWISE. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICUI TURE
- 2. AGRICULTURAL LIME IS GENERALLY NOT REQUIRED WHERE ONLY TREES AND SOME LANDSCAPING IS PLANTED, REFER TO TREE PROTECTION AND LANDSCAPE PLANS FOR LIME REQUIREMENTS IN AREAS OF TREES AND SHRUBS
- 3. REFER TO THE TABLE ON THIS SHEET OR TABLE 6-5.1 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GA, SIXTH EDITION, FOR FERTILIZER REQUIREMENTS BY PLANTING SPECIES.

#### LIME AND FERTILIZER APPLICATION

- 1. WHEN HYDRAULIC SEEDING EQUIPMENT IS USED. THE INITIAL FERTILIZER SHALL BE MIXED WITH SEED. INNOCULANT (IF NEEDED). AND WOOD CELLULOSE OR WOOD PULP FI BER MULCH AND APPLIED IN A SLURRY. THE INNOCULANT, IF NEEDED, SHALL BE MIXED WITH THE SEED PRIOR TO BEING PLACED INTO THE HYDRAULIC SEEDER. THE SLURRY MIXTURE WILL BE AGITATED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER
- 2. FINELY GROUND LIMESTONE CAN BE APPLIED IN THE MULCH SLURRY OR IN COMBINATION WITH THE TOP DRESSING.
- 3. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS: a. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH
- THE SOIL DURING SEEDBED PREPARATION. b. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS
- c. BROADCAST AFTER STEEP SURFACES ARE SCARIFIED, PITTED OR TRENCHED
- d. A FERTILIZER PELLET SHALL BE PLACED AT ROOT DEPTH IN THE CLOSING HOLE BESIDE EACH PINE TREE SEEDLING.

#### PLANT SELECTION

1. PLANT AND LANDSCAPE SPECIES TO BE AS INDICATED ON THE TREE REPLACEMENT PLAN AND LANDSCAPE PLANS. IN THE EVENT NO SUCH PLAN HAS BEEN PREPARED, AND SPECIES IS NOT CALLED OUT SPECIFICALLY ON THE PERMANENT VEGETATION PLAN. SPECIES ARE TO BE SELECTED BASED ON THE TABLES SHOWN ON THIS SHEET OR FROM TABLES 6-4.1, 6-5.2, 6-5.3, OR 6.5-4 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA SIXTH EDITION, AND APPROVED IN WRITING BY THE OWNER.

RYEGRASS SHALL NOT BE USED IN ANY SEEDING MIXTURES CONTAINING PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER.

#### SEEDBED PREPARATION

SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED (BUT IS STRONGLY RECOMMENDED FOR ANY SEEDING PROCESS, WHEN POSSIBLE), WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:

#### **BROADCAST PLANTINGS**

- 1. TILLAGE, AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES; ALLEVIATE COMPACTION; INCORPORATE LIME AND FERTILIZER: SMOOTH AND FLRM THE SOIL. ALLOW FOR THE PROPER PLACEMENT OF SEED. SPRIGS. OR PLANTS: AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.
- 2. TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT. 3. TILLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMEN. THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE
- WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

#### LANDSCAPE OR TREE REPLACEMENT PLANS.

PLANTING AND FERTILIZER SCHEDULE FOR PERMANENT GRASSING PURE LIVE FERTILIZER PLANTING DATES RATE YEARS TO N TOP SEED (PLS) ANALYSIS FERTILIZER SPECIES PER APPLY DRESSING PER RATE (lb/Ac) ACRE FERTILIZER RATE MTNS./ PIEDMONT COASTAL 1,000 S.F LIMESTONE WEEPING LOVEGRASS 0.1 LBS. 4 LBS. 3/15 - 6/15 3/1 - 6/15 2/1 - 6/15 FIRST 1500 50 6 | 12 | 12 VIRGATA OR SERICEA LESPEDEZA 1.4 LBS. 40 LBS. SECOND 3/15 - 6/15 3/1 - 6/15 2/15 - 6/1 0 | 10 | 10 1000 SERICEA LESPEDEZA SEEDBEARING HAY 138 LBS. 3 TONS 10/1 - 3/1 10/1 - 3/1 10/15 - 2/1 FIRST 12 1500 50 OVERSEEDED WEEPING LOVEGRASS 0.05 LBS. 3/1 - 6/15 2 LBS. 3/1 - 6/15 2/1 - 6/15 SECOND 0 | 10 | 10 1000 -HULLED COMMON BERMUDAGRASS 50 0.2 LBS. 10 LBS. N/A 2/15 - 7/1 2/15 - 6/15 FIRST 6 | 12 | 12 1500 SERICEA LESPEDEZA 1.4 LBS. 1000 60 LBS. N/A 3/1 - 6/15 2/15 - 6/15 SECOND 0 | 10 | 10 -UNHULLED COMMON BERMUDAGRASS 0.2 LBS. 10 LBS. N/A 11/1 - 2/1 FIRST 1500 50 6 | 12 | 12 | 1.4 LBS. 40 LBS. N/A 3/1 - 6/15 SECOND 0 | 10 | 10 | 1000 -VIRGATA OR SERICEA LESPEDEZA SEED HAY 140 LBS. 3 TONS N/A 10/1 - 3/1 10/15 - 2/1 TALL FESCUEGRASS 0.7 LBS 8/1 - 11/1 8/15 - 11/1 2/15 - 6/1 FIRST 6 12 12 1500 50(1) 30LBS 3/1 - 4/15 (3/15 -3/1 - 6/15 SECOND 1000 1.4 LBS. 40 LBS. 0 | 10 | 10 | -CLEAN COMBINE RUN VIRGATA OR SERICEA LESPEDEZA 5/1 FOR LESPEDEZA 0-50(1),(2) FIRST 6 | 12 | 12 | 1500 TALL FESCUEGRASS (ALONE) 1.1 LBS 3/1-5/1, 8/15-11/1 9/1-11/1 50LBS N/A FESTUCA ARUNDINACEA SECOND 6 | 12 | 12 1000 50-100 FIRST 6 | 12 | 12 | 1500 COMMON BERMUDA, HULLED ALONE 0.2 LBS. 4/1-4/31 3/15-5/31 10 LBS. CYNODON DACTYLON SECOND 50-100 6 | 12 | 12 800 FIRST 6 | 12 | 12 | 1500 50-100 COMMON BERMUDA, UNHULLED 0.2 LBS. 10 LBS. 10/1-3/1 11/1-2/1 CYNODON DACTYLON (PLANT WITH WINTER ANNUALS) SECOND 6 12 12 800 50-100 - APPLY IN SPRING FOLLOWING SEEDING

- APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED - APPLY IN 3 SPLIT APPLICATIONS

4 - APPLY WHEN PLANTS ARE PRUNED 5 - APPLY TO GRASS SPECIES ONLY

6 - APPLY WHEN PLANTS GROW TO A HEIGHT OF 2-4 INCHES.

- RRIGATION

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INDIVIDUAL PLANTS

1. ALL INDIVIDUAL PLANTINGS SHOULD BE PERFORMED IN ACCORDANCE WITH

INOCULANTS

HOUR.

HYDRAULIC SEEDING

AFTER THE MIXTURE IS MADE

CONVENTIONAL SEEDING

EQUIPMENT.

MULCHING

NO-TILL SEEDING

PLANTING

DATES ON THE CONTAINER.

1. ALL LEGUME SEED SHALL BE INOCULATED WITH APPROPRIATE

RECOMMENDED BY THE MANUFACTURER SHALL BE USED.

NITROGEN-FIXING BACTERIA. THE INOCULANT SHALL BE A PURE CULTURE

PREPARED SPECIFICALLY FOR THE SEED SPECIES AND USED WITHIN THE

2. A MIXING MEDIUM RECOMMENDED BY THE MANUFACTURER SHALL BE USED

FOR HYDRAULIC SEEDING, FOUR TIMES THE AMOUNT OF INOCULANT

ALL INOCULATED SEED SHALL BE PROTECTED FROM THE SUN AND HIGH

EMPERATURES AND SHALL BE PLANTED THE SAME DAY INOCULATED. NO

INOCULATED SEED SHALL REMAIN IN THE HYDROSEEDER LONGER THAN ONE

MIX THE SEED (INOCULATED IF NEEDED), FERTILIZER, AND WOOD CELLULOSE

OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY

UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR

SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED.

FOR BROADCAST PLANTING, USE A CULTIPACKER-SEEDER, DRILL, ROTARY

SEEDER. OTHER MECHANICAL SEEDER. OR HAND SEEDING TO DISTRIBUTE

THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED

LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH

FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE

NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN

BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.

PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE

GROWTH OF THE PERMANENT (PERENNIAL) SPECIES, NO-TILL SEEDING SHALL

BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST

TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE

MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS.

COVER. PERMANENT MULCH COVER SELECTION WHERE VEGETATION IS NOT

LANDSCAPING PLANS. OR AT THE DIRECTION OR APPROVAL OF THE OWNER.

MULCH SELECTION FOR TEMPORARY COVER OF PERMANENT VEGETATION

GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY

TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING

DISPERSED WHEN AGITATED IN WATER. THE FI BERS SHALL CONTAIN A DYE

STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER

SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE

WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY

ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE

. HAY AND STRAW MULCH SHALL BE PRESSED INTO THE SOIL IMMEDIATELY

AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW

SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12

DESIGNED TO TACK STRAW SHALL BE APPLIED IN CONJUNCTION WITH OR

IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL

BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

ALL TACKIFIERS, BINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO

TACK STRAW SHOULD BE VERIFIED NONTOXIC THROUGH EPA 2021.0 TESTING.

STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER

3. RYE OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO

4. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE

INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE

SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE

INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S

AN ERECT POSITION. MULCH SHALL NOT BE PLOWED INTO THE SOIL.

2. SYNTHETIC TACKIFIERS. BINDERS OR HYDRAULIC MULCH SPECIFICALL

WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OF

INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS

THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN

SPREADING EQUIPMENT. OTHER SPREADING EQUIPMENT OR BY HAND. MULCH

SHALL BE BASED ON SELECTION GUIDELINES IN THE "MULCH REQUIREMENTS

APPLIED SHOULD BE PLACED AS INDICATED ON TREE REPLACEMENT AND/OR

MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% TO 100% SOIL

FOR PERMANENT STABILIZATION" TABLE ON THIS SHEET.

SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE ..

SEEDING. APPLYING MULCH

WITH HYDRAULIC SEEDING EQUIPMENT

OF THE FOLLOWING METHODS:

REFER TO TACKIFIERS-TAC

SPECIFICATIONS.

**BEDDING MATERIAL** 

TO ONE-HALF BUSHEL PER ACRE.

APPLYING MULCH

ANCHORING MULCH

WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN

TO BOND THE INOCULANT TO THE SEED. FOR CONVENTIONAL SEEDING, USE

TWICE THE AMOUNT OF INOCULANT RECOMMENDED BY THE MANUFACTURER.

MULCH SHALL BE APPLIED TO ORNAMENTAL BEDS, AROUND SHRUBS, AND ON BARE AREAS ON LAWNS. WHEN BEDDING MATERIALS ARE NOT SPECIFIED ON THE LANDSCAPE AND/OR TREE REPLACEMENT PLANS. THE CONTRACTOR SHALL SELECT AND SEEK PRIOR APPROVAL OF THE OWNER TO PLACE BEDDING MATERIAL SHOWN IN THE "MULCH REQUIREMENTS FOR PERMANENT STABILIZATION" TABLE ON THIS SHEET.

#### IRRIGATION

WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION.

TOPDRESSING

TOPDRESSING WILL BE APPLIED ON ALL TEMPORARY AND PERMANENT (PERENNIAL) SPECIES PLANTED ALONE OR IN MIXTURES WITH OTHER SPECIES. RECOMMENDED RATES OF APPLICATION ARE LISTED ON THIS. SHEET AND IN TABLE 6-5.1. OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GA, SIXTH EDITION.

| MULCH REQUIREMENTS FOR PERMANENT STABILIZATION       |                 |   |  |  |  |  |  |
|--|-----------------|---|--|--|--|--|--|
| MATERIAL   | RATE            | WHERE TO USE  |  |  |  |  |  |
| DRY STRAW  | 2 TONS/ACRE     | TEMPORARY COVER IN SEEDED   |  |  |  |  |  |
| DRY HAY  | 2-1/2 TONS/ACRE | AREAS   |  |  |  |  |  |
| WOOD CELLULOSE<br>MULCH OR WOOD<br>PULP FIBER        | 500 LB/ACRE     | HYDRAULIC APPLICATIONS<br>(REQUIRES STRAW OR HAY<br>APPLICATION NOTED ABOVE<br>FOLLOWING HYDRAULIC SEEDING) |  |  |  |  |  |
| WOOD CELLULOSE OR<br>WOOD PULP FIBER W/<br>TACKIFIER | 1,000 LB/ACRE   | USE FOR HYDRAULIC SEEDING ON<br>SLOPES 3/4:1 AND GREATER  |  |  |  |  |  |
| SERICEA LESPEDEZA<br>HAY (CONTAINING<br>MATURE SEED) | 3 TONS/ACRE     | USE ON AREAS WHERE SERICEA<br>LESPEDEZA IS MAY BE ESTABLISHED   |  |  |  |  |  |
| GRAIN STRAW  | 4" TO 6"        | FOR AREAS WHERE ORNAMENTALS<br>OR GROUND COVERS ARE PLANTED   |  |  |  |  |  |
| GRASS HAY  | 4" TO 6"        | AND NO LANDSCAPE/TREE   |  |  |  |  |  |
| PINE NEEDLES   | 3" TO 5"        | REPLACEMENT PLANS HAVE BEEN<br>PREPARED THAT SPECIFY  |  |  |  |  |  |
| CHIPPED WOOD<br>MULCH                                | 4" TO 6"        | OTHERWISE. REQUIRES ADVANCE<br>APPROVAL OF OWNER. NOT<br>APPROPRIATE FOR GRASS SEEDING                      |  |  |  |  |  |
| PINE BARK  | 4" TO 6"        | APPROPRIATE FOR GRASS SEEDING<br>APPLICATIONS.  |  |  |  |  |  |

#### DISTURBED AREA STABILIZATION (WITH SODDING)

#### SOIL PREPARATION

- BRING SOIL SURFACE TO FI NAL GRADE. CLEAR SURFACE OF TRASH, WOODY DEBRIS, STONES AND CLODS LARGER THAN 1". APPLY SOD TO SOIL SURFACES ONLY AND NOT FROZEN SURFACES. OR GRAVEL TYPE SOILS.
- TOPSOIL PROPERLY APPLIED WILL HELP GUARANTEE A STAND. DON'T USE TOPSOIL RECENTLY TREATED WITH HERBICIDES OR SOIL STERILANTS.

#### LIME AND FERTILIZER RATES

- 1. FERTILIZE AT RATES SHOWN IN THE "FERTILIZER RATES FOR SOD" TABLE ON THIS SHEET
- AGRICULTURAL LIME SHOULD BE APPLIED BASED ON SOIL TESTS IF AVAILABLE OR AT A RATE OF 1 TO 2 TONS PER ACRE.
- INSTALLATION

AREAS

M-L, P, C

P, C

P, C

P, C

P, C

M-L, P

SPECIES

VARIETY

BERMUDA

GRASS

COMMON

BAHAIA GRASS

PENSACOLA

CENTIPEDE

ST AUGUSTINE

COMMON

ZOYSIA

EMERALD

MYER

TALL FESCUE

KENTUCKY

- 1. LAY SOD WITH TIGHT JOINTS AND IN STRAIGHT LINES. DON'T OVERLAP JOINTS STAGGER JOINTS AND DO NOT STRETCH SOD
- ON SLOPES STEEPER THAN 3:1, SOD SHOULD BE ANCHORED WITH PINS OR OTHER APPROVED METHODS. INSTALLED SOD SHOULD BE ROLLED OR TAMPED TO PROVIDE GOOD CONTACT BETWEEN SOD AND SOIL.
- 3. SOD SHOULD NOT BE CUT OR SPREAD IN EXTREMELY WET OR DRY WEATHER. IRRIGATION SHOULD BE USED TO SUPPLEMENT RAINFALL FOR A MINIMUM OF 2-3 WEEKS.
- SOD SHOULD BE CUT AND INSTALLED WITHIN 36 HOURS OF DIGGING. AVOID PLANTING WHEN SUBJECT TO FROST HEAVE OR HOT WEATHER, IF IRRIGATION IS NOT AVAILABLE
- THE SOD TYPE SHOULD BE BASED ON THE LANDSCAPE PLANS, OR IN THE CASE LANDSCAPE PLANS ARE NOT INCLUDED. AT THE DIRECTION OF THE OWNER.

FERTILIZER REQUIREMENTS FOR SOD

RESOURCE | MAINT. | FERTILZER | RATE

FIRST

SECOND

FIRST

FIRST

FIRST

FIRST

SECOND

SECOND

SECOND

YEAR (N-P-K)

SECOND 6-12-12

SECOND 6-12-12

M-L: MOUNTAIN-LIMESTONE, P: PIEDMONT, C: COASTAL

SEE "THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA, SIXTH

6-12-12

6-12-12

6-12-12

6-12-12

6-12-12

6-12-12

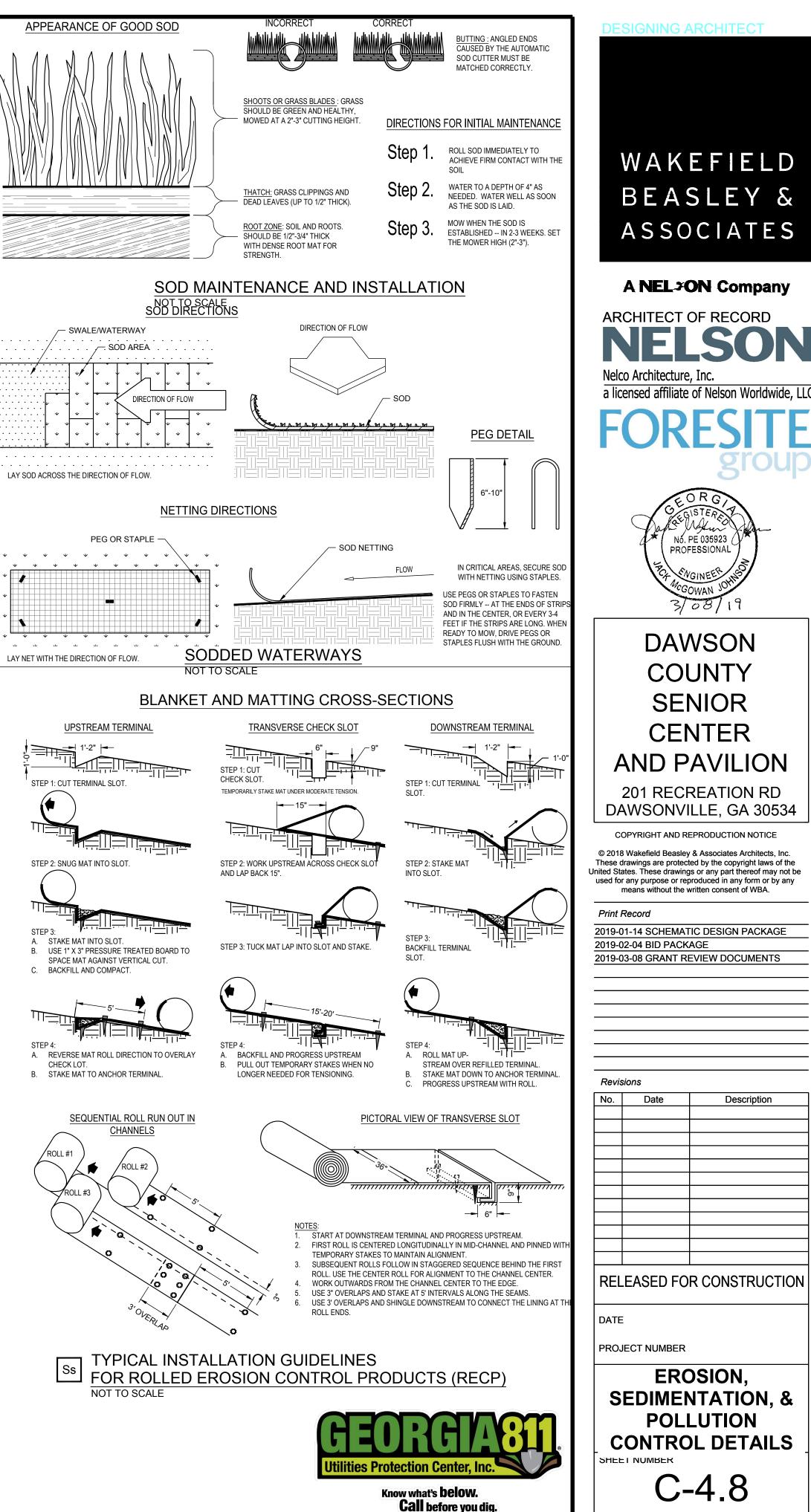
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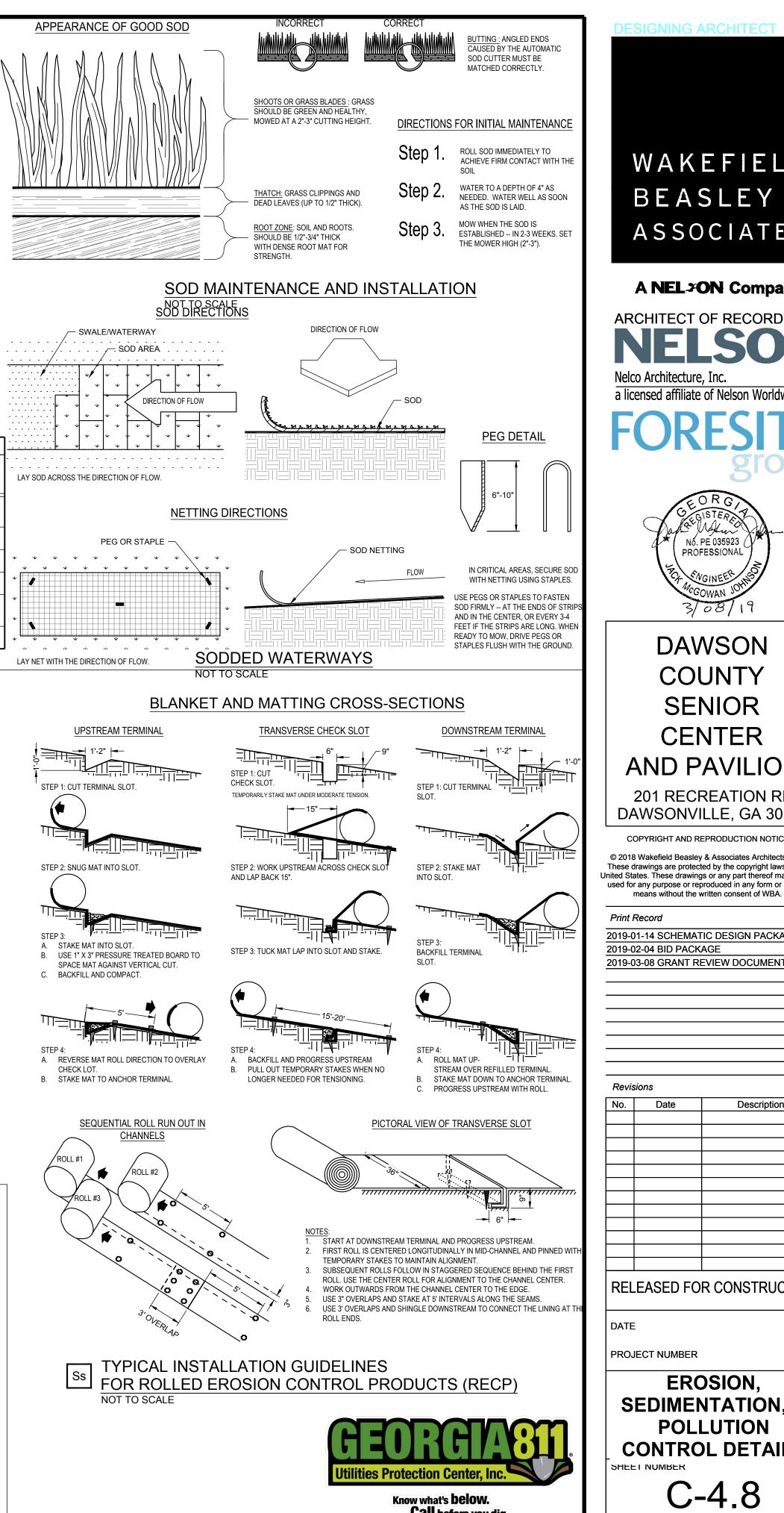
6-12-12

6-12-12

FIRST 6-12-12 1500

| SOD N<br>NOT TO SO<br>SOD DIREC |
|---------------------------------|







EDITION FOR MAJOR LAND RESOURCE AREAS.

ALL SLOPE STABILIZATION PRODUCTS MUST HAVE A DOCUMENTED "C" FACTOR OF 0.080 PER ASTM D6459 AND BE ON THE GASWCC APPROVED PRODUCTS LIST (APL).

**ROLLED EROSION CONTROL PRODUCT (RECP) CLASSIFICATIONS:** 

- SHORT TERM FUNCTIONAL LONGEVITY OF 12 MONTHS • EXTENDED TERM - FUNCTIONAL LONGEVITY OF 24 MONTHS
- LONG TERM FUNCTIONAL LONGEVITY OF 36 MONTHS

CONSERVATION WEBSITE (HTTP://WWW.GASWCC.GEORGIA.GOV.)

REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", SIXTH EDITION, FOR MORE DETAILED INFORMATION ON SPECIFIC LONGEVITY CRITERIA.

THE APPROVED PRODUCTS LIST AND TEST METHODS FOR APPROVED MATERIALS ARE AVAILABLE AT THE GEORGIA SOIL AND WATER

#### SITE PREPARATION

AFTER THE SITE HAS BEEN SHAPED AND GRADED TO DESIGN, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN ONE INCH IN DIAMETER. AND ANY FOREIGN MATERIAL THAT WILL PREVENT CONTACT OF THE SOIL STABILIZATION MAT WITH THE SOIL SURFACE. SURFACE MUST BE SMOOTH TO ENSURE PROPER CONTACT OF BLANKETS OR MATTING TO THE SOIL SURFACE. IF NECESSARY, REDIRECT ANY RUNOFF FROM THE DITCH OR SLOPE DURING INSTALLATION.

#### MAINTENANCE

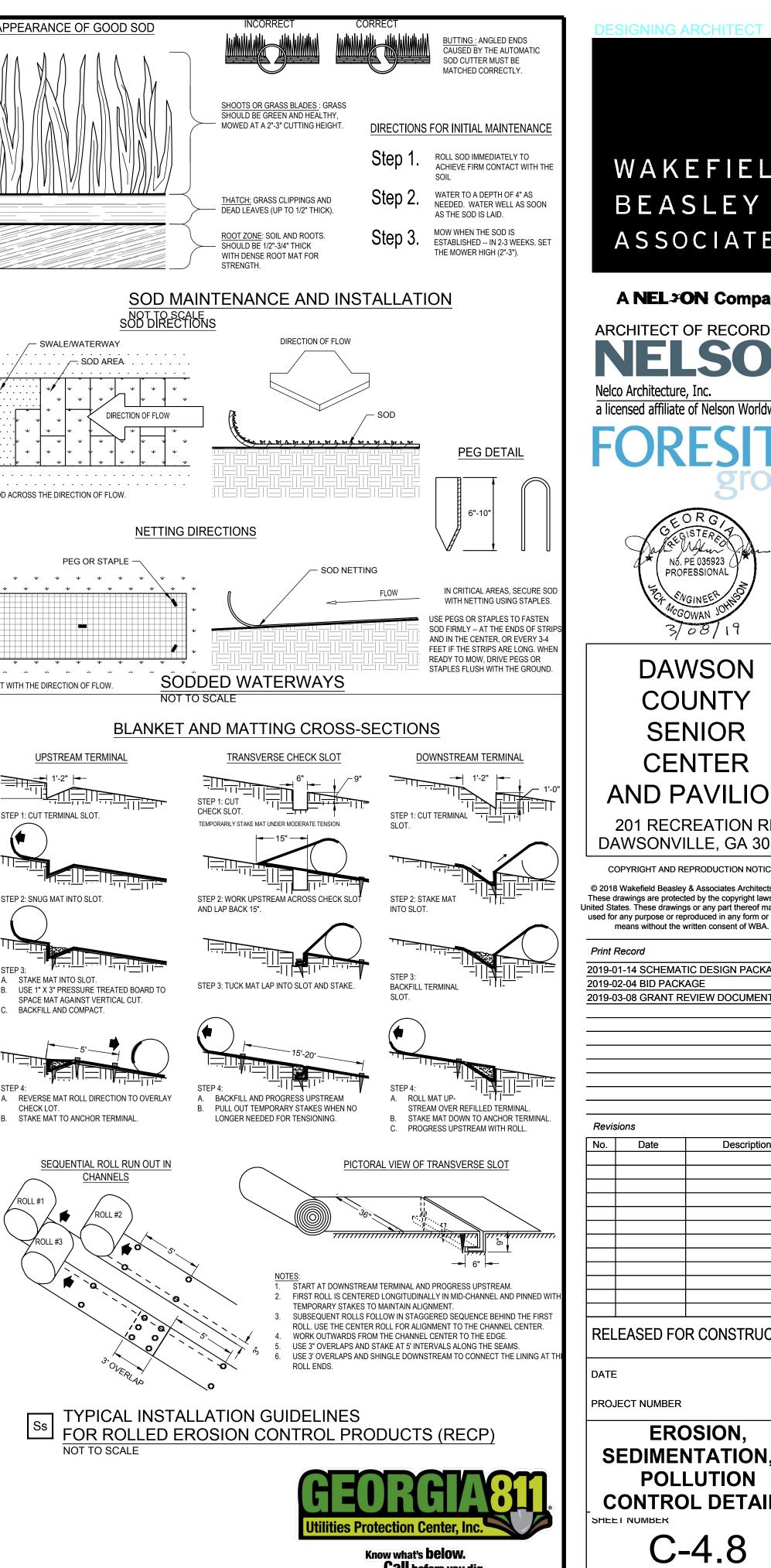
ALL EROSION CONTROL BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION. PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS. REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL THEY BECOME PERMANENTLY STABILIZED.

#### DUST CONTROL ON DISTURBED AREAS

#### REFER TO THE POLLUTION CONTROL NOTES FOR RECOMMENDED SEQUENCE AND PRACTICE OF DUST CONTROL MEASURES.

#### TEMPORARY METHODS

- 1. APPLICATION OF MULCH (SEE Ds1) 2. TEMPORARY VEGETATIVE COVER (SEE Ds2)
- 3. SPRAY ON ADHESIVES (SEE Tac)
- 4. TILLAGE THE ROUGHENING OF SOIL AND BRING CLODS TO THE SURFACE. IT SHOULD BE USED AS AN EMERGENCY MEASURE BEFORE HIGH WIND **EROSION POTENTIAL**
- 5. IRRIGATION SPRINKLE WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.
- 6. BARRIERS SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, BALES OF HAY, AND SIMILAR MATERIALS TO BE PLACED TO RIGHT ANGLES OF PREVAILING CURRENTS. TO BE EFFECTIVE, BARRIERS MUST BE AT
- INTERVALS OF APPROX. 15 TIMES THEIR HEIGHT. 7. CALCIUM CHLORIDE APPLICATION - APPLY AS NEEDED TO KEEP SURFACE
- PREMANENT METHODS
- 1. PERMANENT VEGETATION (SEE Ds3)
- 2. TOPSOILING COVER WITH LESS EROSIVE TOPSOIL 3. STONE - COVER AREAS SUBJECT TO WIND EROSION AND HIGH TRAFFIC AREAS WITH CRUSHED STONE OR COARSE GRAVEL.



NITROGEN TOP

DRESSING

(LB/AC)

50-100

50-100

50-100

50-100

50-100

50-100

50-100

50-100

50-100

50-100

50-100

(LB/AC)

1500

800

1500

800

1500

800

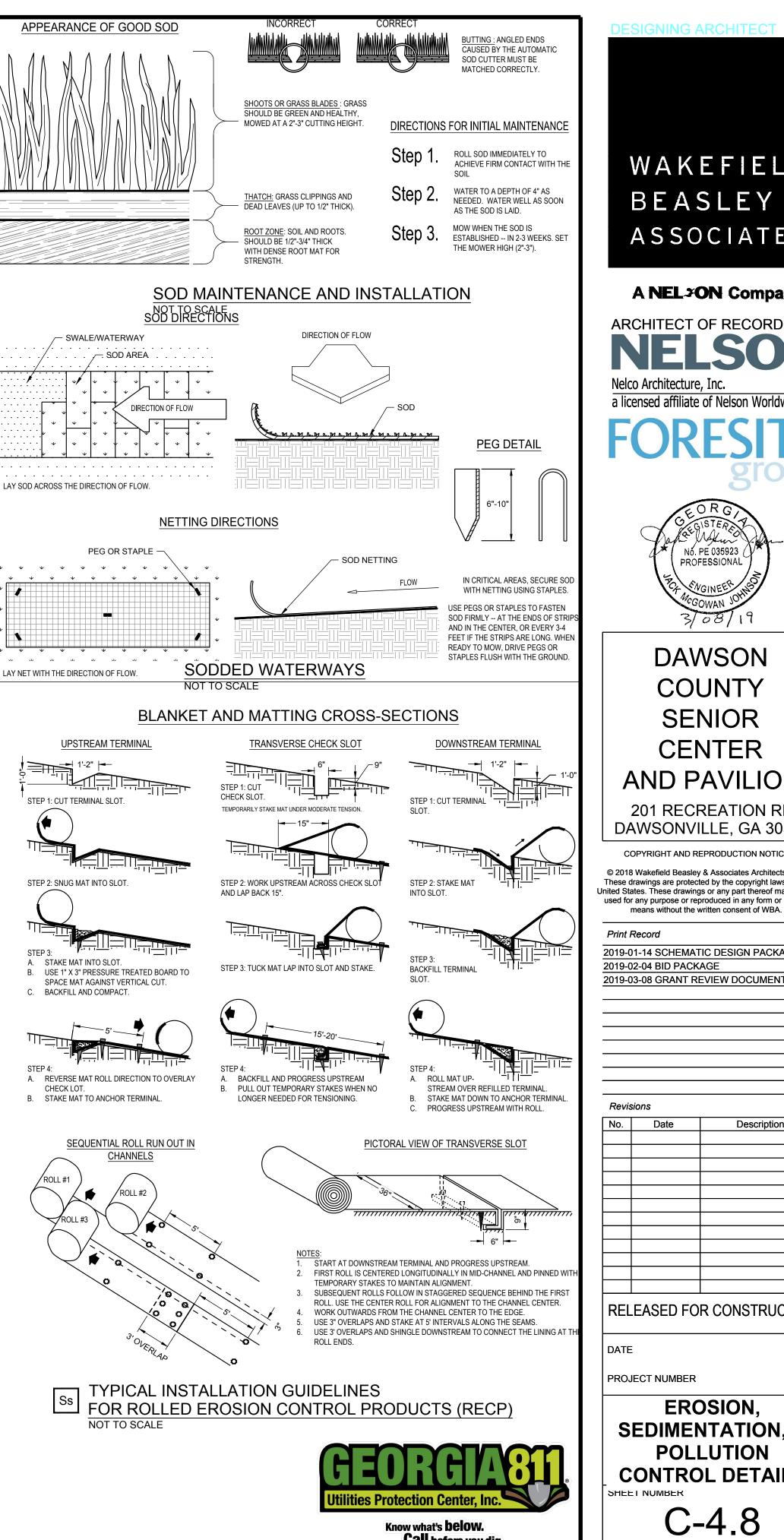
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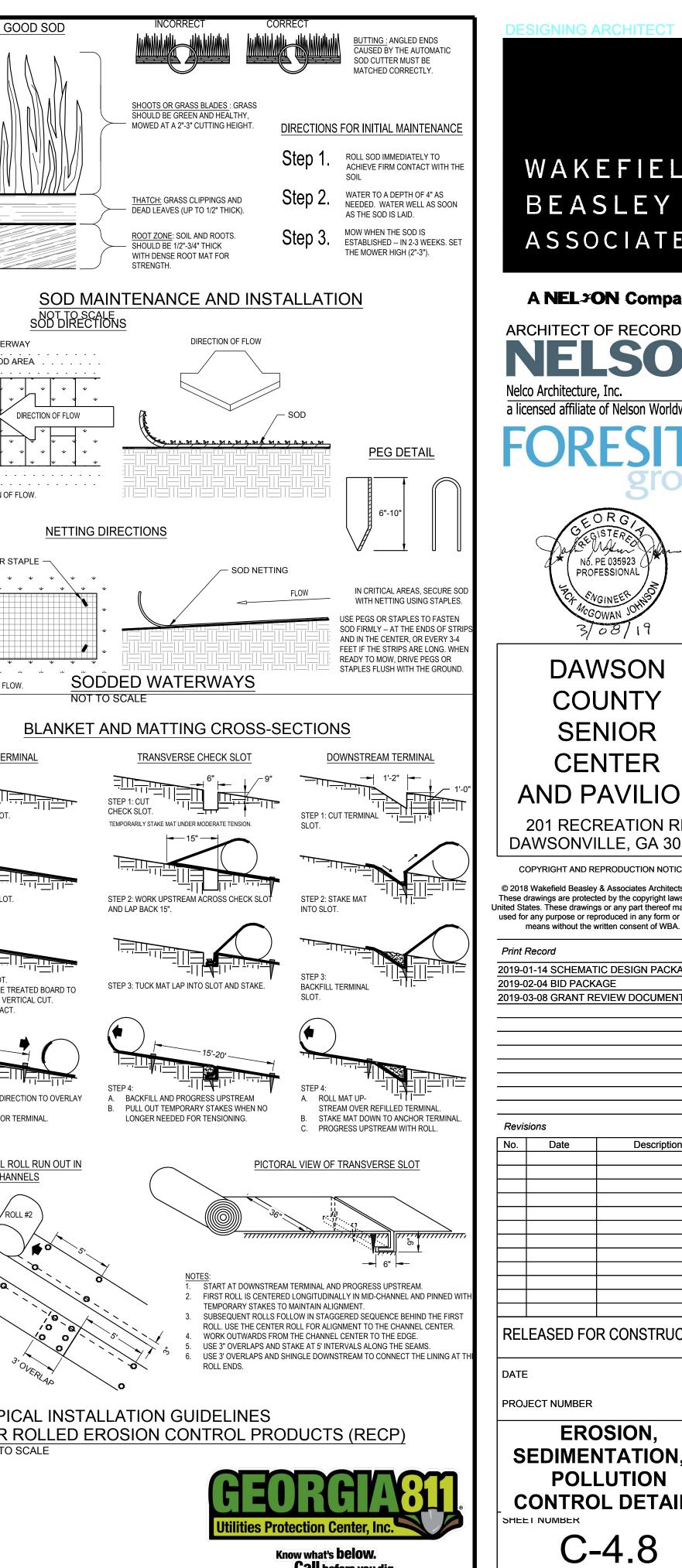
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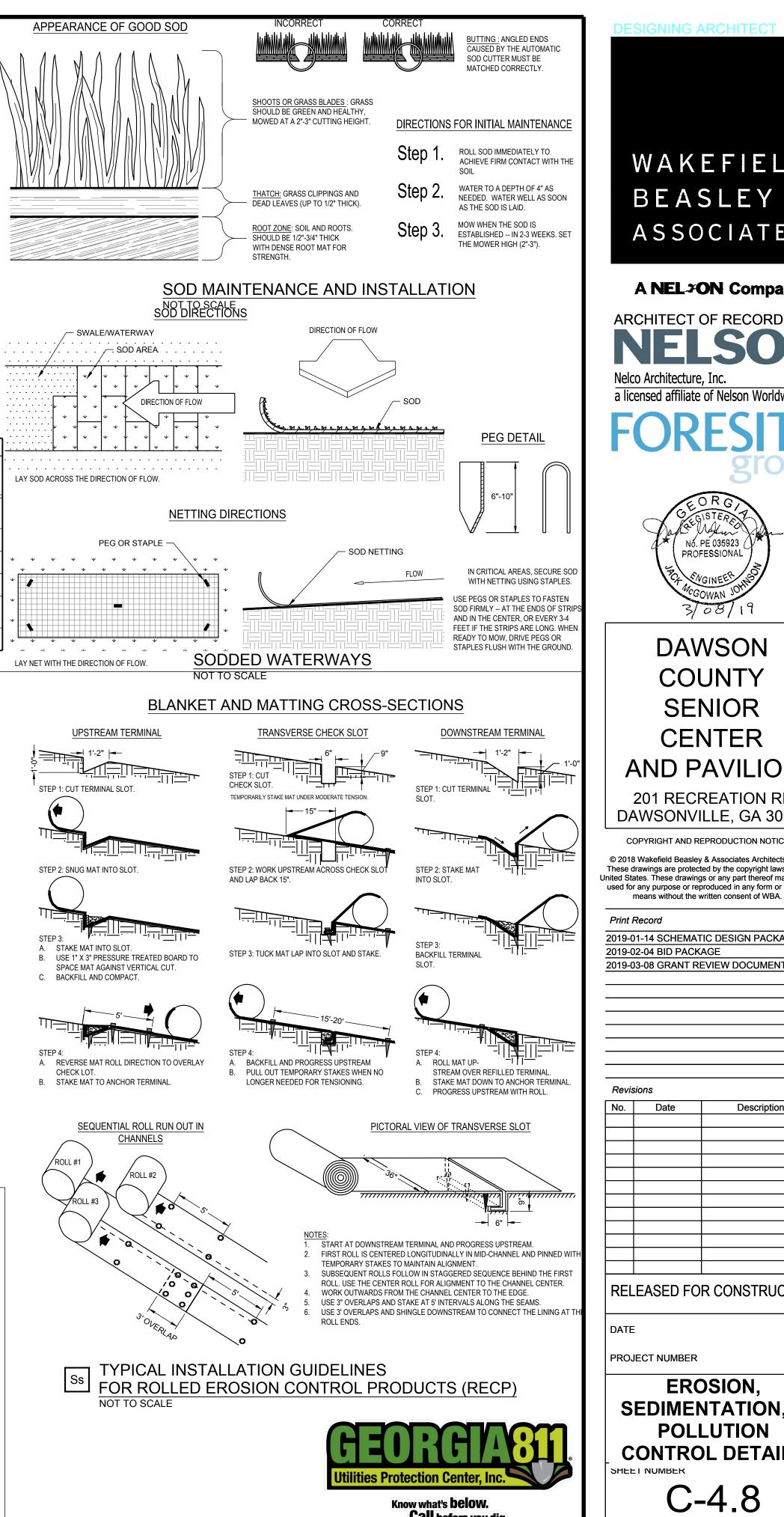
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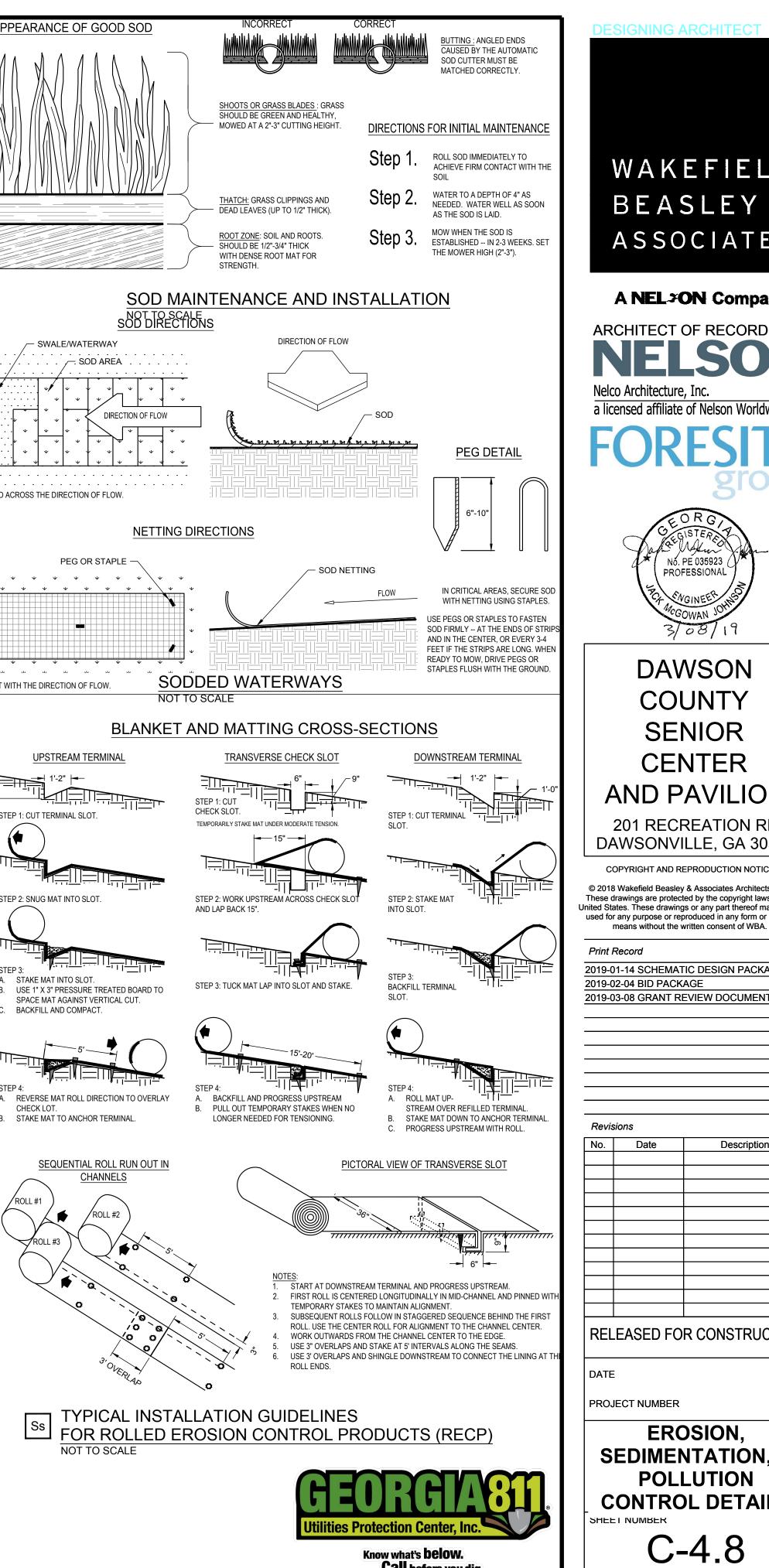
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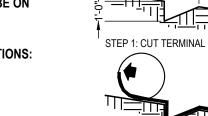
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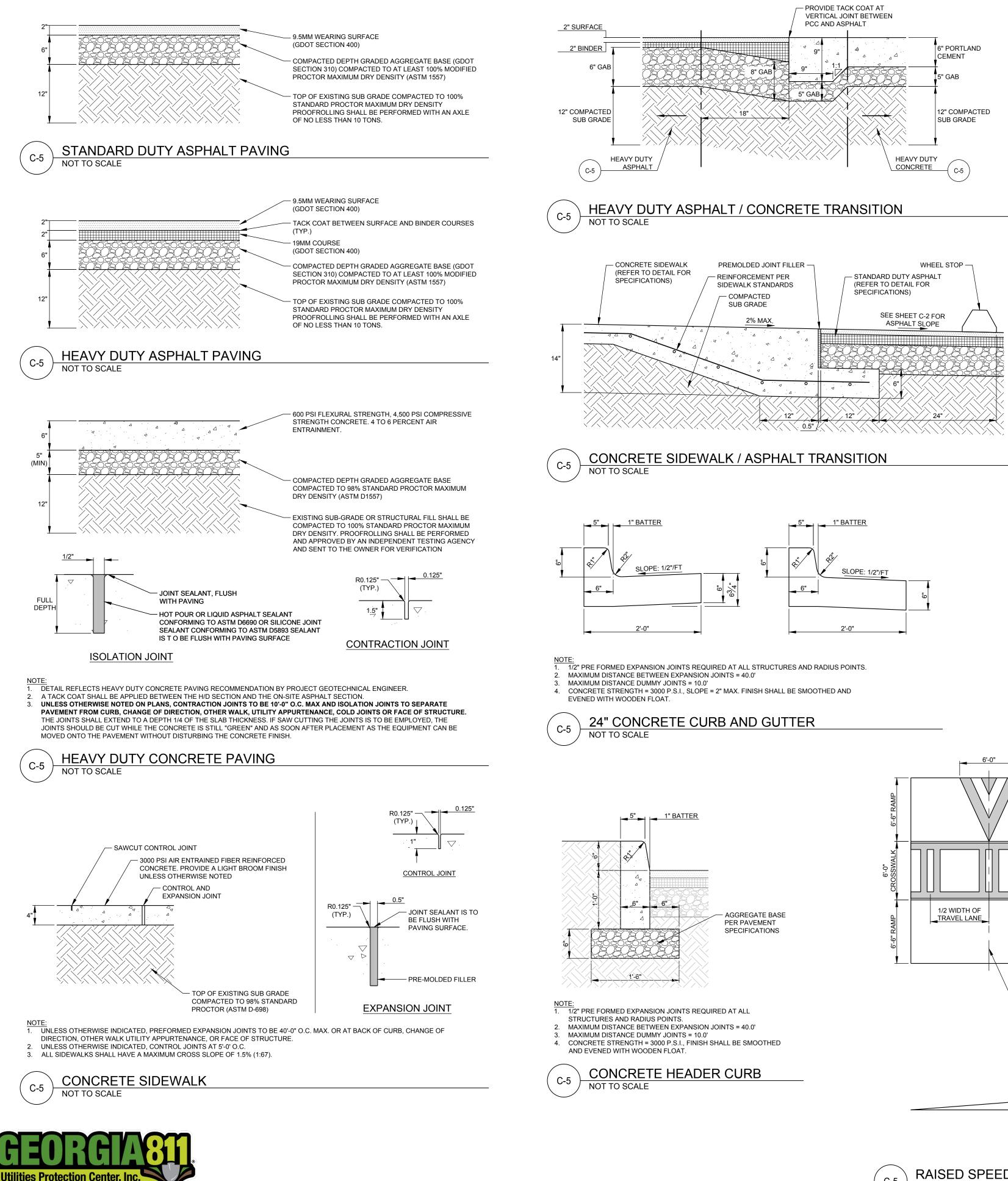








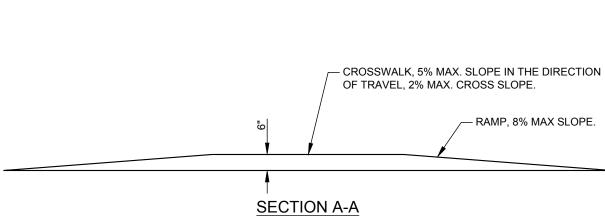




Know what's **below**.

**Call** before you dig.

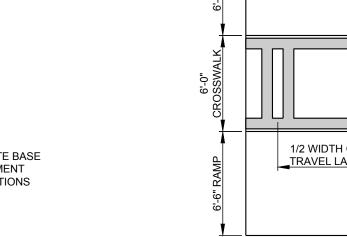


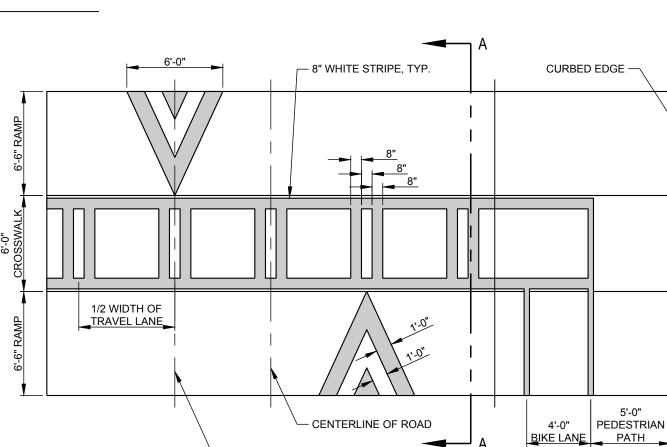


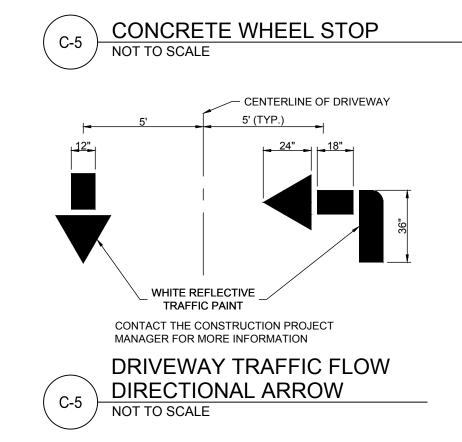
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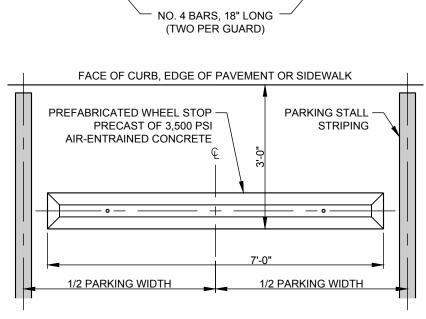


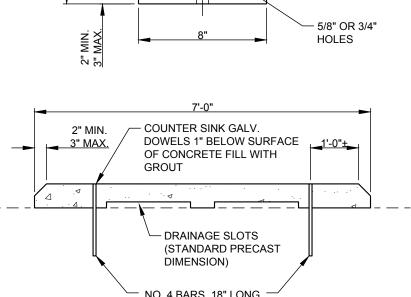












4" MIN.

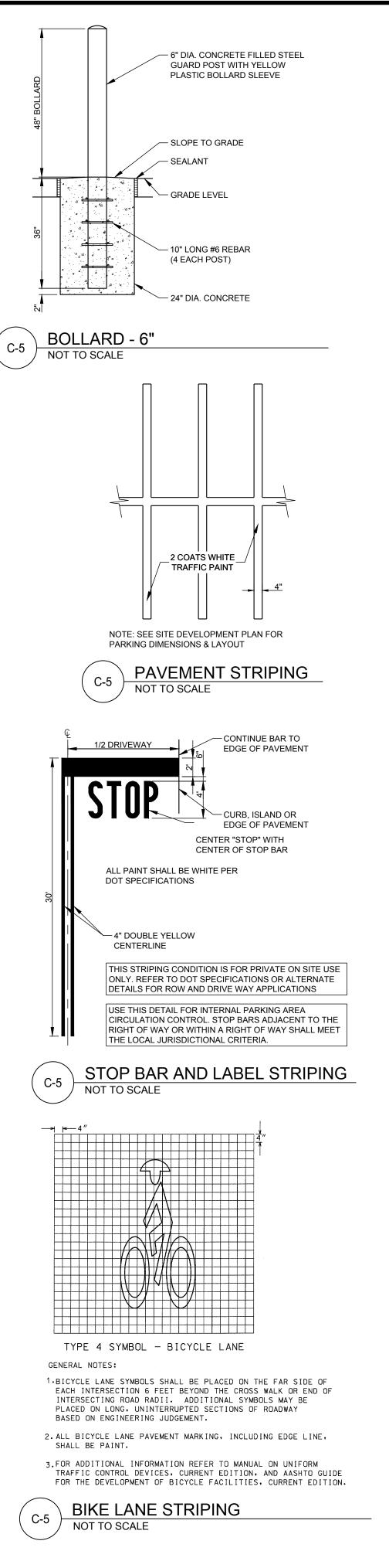
5" MAX.

- R1" CAST OR

RUBBED

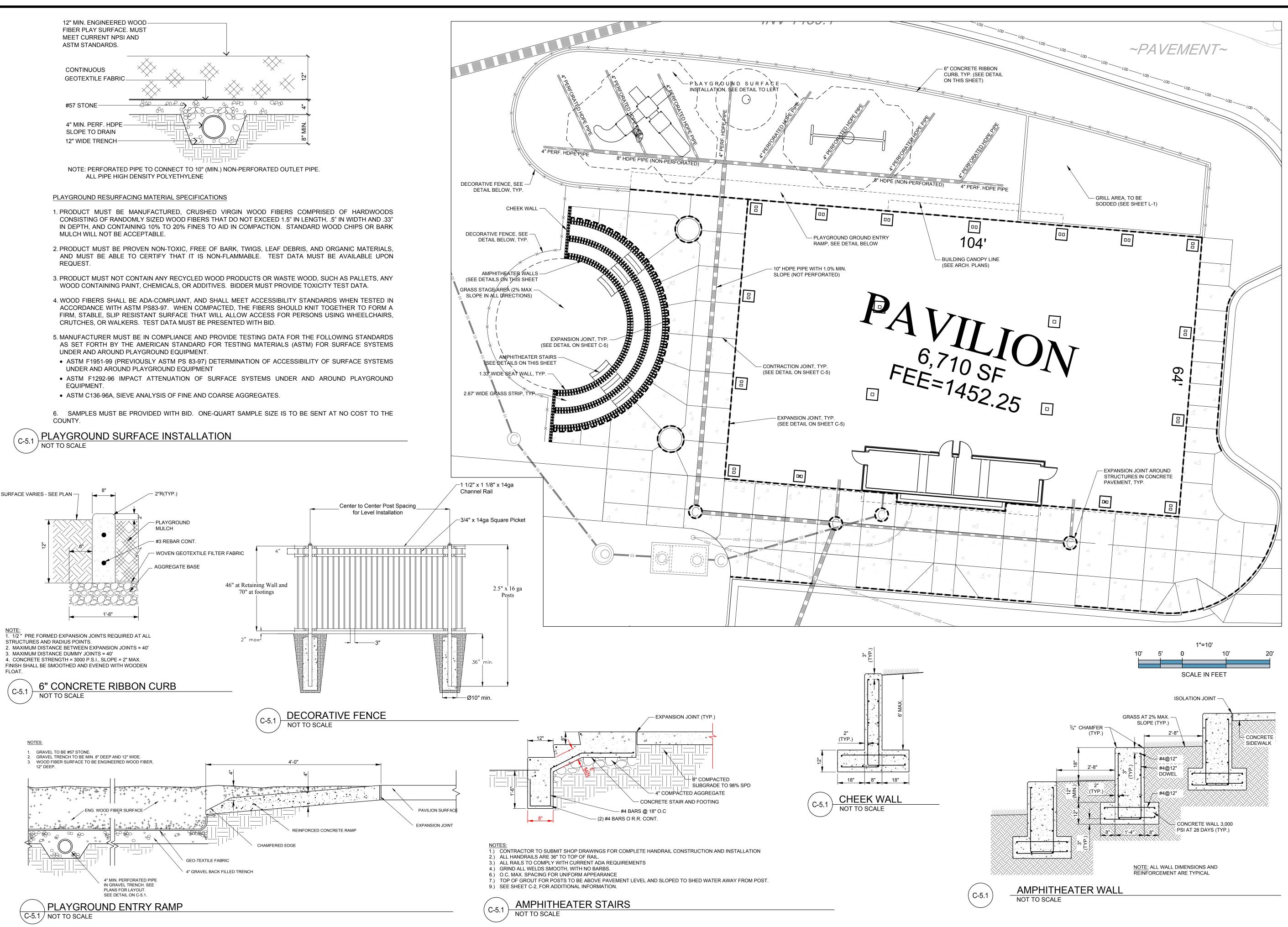
1/4" PITCH

OPTIONAL

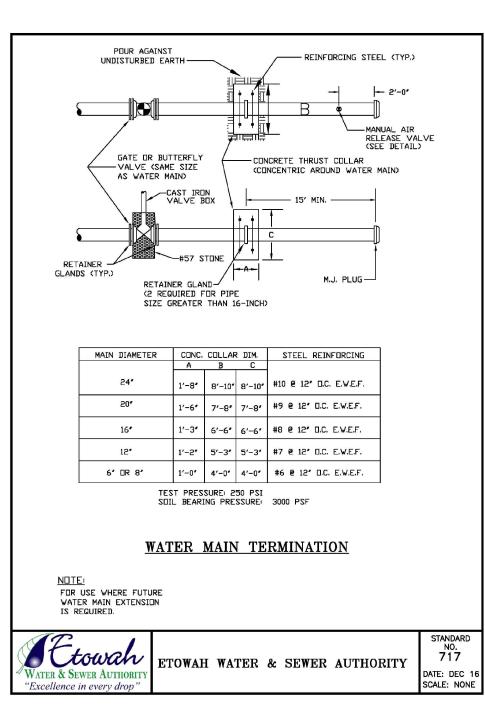


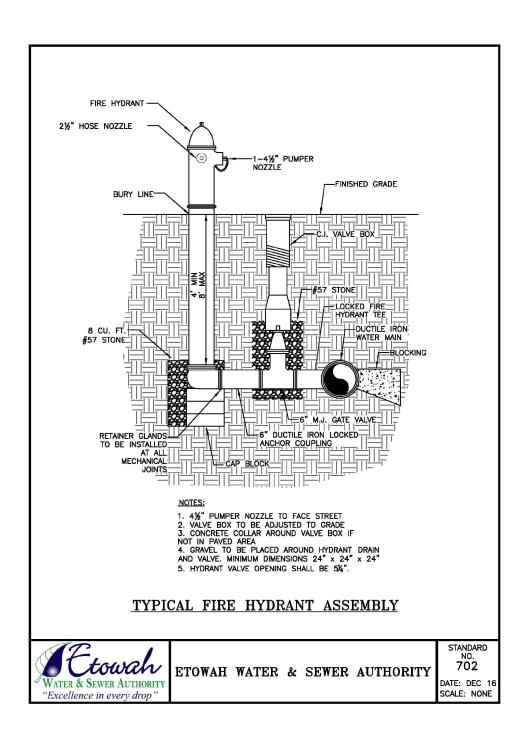
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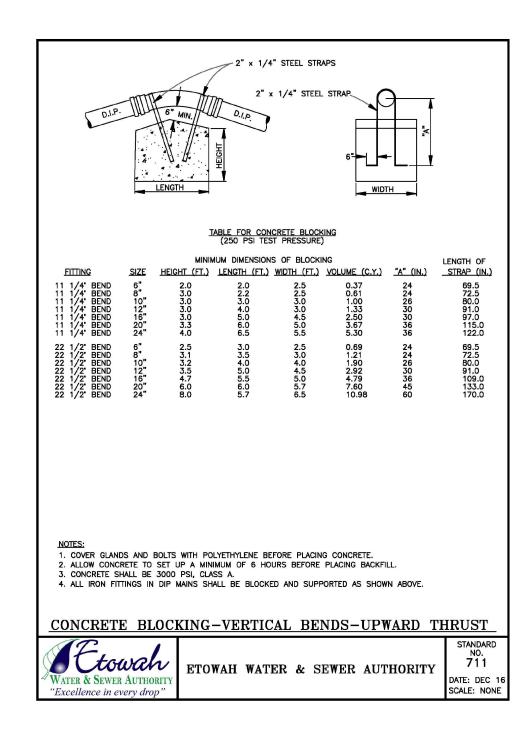
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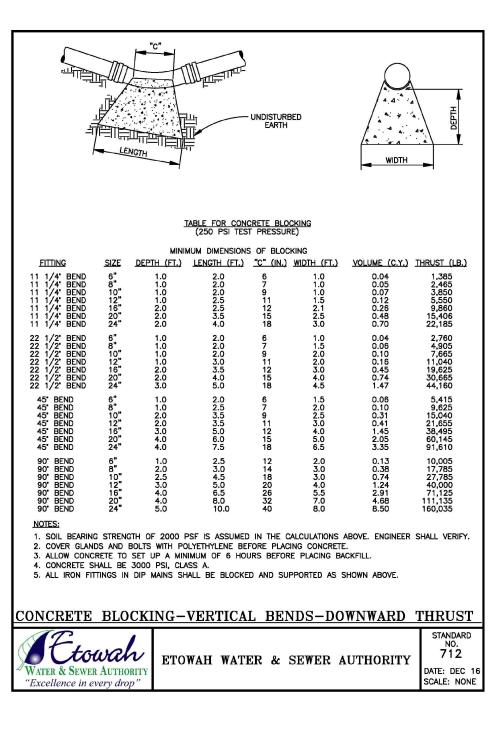


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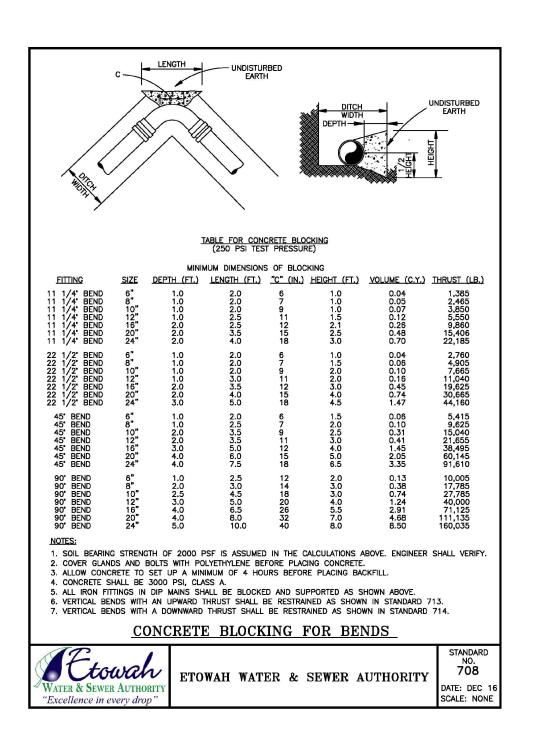


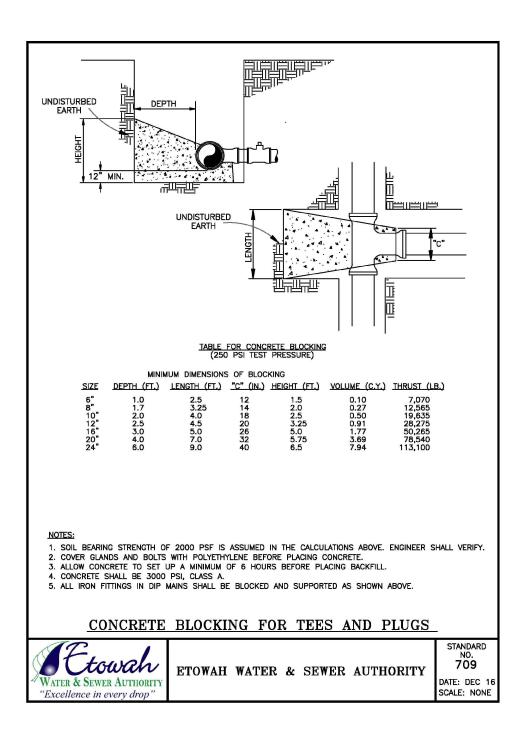


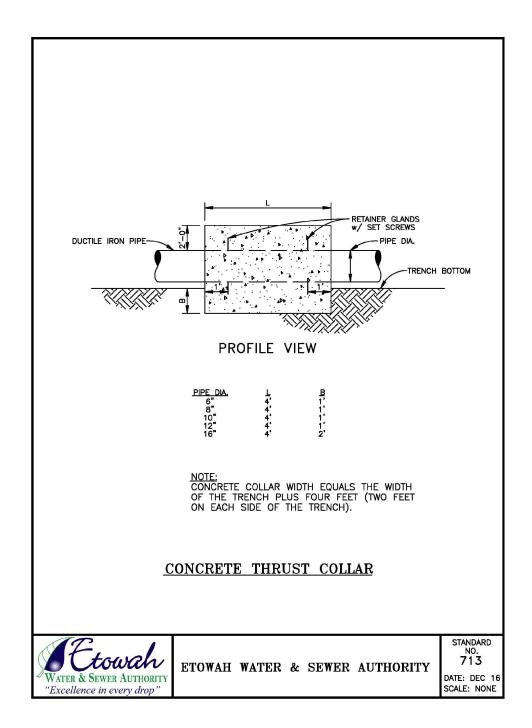


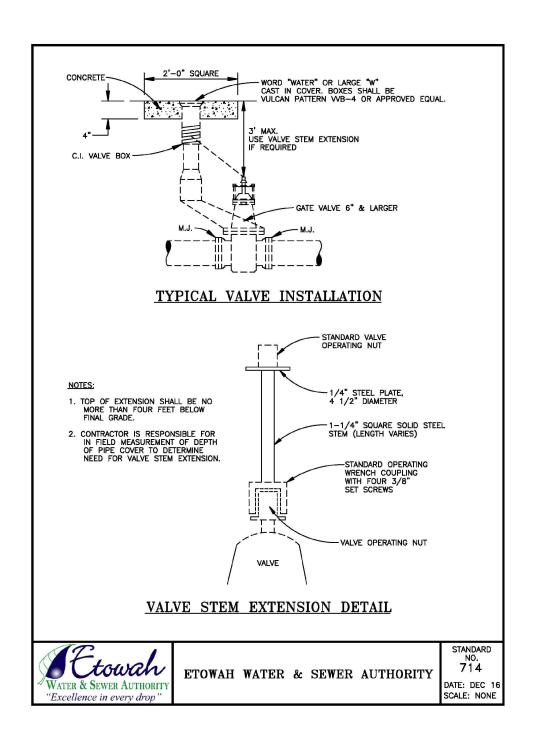


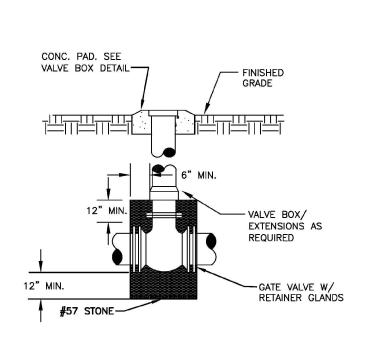
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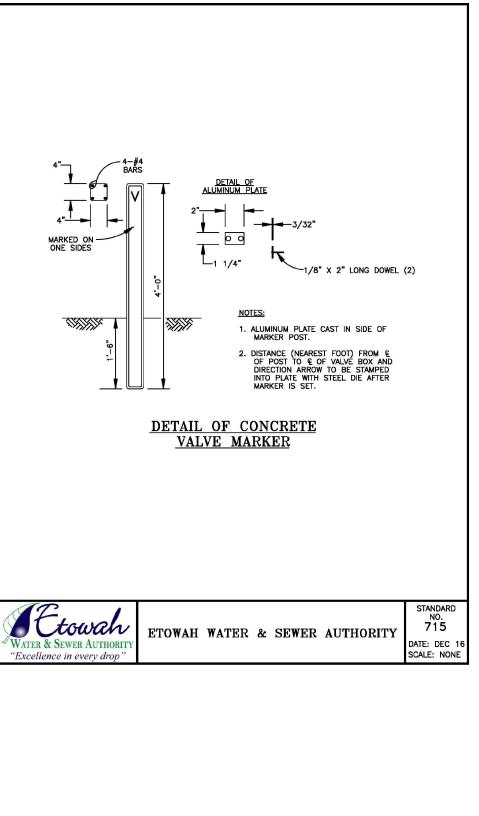




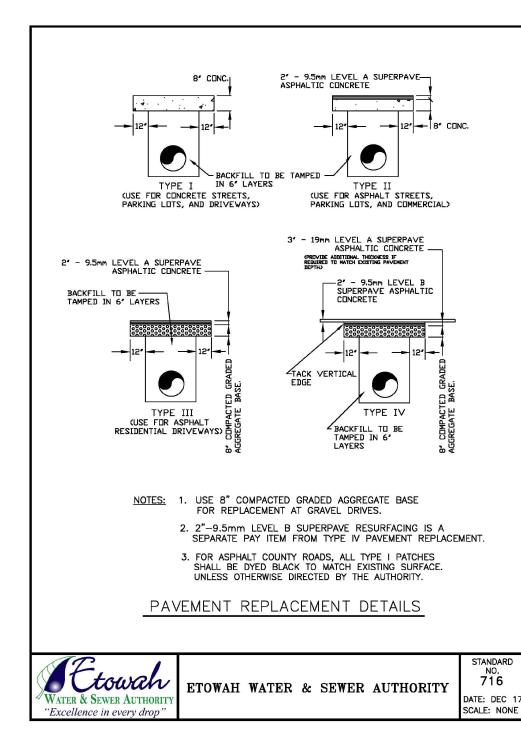


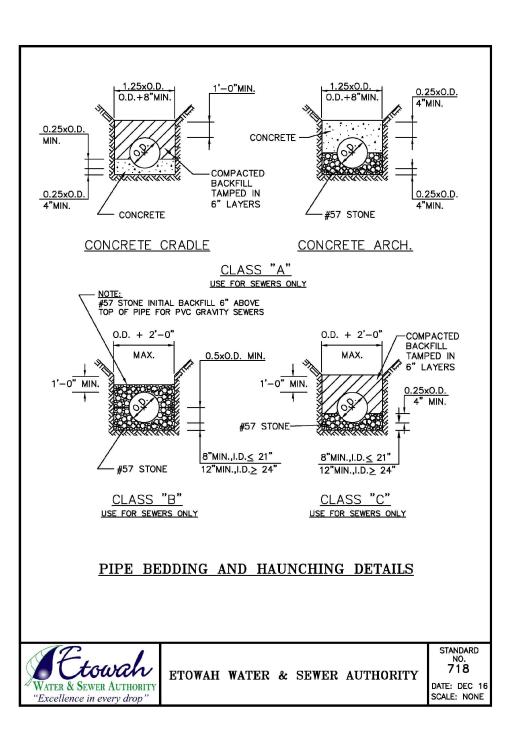
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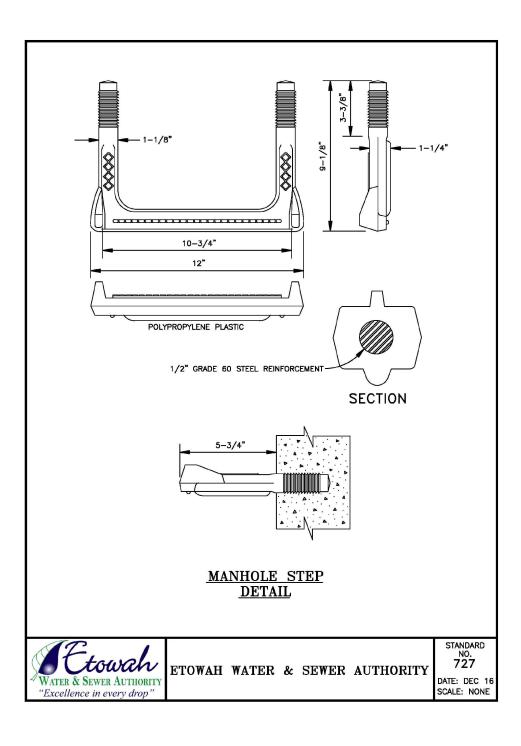
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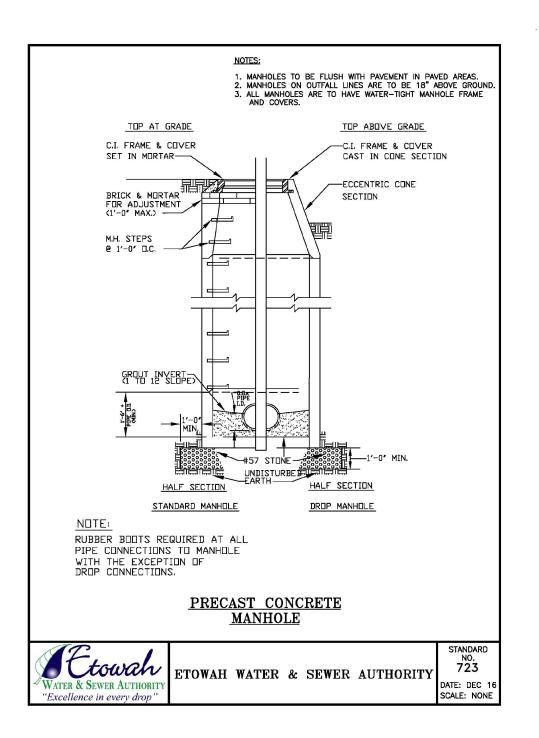
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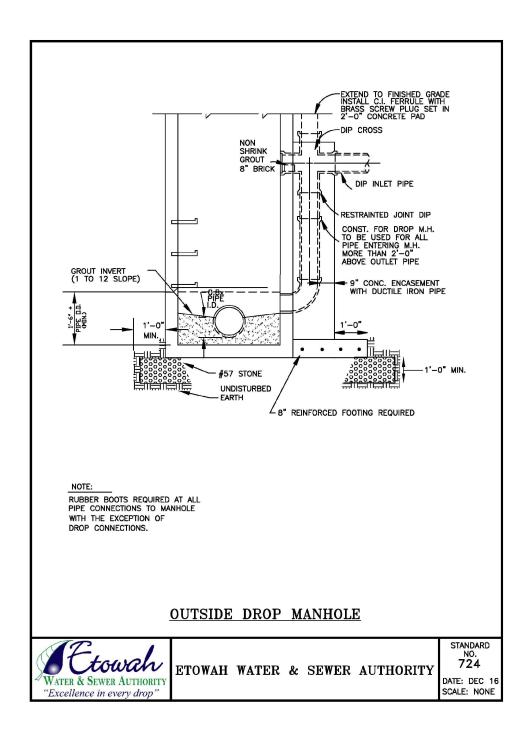


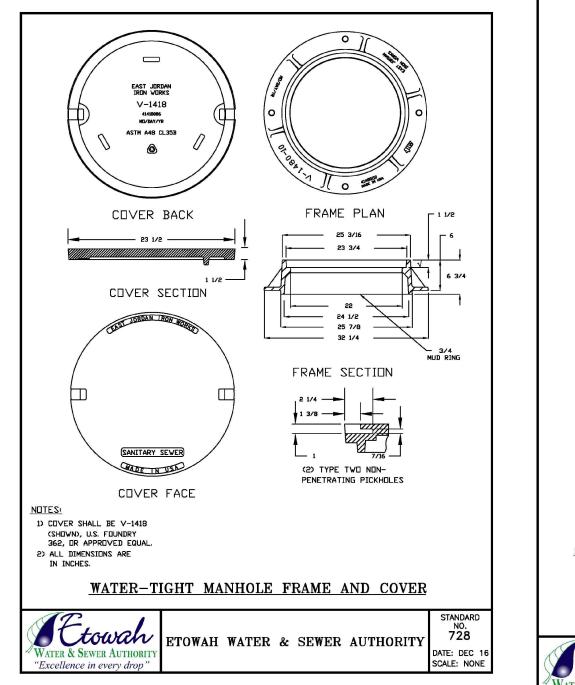


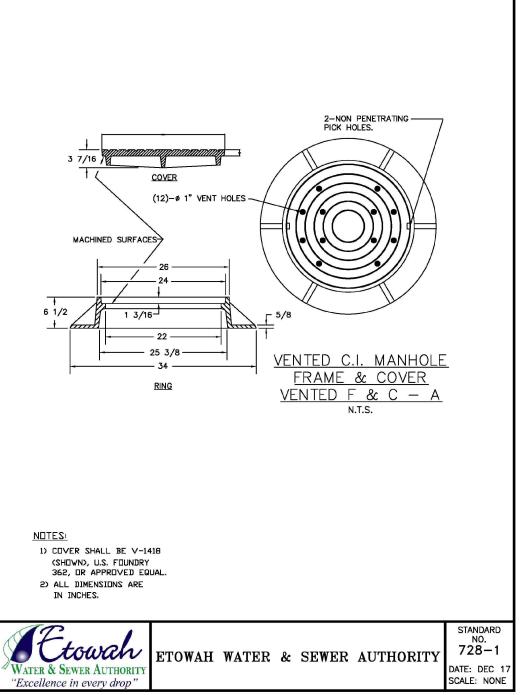












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|--|---|--|--|--|---|--|---|--|-------------------------|-------------------------|------------------|----------|--|
| Image: Several content         Image: Several content<  | Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           SCHEDULE OF GOVERNING DIMENSIONS         Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           SCHEDULE OF GOVERNING DIMENSIONS         Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           SCHEDULE OF GOVERNING DIMENSIONS         Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           21" & 24"         60" TO 90"         4'-0"         2'-0"         6"           21" & 24"         60" TO 90"         4'-0"         2'-0"         6"           21" & 24"         60" TO 90"         5'-0"         2'-0"         6"           21" & 24"         60" TO 90"         5'-0"         2'-0"         6"           21" & 24"         60" TO 90"         5'-0"         2'-0"         10'-1/2"           30" & 36"         0" TO 80"         5'-0"         3'-0"         10'-1           30" & 36"         60" TO 90"         6'-0"         3'-0"         10'-1           30" & 36"         60" TO 35"         6'-0"         3'-0"         10'-1           30" & 36"         60" TO 35"         6'-0"         3'-0"         10'-1  | N         N         P:         N         N         N         N         N         N         N         RADIUS         EQUALS D.L         N         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         N         R | $\frac{\mathbb{E}_{MAIN}}{\mathbb{E}_{VAIV}} \xrightarrow{\mathbb{E}_{VAIV}} \mathbb{E}_{VAIV} \xrightarrow{\mathbb{E}_{VAIV}} \xrightarrow{\mathbb{E}_{VAIV}} \mathbb{E}_{VAIV} \xrightarrow{\mathbb{E}_{VAIV}} $   | $\frac{E}{21^{\circ} \times 24^{\circ}} \xrightarrow{\text{OT TO 80^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 100^{\circ}}} \xrightarrow{\text{OT TO 100^{\circ}}} \xrightarrow{\text{OT TO 90^{\circ}}} \xrightarrow{\text{OT OT 100^{\circ}}} \xrightarrow{\text{OT OT 00^{\circ}}} \text{OT OT 00$   | $\frac{E}{21^{\circ} \times 24^{\circ}} \xrightarrow{\text{OT TO 80^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}} \xrightarrow{\text{OT TO 70^{\circ}}}} \xrightarrow{\text{OT TO 70^{\circ}}}} \xrightarrow{\text{OT TO 70^{\circ}}} $ | $\frac{\mathbf{F}_{i}}{\mathbf{F}_{i}} = \frac{\mathbf{F}_{i}}{\mathbf{F}_{i}} + \mathbf{$ | $\frac{E}{21^{\circ} \times 24^{\circ}} \xrightarrow{\text{OT 10 80^{\circ}}} \xrightarrow{\text{OT 0 90^{\circ}}} \xrightarrow{\text{OT 0 80^{\circ}}} \xrightarrow{\text{OT 0 90^{\circ}}} \text{O$ |  | B" ANGLE A              | SEE TABLE<br>FOR RADIUS |                  |          | ANGLE A                                  |
| Image: Standard Manhole       Image: Standard Manhole         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A         MANHOLE       Image: Standard Manhole         11 & 24*       0 TO 90*       4'-0*         21* & 24*       60*       10*         21* & 24*       60*       10*         21* & 24*       60*       10*         21* & 24*       60*       10*         21* & 24*       60*       10*         21* & 24*       60*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         30* & 36*       0*       10*         42*       50*       10*         42*       50*       10*         <  | Image: Standard Manhole       Image: Standard Manhole         Standard Manhole       Standard Manhole         Schedult       Image: Standard Manhole         Schedult       Standard Manhole         Schedult       Image: Standard Manhole         Schedult       Of Governing Dimensions         Pipe Size       Angle A         Manhole       Image: Schedult         Schedult       Of To 90'         21' & 24''       Of To 80'         21'' & 24''       Of To 80'         21'' & 24''       Of To 80'         21'' & 24''       Of To 80'         30'' & 36''       Of To 80'         30'' & 36''       Of To 80''         30'' & 36''       Of To 80''         30'' & 36''       Of To 80''         30'' & 36'''       Of To 80''         30'' & 36'''       Of To 80''         42''''       35''''         30''''''''''''''''''''''''''''''''''''  | Image: Standard Manhole       Image: Standard Manhole         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A         MANHOLE       "R"         1* & 24*       0 TO 90'         21* & 24*       0 TO 60'         21* & 24*       0 TO 80'         21* & 24*       60' TO 70'         21* & 24*       60' TO 70'         30* & 36*       0 TO 80'         5'-0*       2'-0*         21* & 24*       60' TO 70'         30* & 36*       0 TO 80'         5'-0*       2'-0*         30* & 36*       0 TO 80'         5'-0*       2'-0*         30* & 36*       0 TO 80'         6'-0*       3'-0*         30* & 36*       0 TO 90'         42"       50' TO 90'         42"       50' TO 90'         42"       50' TO 90'         42"       50' TO 90'  | $\frac{1}{10000000000000000000000000000000000$   | No.       RADIUS<br>EDUALS D.L.         NO.       TYPICAL PLANS<br>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         21" & 24"       0° TO 90°         21" & 24"       60° TO 70°         21" & 24"       60° TO 70°         21" & 24"       60° TO 70°         30° & 36"       70 TO 80°         30° & 36"       70 TO 80°         30° & 36"       60° TO 70°         30° & 36"       70 TO 80°         30° & 36"       60° TO 90°         42"       35° TO 90°         30° & 36"       80° TO 90°         42"       35° TO 90°         42"       55° TO 90°         42"       35° TO 90°         42"       55° TO 90°         42" <td< th=""><th>No.       No.       No.       No.       EQUALS D.L.         No.       No.       No.       EQUALS D.L.         No.       No.       No.       No.         No.       No.       No.       No.       No.</th><th><math display="block">\frac{1}{1000} + \frac{1}{1000} + \frac{1}{10000} + \frac{1}{10000} + \frac{1}{10000} + \frac{1}{100000} + \frac{1}{10000000000000000000000000000000000</math></th><th><math display="block">\frac{1}{1000} + \frac{1}{1000} + \frac{1}{1000} + \frac{1}{10000} + \frac{1}{10000000000000000000000000000000000</math></th><th></th><th></th><th> <br/>~~~</th><th>X</th><th></th><th></th></td<>  | No.       No.       No.       No.       EQUALS D.L.         No.       No.       No.       EQUALS D.L.         No.       No.       No.       No.         No.       No.       No.       No.       No.   | $\frac{1}{1000} + \frac{1}{1000} + \frac{1}{10000} + \frac{1}{10000} + \frac{1}{10000} + \frac{1}{100000} + \frac{1}{10000000000000000000000000000000000$  | $\frac{1}{1000} + \frac{1}{1000} + \frac{1}{1000} + \frac{1}{10000} + \frac{1}{10000000000000000000000000000000000$   |  |                         | <br>~~~                 | X                |          |  |
| Image: Standard Manhole       Image: Standard Manhole         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A         MANHOLE       Image: Standard Manhole         21" & 24"       0 TO 90"       4'-0"         21" & 24"       0 TO 60"       4'-0"       2'-0"         21" & 24"       60" TO 70"       5'-0"       2'-0"       6"         21" & 24"       60" TO 70"       5'-0"       2'-0"       6"         21" & 24"       60" TO 70"       5'-0"       2'-0"       10'         30" & 36"       70 TO 80"       5'-0"       2'-0"       10'         30" & 36"       70 TO 80"       6'-0"       3'-0"       13"         30" & 36"       70 TO 80"       6'-0"       3'-0"       13"         30" & 36"       70 TO 80"       6'-0"       3'-0"       16"         42"       50" TO 90"       6'-0"       3'-0"       16"         42"       50" TO 90"       6'-0"       0"       3'-0"       3'-0"         30" & 36"       60" TO 70"       6'-0"       10"       3'-0"       13"         30" & 36"       70 TO 80"       6'-0"       10"  | Numerotic         Numerotic         Numerotic           TYPICAL PLANS<br>STANDARD MANHOLE         STANDARD MANHOLE         Numerotic         Numerotic           STANDARD MANHOLE         STANDARD MANHOLE         Numerotic         Numerotic         Numerotic           SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE         ANGLE Δ         MANHOLE         '''''         ''''''''''''''''''''''''''''''''''''  | Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           STANDARD MANHOLE         STANDARD MANHOLE         Standard Manhole         Image: Standard Manhole           SCHEDULE OF GOVERNING DIMENSIONS         Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           SCHEDULE OF GOVERNING DIMENSIONS         Image: Standard Manhole         Image: Standard Manhole         Image: Standard Manhole           21" & 24"         O'TO 60'         4'-O''         2'-O''         6''           21" & 24"         O'TO 60'         4'-O''         2'-O''         6''           21" & 24"         O'TO 80'         5'-O''         2'-O''         6''           21" & 24"         80'TO 90'         5'-O''         2'-O''         10''           30" & 36''         60'TO 70'         5'-O''         2'-O''         10''           30" & 36''         60'TO 70'         6'-O'''         3'-O'''         13'''           30" & 36'''         60'TO 70'''         6'-O''''         10''''         13''''           30" & 36''''         60'TO 70''''''''''''''''''''''''''''''''''''                                   | Image: Standard Manhole       Image: Standard Manhole         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A         MANHOLE       Image: Standard Manhole         11 & 24"       0 TO 90"       4'-0"         21" & 24"       0 TO 60"       4'-0"       2'-0"         21" & 24"       60" TO 70"       5'-0"       2'-0"       6"         21" & 24"       60" TO 70"       5'-0"       2'-0"       6"         21" & 24"       60" TO 70"       5'-0"       2'-0"       6"         21" & 24"       60" TO 70"       5'-0"       2'-0"       10-1/2"         30" & 36"       70 TO 80"       6'-0"       3'-0"       15'-0"         30" & 36"       70 TO 80"       6'-0"       3'-0"       16"         30" & 36"       70 TO 80"       6'-0"       3'-0"       16"         30" & 36"       70 TO 80"       6'-0"       3'-0"       16"         42"       50 TO 90"       6'-0"       3'-0"       16"         42"       50 TO 90"       7'-0"       6'-0"       0"       3'-0"         42"       50 TO 90"       7'-0"       6'-0"       0"       10   | WIN. RADIUS<br>EDUALS D.L.         TYPICAL PLANS<br>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         11 & 24*       0'10 90'         21* & 24*       0'10 60'         21* & 24*       0'10 60'         21* & 24*       60' 10 70'         21* & 24*       60' 10 70'         21* & 24*       60' 10 70'         30* & 36*       0'10 80'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 70'         30* & 36*       60' 10 35'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'         42*       55' 10 90'   | No. 1       No. 1 <t< td=""><td>WIN. RADIUS<br/>EDUALS D.L.         TYPICAL PLANS<br/>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         11 &amp; 24*       0 TO 90'         21* &amp; 24*       0 TO 60'         21* &amp; 24*       0 TO 60'         21* &amp; 24*       60' TO 70'         30* &amp; 36*       70' TO 80'         5'-0*       2'-0*         30* &amp; 36*       70' TO 80'         42*       35' TO 90'         42*       35' TO 90'         42*       50' TO 90'         42*</td><td>NMN. RADIUS<br/>EDUALS D.L.         NUMN. RADIUS<br/>EDUALS D.L.         TYPICAL PLANS<br/>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         11 &amp; 24*       0 TO 90'         21* &amp; 24*       0 TO 60'         21* &amp; 24*       0 TO 60'         21* &amp; 24*       60' TO 70'         30' &amp; 36*       0 TO 80'         5'-0"       2'-0"         30' &amp; 36*       70' TO 80'         6'-0"       3'-0"         30' &amp; 36*       6' TO 90'         6'-0"       3'-0"         30' &amp; 36*       70' TO 80'         6'-0"       3'-0"         30' &amp; 4 36*       70' TO 80'         6'-0"       3'-0"         30' &amp; 4 36*       70' TO 80'         6'-0"       3'-0"         30' &amp; 4 36*       70' TO 80'         6'-0"       3'-0"         42"       50' TO 90'         42"       50' TO 90'         42"&lt;</td><td></td><td></td><td></td><td></td><td></td><td>Z H</td></t<>   | WIN. RADIUS<br>EDUALS D.L.         TYPICAL PLANS<br>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         11 & 24*       0 TO 90'         21* & 24*       0 TO 60'         21* & 24*       0 TO 60'         21* & 24*       60' TO 70'         30* & 36*       70' TO 80'         5'-0*       2'-0*         30* & 36*       70' TO 80'         42*       35' TO 90'         42*       35' TO 90'         42*       50' TO 90'         42*  | NMN. RADIUS<br>EDUALS D.L.         NUMN. RADIUS<br>EDUALS D.L.         TYPICAL PLANS<br>STANDARD MANHOLE         STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ         MANHOLE         11 & 24*       0 TO 90'         21* & 24*       0 TO 60'         21* & 24*       0 TO 60'         21* & 24*       60' TO 70'         30' & 36*       0 TO 80'         5'-0"       2'-0"         30' & 36*       70' TO 80'         6'-0"       3'-0"         30' & 36*       6' TO 90'         6'-0"       3'-0"         30' & 36*       70' TO 80'         6'-0"       3'-0"         30' & 4 36*       70' TO 80'         6'-0"       3'-0"         30' & 4 36*       70' TO 80'         6'-0"       3'-0"         30' & 4 36*       70' TO 80'         6'-0"       3'-0"         42"       50' TO 90'         42"       50' TO 90'         42"<  |  |                         |                         |                  |          | Z H                                      |
| $\frac{F}{2}$ <b>TYPICAL PLANS STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS</b> $\frac{PIPE SIZE ANGLE \Delta MANHOLE ''R'' ''X''}{B^* TO 18^* O' TO 90' 4'-O^* 2'-O^* O'}$ $\frac{21' & 24^* O' TO 60' 4'-O^* 2'-O^* O'}{21' & 24^* O' TO 60' 4'-O^* 2'-O^* O'}$ $\frac{21' & 24^* O' TO 80' 5'-O^* 2'-O^* O'}{21' & 24^* 80' TO 90' 5'-O^* 2'-O^* O'}$ $\frac{21' & 24^* BO' TO 90' 5'-O^* 2'-O^* O'}{30' & 36^* O' TO 60' 5'-O^* 3'-O^* 10'}$ $\frac{30' & 36^* O' TO 80' 6'-O^* 3'-O^* 13''}{30' & 36^* O' TO 35' 6'-O^* 3'-O^* 13''}$ $\frac{30' & 36^* SO' TO 90' 7'-O^* 6'-O^* O' 10'}{44^* & 54^* O' TO 35' 6'-O^* 8'-O^* 0'}$ <b>ETOWAH WATER &amp; SEWER AUTHORITY STANDARD</b> $\frac{FOWAH WATER & SEWER AUTHORITY}$  | $\frac{56}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE}{2} ANGLE \Delta MANHOLE} (1'R'') (1'X'')$ $\frac{8'' TO 18'' O' TO 90' 4'-O'' 2'-O'' 0''}{21'' & 24'' 0' TO 60' 4'-O'' 2'-O'' 6'''}$ $\frac{21'' & 24'' 0' TO 60' 4'-O'' 2'-O'' 6'''}{21'' & 24'' 0' TO 80' 5'-O'' 2'-O'' 7-1/2''}$ $\frac{21'' & 24'' 60' TO 70' 5'-O'' 2'-O'' 6'''}{30' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10'''}$ $\frac{30'' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10'''}{30' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10''''}$ $30'' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10''''''''''''''''''''''''''''''''''$  | $\frac{5}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE}{2} ANGLE \Delta MANHOLE} (1'R'') (1'X'')$ $\frac{8" TO 18" O' TO 90' 4'-O" 2'-O" 0"}{21" & 24" O' TO 60' 4'-O" 2'-O" 6"}$ $\frac{21" & 24" O' TO 60' 4'-O" 2'-O" 6"}{21" & 24" 0' TO 60' 5'-O" 2'-O" 6"}$ $\frac{21" & 24" 80' TO 90' 5'-O" 2'-O" 6"}{21" & 24" 80' TO 90' 5'-O" 2'-O" 10-1/2"}$ $\frac{30" & 36" O' TO 60' 5'-O" 3'-O" 13"}{30" & 36" 0' TO 80' 6'-O" 3'-O" 13"}$ $\frac{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}$ $\frac{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}$ $\frac{42" 35' TO 50' 6'-O" 3'-O" 13"}{35' 10 90' 8'-O" 6'-O" 0"}$ $\frac{42" 50' TO 90' 7'-O" 6'-O" 0"}{48" & 54" 35' TO 90' 8'-O" 6'-O" 0"}$  | $\frac{56}{9}$ <b>STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS</b> $\frac{\text{PIPE SIZE} \text{ ANGLE } \text{ ANGLE } \text{ MANHOLE} \text{ ''R'' ''X''} \\ \hline 8^{*} \text{ TO } 18^{*} & 0^{*} \text{ TO } 90^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 0^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 60^{*} \text{ TO } 70^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 80^{*} \text{ TO } 90^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 80^{*} \text{ TO } 90^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 10^{*} \\ \hline 30^{*} & 36^{*} & 60^{*} \text{ TO } 70^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} & 13^{*} \\ \hline 30^{*} & 36^{*} & 60^{*} \text{ TO } 90^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} & 13^{*} \\ \hline 30^{*} & 36^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} \\ \hline 42^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} \\ \hline 42^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 48^{*} & 654^{*} & 35^{*} \text{ TO } 90^{*} & 8^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 48^{*} & 654^{*} & 35^{*} \text{ TO } 90^{*} & 8^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 726 \\ \hline \text{DAUTHORITY} $   | $\frac{56}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE} ANGLE \Delta MANHOLE (1'R'' ''X'') (1'X'') (1'X'$   | STANDARD MANHOLE       Φ         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE         1" & 24"       0 TO 90°       4'-0"       2'-0"       0"         21" & 24"       0 TO 90°       4'-0"       2'-0"       6"         21" & 24"       0 TO 90°       4'-0"       2'-0"       6"         21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       6"         21" & 24"       60' TO 70°       5'-0"       2'-0"       10"         30" & 36"       60' TO 70°       5'-0"       3'-0"       10"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       70' TO 35'       6'-0" & 7'-0"       6'-0"       0"         42"       5' TO 50'       6'-0" & 7'-0"       6'-0"       0"   | STANDARD MANHOLE       Δ         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE         1" & 24"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 90'       4'-0"       2'-0"       6"         21" & 24"       0' TO 90'       4'-0"       2'-0"       6"         21" & 24"       0' TO 80'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10"         30" & 36"       60' TO 70'       5'-0"       3'-0"       13"         30" & 36"       60' TO 90'       5'-0"       3'-0"       13"         30" & 36"       60' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       60' TO 35'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         42"       5' TO 90'       7'-0"       6'-0"       0"       13"         42  | $\frac{5}{9}$ <b>STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS</b> $\frac{PIPE SIZE}{ANGLE \Delta} \frac{MANHOLE}{DIMETER} \frac{I'R''}{I'X''}$ $\frac{8'' TO 18'' O' TO 90' 4'-0'' 2'-0'' 0''}{21'' & 24'' O' TO 60' 4'-0'' 2'-0'' 6''}$ $\frac{21'' & 24'' O' TO 60' 4'-0'' 2'-0'' 6''}{21'' & 24'' 60' TO 70' 5'-0'' 2'-0'' 6''}$ $\frac{21'' & 24'' 60' TO 70' 5'-0'' 2'-0'' 6''}{21'' & 24'' 80' TO 90' 5'-0'' 2'-0'' 10''}$ $\frac{30'' & 36'' O' TO 80' 6'-0'' 3'-0'' 13''}{30'' & 36'' 60' TO 70' 6'-0'' 3'-0'' 13''}$ $\frac{30'' & 36'' 70' TO 80' 6'-0'' 3'-0'' 13''}{30'' & 36'' 0'' TO 35' 6'-0'' 3'-0'' 13''}$ $\frac{42'' 35' TO 50' 6'-0'' 3'-0'' 13''}{42'' 35' TO 90' 8'-0'' 6'-0'' 0''}$ $\frac{42'' 50' TO 90' 7'-0' 6'-0'' 0''}{48'' & 54'' 35' TO 90' 8'-0'' 6'-0'' 0''}$ <b>STANDARD</b> $\frac{5''}{726}$ <b>ETOWAH WATER &amp; SEWER AUTHORITY</b>   |  | 5                       |                         | D.L.             |          | IIN. RADIUS<br>QUALS D.L.                |
| STANDARD MANHOLE       Υ         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE         1 * 10 * 10 * 10 * 10 * 10 * 10 * 10 *   | $\frac{56}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE}{2} ANGLE \Delta MANHOLE} (1'R'') (1'X'')$ $\frac{8'' TO 18'' O' TO 90' 4'-O'' 2'-O'' 0''}{21'' & 24'' 0' TO 60' 4'-O'' 2'-O'' 6'''}$ $\frac{21'' & 24'' 0' TO 60' 4'-O'' 2'-O'' 6'''}{21'' & 24'' 0' TO 80' 5'-O'' 2'-O'' 7-1/2''}$ $\frac{21'' & 24'' 60' TO 70' 5'-O'' 2'-O'' 6'''}{30' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10'''}$ $\frac{30'' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10'''}{30' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10''''}$ $30'' & 36'' 0' TO 80' 5'-O'' 3'-O'' 10''''''''''''''''''''''''''''''''''$  | $\frac{5}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE}{2} ANGLE \Delta MANHOLE} (1'R'') (1'X'')$ $\frac{8" TO 18" O' TO 90' 4'-O" 2'-O" 0"}{21" & 24" O' TO 60' 4'-O" 2'-O" 6"}$ $\frac{21" & 24" O' TO 60' 4'-O" 2'-O" 6"}{21" & 24" 0' TO 60' 5'-O" 2'-O" 6"}$ $\frac{21" & 24" 80' TO 90' 5'-O" 2'-O" 6"}{21" & 24" 80' TO 90' 5'-O" 2'-O" 10-1/2"}$ $\frac{30" & 36" O' TO 60' 5'-O" 3'-O" 13"}{30" & 36" 0' TO 80' 6'-O" 3'-O" 13"}$ $\frac{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}$ $\frac{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}{30" & 36" 80' TO 90' 6'-O" 3'-O" 113"}$ $\frac{42" 35' TO 50' 6'-O" 3'-O" 13"}{35' 10 90' 8'-O" 6'-O" 0"}$ $\frac{42" 50' TO 90' 7'-O" 6'-O" 0"}{48" & 54" 35' TO 90' 8'-O" 6'-O" 0"}$  | $\frac{56}{9}$ <b>STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS</b> $\frac{\text{PIPE SIZE} \text{ ANGLE } \text{ ANGLE } \text{ MANHOLE} \text{ ''R'' ''X''} \\ \hline 8^{*} \text{ TO } 18^{*} & 0^{*} \text{ TO } 90^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 0^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 4^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 0^{*} \text{ TO } 60^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 60^{*} \text{ TO } 70^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 80^{*} \text{ TO } 90^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 6^{*} \\ \hline 21^{*} & 24^{*} & 80^{*} \text{ TO } 90^{*} & 5^{*} - 0^{*} & 2^{*} - 0^{*} & 10^{*} \\ \hline 30^{*} & 36^{*} & 60^{*} \text{ TO } 70^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} & 13^{*} \\ \hline 30^{*} & 36^{*} & 60^{*} \text{ TO } 90^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} & 13^{*} \\ \hline 30^{*} & 36^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} \\ \hline 42^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 3^{*} - 0^{*} \\ \hline 42^{*} & 50^{*} \text{ TO } 90^{*} & 7^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 48^{*} & 654^{*} & 35^{*} \text{ TO } 90^{*} & 8^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 48^{*} & 654^{*} & 35^{*} \text{ TO } 90^{*} & 8^{*} - 0^{*} & 6^{*} - 0^{*} & 0^{*} \\ \hline 726 \\ \hline \text{DAUTHORITY} $   | $\frac{56}{9}$ <b>TYPICAL PLANS</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>STANDARD MANHOLE</b><br><b>SCHEDULE OF GOVERNING DIMENSIONS</b><br>$\frac{PIPE SIZE} ANGLE \Delta MANHOLE (1'R'' ''X'') (1'X'') (1'X'$   | STANDARD MANHOLE       Φ         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE         1" & 24"       0 TO 90°       4'-0"       2'-0"       0"         21" & 24"       0 TO 90°       4'-0"       2'-0"       6"         21" & 24"       0 TO 90°       4'-0"       2'-0"       6"         21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60' TO 70°       5'-0"       2'-0"       6"         21" & 24"       80' TO 90°       5'-0"       2'-0"       6"         21" & 24"       60' TO 70°       5'-0"       2'-0"       10"         30" & 36"       60' TO 70°       5'-0"       3'-0"       10"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       60' TO 90°       6'-0"       3'-0"       13"         30" & 36"       70' TO 35'       6'-0" & 7'-0'       6'-0"       0"         42"       5' TO 50'       6'-0" & 7'-0'       6'-0"  | STANDARD MANHOLE       Δ         STANDARD MANHOLE       STANDARD MANHOLE         SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE         1" & 24"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 90'       4'-0"       2'-0"       6"         21" & 24"       0' TO 90'       4'-0"       2'-0"       6"         21" & 24"       0' TO 80'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10"         30" & 36"       60' TO 70'       5'-0"       3'-0"       13"         30" & 36"       60' TO 90'       5'-0"       3'-0"       13"         30" & 36"       60' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       60' TO 35'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         42"       5' TO 90'       7'-0"       6'-0"       0"       13"         42  | $\frac{5}{9}$ <b>STANDARD MANHOLE STANDARD MANHOLE STANDARD MANHOLE SCHEDULE OF GOVERNING DIMENSIONS</b> $\frac{PIPE SIZE}{ANGLE \Delta} \frac{MANHOLE}{DIMETER} \frac{I'R''}{I'X''}$ $\frac{8'' TO 18'' O' TO 90' 4'-0'' 2'-0'' 0''}{21'' & 24'' O' TO 60' 4'-0'' 2'-0'' 6''}$ $\frac{21'' & 24'' O' TO 60' 4'-0'' 2'-0'' 6''}{21'' & 24'' 60' TO 70' 5'-0'' 2'-0'' 6''}$ $\frac{21'' & 24'' 60' TO 70' 5'-0'' 2'-0'' 6''}{21'' & 24'' 80' TO 90' 5'-0'' 2'-0'' 10''}$ $\frac{30'' & 36'' O' TO 80' 6'-0'' 3'-0'' 13''}{30'' & 36'' 60' TO 70' 6'-0'' 3'-0'' 13''}$ $\frac{30'' & 36'' 70' TO 80' 6'-0'' 3'-0'' 13''}{30'' & 36'' 0'' TO 35' 6'-0'' 3'-0'' 13''}$ $\frac{42'' 35' TO 50' 6'-0'' 3'-0'' 13''}{42'' 35' TO 90' 8'-0'' 6'-0'' 0''}$ $\frac{42'' 50' TO 90' 7'-0' 6'-0'' 0''}{48'' & 54'' 35' TO 90' 8'-0'' 6'-0'' 0''}$ <b>STANDARD</b> $\frac{5''}{726}$ <b>ETOWAH WATER &amp; SEWER AUTHORITY</b>   | 2. SEM   | LATER AL                |                         | C PAI            |          |  |
| STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE $\Delta$ MANHOLE<br>DAMETER       ''R''       ''x''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       70' TO 80'       5'-0"       2'-0"       10-1/2"         30" & 36"       6' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"       10"         48" & 54"       35' TO 90'       8'-0"       6'-0" <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS           PIPE SIZE         ANGLE Δ         MANHOLE<br/>DIAMETER         ''R''         ''X''           8" TO 18"         O' TO 90"         4'-O"         2'-O"         0"           21" &amp; 24"         O' TO 60"         4'-O"         2'-O"         6"           21" &amp; 24"         O' TO 60"         4'-O"         2'-O"         6"           21" &amp; 24"         60" TO 70"         5'-O"         2'-O"         6"           21" &amp; 24"         70" TO 80"         5'-O"         2'-O"         7.1/2"           21" &amp; 24"         80" TO 90"         5'-O"         2'-O"         10-1/2"           30" &amp; 36"         60" TO 70"         6'-O"         3'-O"         13"           30" &amp; 36"         60" TO 70"         6'-O"         3'-O"         13"           30" &amp; 36"         80" TO 90"         6'-O"         3'-O"         16"           42"         35" TO 90"         6'-O"         3'-O"         3"           42"         50" TO 90"         7'-O"         6'-O"         0"           42"         50" TO 90"         8'-O"         6'-O"         0"           42"         50" TO 90"         8'-O"         6'-O"         0"</td> <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS           PIPE SIZE         ANGLE Δ         MANHOLE<br/>DIAMETER         ''R''         ''X''           8" TO 18"         0 TO 90"         4'-0"         2'-0"         0"           21" &amp; 24"         0 TO 60"         4'-0"         2'-0"         6"           21" &amp; 24"         60" TO 70"         5'-0"         2'-0"         6"           21" &amp; 24"         60" TO 70"         5'-0"         2'-0"         6"           21" &amp; 24"         70" TO 80"         5'-0"         2'-0"         10-1/2"           30" &amp; 36"         0" TO 60"         5'-0"         3'-0"         10"           30" &amp; 36"         60" TO 70"         6'-0"         3'-0"         13"           30" &amp; 36"         60" TO 90"         6'-0"         3'-0"         16"           42"         0" TO 35"         6'-0"         3'-0"         3"           30" &amp; 36"         80" TO 90"         7'-0"         6'-0"         3"           42"         35" TO 90"         7'-0"         6'-0"         0"           42"         50" TO 90"         8'-0"         6'-0"         0"           42"         50" TO 90"         8'-0"         6'-0"         0"</td> <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90"       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60"       4'-0"       2'-0"       6"         21" &amp; 24"       0' TO 60"       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       70' TO 80"       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 60"       5'-0"       3'-0"       10"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       13"         30" &amp; 36"       60' TO 90'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       35' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" &amp; 54"       0' TO 35'       6'-0"       0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"     <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE <math>\Delta</math>       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 80'       5'-0"       3'-0"       8"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       10"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"<td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0 TO 90"       4'-0"       2'-0"       0"         21" &amp; 24"       0 TO 60"       4'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       70 TO 80"       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       10"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       16"         42"       50 TO 90'       6'-0"       3'-0"       3'-0"       4'-0"         42"       50 TO 90'       6'-0"       3'-0"       0"       4'-0"       4''''''''''''''''''''''''''''''''''''</td><td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       70' TO 80'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 60'       5'-0"       3'-0"       18"         30" &amp; 36"       6' TO 70'       6'-0"       3'-0"       13"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         42"       50' TO 35'       6'-0"       0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"     &lt;</td><td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE <math>\Delta</math>       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 80'       5'-0"       3'-0"       8"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       10"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"<td></td><td></td><td>PLANS</td><td>TA I A</td><td></td><td></td></td></td></td> | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS           PIPE SIZE         ANGLE Δ         MANHOLE<br>DIAMETER         ''R''         ''X''           8" TO 18"         O' TO 90"         4'-O"         2'-O"         0"           21" & 24"         O' TO 60"         4'-O"         2'-O"         6"           21" & 24"         O' TO 60"         4'-O"         2'-O"         6"           21" & 24"         60" TO 70"         5'-O"         2'-O"         6"           21" & 24"         70" TO 80"         5'-O"         2'-O"         7.1/2"           21" & 24"         80" TO 90"         5'-O"         2'-O"         10-1/2"           30" & 36"         60" TO 70"         6'-O"         3'-O"         13"           30" & 36"         60" TO 70"         6'-O"         3'-O"         13"           30" & 36"         80" TO 90"         6'-O"         3'-O"         16"           42"         35" TO 90"         6'-O"         3'-O"         3"           42"         50" TO 90"         7'-O"         6'-O"         0"           42"         50" TO 90"         8'-O"         6'-O"         0"           42"         50" TO 90"         8'-O"         6'-O"         0"   | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS           PIPE SIZE         ANGLE Δ         MANHOLE<br>DIAMETER         ''R''         ''X''           8" TO 18"         0 TO 90"         4'-0"         2'-0"         0"           21" & 24"         0 TO 60"         4'-0"         2'-0"         6"           21" & 24"         60" TO 70"         5'-0"         2'-0"         6"           21" & 24"         60" TO 70"         5'-0"         2'-0"         6"           21" & 24"         70" TO 80"         5'-0"         2'-0"         10-1/2"           30" & 36"         0" TO 60"         5'-0"         3'-0"         10"           30" & 36"         60" TO 70"         6'-0"         3'-0"         13"           30" & 36"         60" TO 90"         6'-0"         3'-0"         16"           42"         0" TO 35"         6'-0"         3'-0"         3"           30" & 36"         80" TO 90"         7'-0"         6'-0"         3"           42"         35" TO 90"         7'-0"         6'-0"         0"           42"         50" TO 90"         8'-0"         6'-0"         0"           42"         50" TO 90"         8'-0"         6'-0"         0"                       | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90"       4'-0"       2'-0"       0"         21" & 24"       0' TO 60"       4'-0"       2'-0"       6"         21" & 24"       0' TO 60"       4'-0"       2'-0"       6"         21" & 24"       60' TO 70"       5'-0"       2'-0"       6"         21" & 24"       70' TO 80"       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60"       5'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       60' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       35' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0" <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE <math>\Delta</math>       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 80'       5'-0"       3'-0"       8"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       10"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"<td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0 TO 90"       4'-0"       2'-0"       0"         21" &amp; 24"       0 TO 60"       4'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       70 TO 80"       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       10"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       16"         42"       50 TO 90'       6'-0"       3'-0"       3'-0"       4'-0"         42"       50 TO 90'       6'-0"       3'-0"       0"       4'-0"       4''''''''''''''''''''''''''''''''''''</td><td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       70' TO 80'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 60'       5'-0"       3'-0"       18"         30" &amp; 36"       6' TO 70'       6'-0"       3'-0"       13"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         42"       50' TO 35'       6'-0"       0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"     &lt;</td><td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE <math>\Delta</math>       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 80'       5'-0"       3'-0"       8"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       10"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"<td></td><td></td><td>PLANS</td><td>TA I A</td><td></td><td></td></td></td> | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE $\Delta$ MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 80'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0" <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0 TO 90"       4'-0"       2'-0"       0"         21" &amp; 24"       0 TO 60"       4'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70"       5'-0"       2'-0"       6"         21" &amp; 24"       70 TO 80"       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       10"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       13"         30" &amp; 36"       60 TO 70"       6'-0"       3'-0"       16"         42"       50 TO 90'       6'-0"       3'-0"       3'-0"       4'-0"         42"       50 TO 90'       6'-0"       3'-0"       0"       4'-0"       4''''''''''''''''''''''''''''''''''''</td> <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       70' TO 80'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 60'       5'-0"       3'-0"       18"         30" &amp; 36"       6' TO 70'       6'-0"       3'-0"       13"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         42"       50' TO 35'       6'-0"       0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"     &lt;</td> <td>STANDARD MANHOLE<br/>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE <math>\Delta</math>       MANHOLE<br/>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" &amp; 24"       0' TO 60'       4'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       6"         21" &amp; 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0' TO 80'       5'-0"       3'-0"       8"         30" &amp; 36"       60' TO 70'       6'-0"       3'-0"       10"         30" &amp; 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" &amp; 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90'       8'-0"       6'-0"       0"<td></td><td></td><td>PLANS</td><td>TA I A</td><td></td><td></td></td> | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0 TO 90"       4'-0"       2'-0"       0"         21" & 24"       0 TO 60"       4'-0"       2'-0"       6"         21" & 24"       60 TO 70"       5'-0"       2'-0"       6"         21" & 24"       60 TO 70"       5'-0"       2'-0"       6"         21" & 24"       70 TO 80"       5'-0"       2'-0"       10-1/2"         30" & 36"       60 TO 70"       6'-0"       3'-0"       10"         30" & 36"       60 TO 70"       6'-0"       3'-0"       13"         30" & 36"       60 TO 70"       6'-0"       3'-0"       13"         30" & 36"       60 TO 70"       6'-0"       3'-0"       16"         42"       50 TO 90'       6'-0"       3'-0"       3'-0"       4'-0"         42"       50 TO 90'       6'-0"       3'-0"       0"       4'-0"       4''''''''''''''''''''''''''''''''''''   | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE A       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       70' TO 80'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       18"         30" & 36"       6' TO 70'       6'-0"       3'-0"       13"         30" & 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         42"       50' TO 35'       6'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"     <   | STANDARD MANHOLE<br>SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE $\Delta$ MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 80'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       18"         42"       0' TO 35'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0" <td></td> <td></td> <td>PLANS</td> <td>TA I A</td> <td></td> <td></td>   |  |                         | PLANS                   | TA I A           |          |  |
| SCHEDULE OF GOVERNING DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       O' TO 80"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       10-1/2"         30" & 36"       O' TO 60"       5'-O"       3'-O"       13"         30" & 36"       70" TO 80"       6'-O"       3'-O"       16"         42"       0" TO 35'       6'-O"       3'-O"       3"         42"       50" TO 90"       7'-O"       6'-O"       0"         48" & 54"       35' TO 90"       8'-O"       0"       0"         48" & 54"  | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       7.1/2"         21" & 24"       80" TO 90"       5'-O"       3'-O"       8"         30" & 36"       O' TO 60"       5'-O"       3'-O"       10"         30" & 36"       70' TO 80"       6'-O"       3'-O"       13"         30" & 36"       80' TO 90"       6'-O"       3'-O"       16"         42"       0" TO 35'       6'-O"       3'-O"       16"         42"       50" TO 90"       7'-O"       6'-O"       0"         48" & 54"       35' TO 90"       8'-O"       0"       0"         48" & 54"       35' TO 90"       8'-O"       0"   | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE $\Delta$ MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       16"         42"       55' TO 50'       6'-0"       0"       4"         42"       55' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"   | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       10-1/2"         30" & 36"       O' TO 60"       5'-O"       3'-O"       8"         30" & 36"       60" TO 70"       6'-O"       3'-O"       13"         30" & 36"       80" TO 90"       6'-O"       3'-O"       13"         30" & 36"       80" TO 90"       6'-O"       3'-O"       13"         30" & 36"       80" TO 90"       6'-O"       3'-O"       13"         42"       05 TO 90"       7'-O"       6'-O"       0"         42"       55' TO 90"       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O"       0"       0"         48" & 54"       35' TO 90"       8'-O"       0"  | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       7.1/2"         21" & 24"       80" TO 90"       5'-O"       3'-O"       8"         30" & 36"       O' TO 60"       5'-O"       3'-O"       10"         30" & 36"       70' TO 80"       6'-O"       3'-O"       13"         30" & 36"       80' TO 90"       6'-O"       3'-O"       16"         42"       0" TO 35'       6'-O"       3'-O"       16"         42"       50" TO 90"       7'-O"       6'-O"       0"         48" & 54"       35' TO 90"       8'-O"       0"       0"         48" & 54"       35' TO 90"       8'-O"       0"  | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60' TO 70"       5'-O"       2'-O"       6"         21" & 24"       60' TO 70"       5'-O"       2'-O"       6"         21" & 24"       60' TO 70"       5'-O"       2'-O"       6"         21" & 24"       80' TO 90"       5'-O"       2'-O"       10-1/2"         30" & 36"       O' TO 60"       5'-O"       3'-O"       10"         30" & 36"       60' TO 70"       6'-O"       3'-O"       13"         30" & 36"       70' TO 80"       6'-O"       3'-O"       16"         42"       0' TO 35'       6'-O"       3'-O"       16"         42"       50' TO 90'       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O" & 0"       0"       4"         48" & 54"       35' TO 90'       8'-O"       0"       0"         48" & 54"       35' TO 90'       8'-O"       0"   | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       10-1/2"         30" & 36"       O' TO 60"       5'-O"       3'-O"       10"         30" & 36"       70" TO 80"       6'-O"       3'-O"       13"         30" & 36"       80" TO 90"       6'-O"       3'-O"       16"         42"       0" TO 35"       6'-O"       3'-O"       16"         42"       50" TO 90"       7'-O"       6'-O"       0"         48" & 54"       0" TO 35"       6'-O" & 0"       0"         48" & 54"       35" TO 90"       8'-O"       0"       0"         48" & 54"       35" TO 90"       8'-O"       0"       0"  | SCHEDULE       OF       GOVERNING       DIMENSIONS         PIPE SIZE       ANGLE Δ       MANHOLE<br>DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       60" TO 70"       5'-O"       2'-O"       6"         21" & 24"       80" TO 90"       5'-O"       2'-O"       7.1/2"         21" & 24"       80" TO 90"       5'-O"       3'-O"       8"         30" & 36"       O' TO 60"       5'-O"       3'-O"       10"         30" & 36"       70' TO 80"       6'-O"       3'-O"       13"         30" & 36"       80' TO 90"       6'-O"       3'-O"       16"         42"       0" TO 35'       6'-O"       3'-O"       16"         42"       50" TO 90"       7'-O"       6'-O"       0"         48" & 54"       35' TO 90"       8'-O"       0"       0"         48" & 54"       35' TO 90"       8'-O"       0"   |  | TANDARD                 | MANHOL                  | <u>E</u>         |          |  |
| PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-O"       2'-O"       0"         21" & 24"       O' TO 60"       4'-O"       2'-O"       6"         21" & 24"       O' TO 80"       5'-O"       2'-O"       6"         21" & 24"       60' TO 70"       5'-O"       2'-O"       6"         21" & 24"       80' TO 90"       5'-O"       2'-O"       6"         21" & 24"       80' TO 90"       5'-O"       2'-O"       10-1/2"         30" & 36"       0' TO 60"       5'-O"       3'-O"       10"         30" & 36"       60' TO 70'       6'-O"       3'-O"       10"         30" & 36"       60' TO 70'       6'-O"       3'-O"       13"         30" & 36"       80' TO 90'       6'-O"       3'-O"       16"         42"       0' TO 35'       6'-O"       3'-O"       3"         42"       50' TO 90'       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O" & 0"       0"       4"         48" & 54"       35' TO 90'       8'-O"       0"       0"         48" & 54"       35' TO 90'       8'-O"   | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-0"       2'-0"       0"         21" & 24"       O' TO 60"       4'-0"       2'-0"       6"         21" & 24"       O' TO 80"       5'-0"       2'-0"       6"         21" & 24"       60' TO 70"       5'-0"       2'-0"       6"         21" & 24"       80' TO 90"       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90"       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60"       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90"       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90"       7'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"   | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8* TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       0' TO 80'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       70' TO 80'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       16"         42"       35' TO 50'       6'-0"       0"       48" & 54"       35' TO 90'       8'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"       48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"       0"       NO.   | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90'       4'-O"       2'-O"       0"         21" & 24"       O' TO 60'       4'-O"       2'-O"       6"         21" & 24"       O' TO 80'       5'-O"       2'-O"       6"         21" & 24"       60' TO 70'       5'-O"       2'-O"       6"         21" & 24"       70' TO 80'       5'-O"       2'-O"       6"         21" & 24"       70' TO 80'       5'-O"       2'-O"       7.1/2"         21" & 24"       80' TO 90'       5'-O"       2'-O"       10-1/2"         30" & 36"       60' TO 70'       6'-O"       3'-O"       10"         30" & 36"       70' TO 80'       6'-O"       3'-O"       13"         30" & 36"       80' TO 90'       6'-O"       3'-O"       16"         42"       0' TO 35'       6'-O"       3'-O"       16"         42"       50' TO 90'       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O" & 0"       4"       4" & 54"       35' TO 90'       8'-O" & 0"         48" & 54"       35' TO 90'       8'-O" & 6'-O"        0"       0"       726  | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-0"       2'-0"       0"         21" & 24"       O' TO 60"       4'-0"       2'-0"       6"         21" & 24"       O' TO 80"       5'-0"       2'-0"       6"         21" & 24"       60' TO 70"       5'-0"       2'-0"       6"         21" & 24"       80' TO 90"       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90"       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60"       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90"       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90"       7'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"  | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90'       4'-O"       2'-O"       0"         21" & 24"       O' TO 60'       4'-O"       2'-O"       6"         21" & 24"       O' TO 80'       5'-O"       2'-O"       6"         21" & 24"       60' TO 70'       5'-O"       2'-O"       6"         21" & 24"       70' TO 80'       5'-O"       2'-O"       6"         21" & 24"       70' TO 80'       5'-O"       2'-O"       7.1/2"         21" & 24"       80' TO 90'       5'-O"       2'-O"       10-1/2"         30" & 36"       60' TO 70'       6'-O"       3'-O"       10"         30" & 36"       70' TO 80'       6'-O"       3'-O"       13"         30" & 36"       80' TO 90'       6'-O"       3'-O"       16"         42"       0' TO 35'       6'-O"       3'-O"       16"         42"       50' TO 90'       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O" & 0"       0"       4"         48" & 54"       35' TO 90'       8'-O" & 0"       0"       4"         48" & 54"       35' TO 90'  | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90'       4'-O"       2'-O"       0"         21" & 24"       O' TO 60'       4'-O"       2'-O"       6"         21" & 24"       O' TO 80'       5'-O"       2'-O"       6"         21" & 24"       60' TO 70'       5'-O"       2'-O"       6"         21" & 24"       80' TO 90'       5'-O"       2'-O"       6"         21" & 24"       80' TO 90'       5'-O"       2'-O"       10-1/2"         30" & 36"       0' TO 60'       5'-O"       3'-O"       8"         30" & 36"       60' TO 70'       6'-O"       3'-O"       10"         30" & 36"       70' TO 80'       6'-O"       3'-O"       13"         30" & 36"       80' TO 90'       6'-O"       3'-O"       16"         42"       0' TO 35'       6'-O"       3'-O"       16"         42"       50' TO 90'       7'-O"       6'-O"       0"         48" & 54"       0' TO 35'       6'-O" & 0"       0"       4"         48" & 54"       35' TO 90'       8'-O" & 0"       0"       5'-O" & 0"         48" & 54"       35' TO 90'       <  | PIPE SIZE       ANGLE $\Delta$ MANHOLE DIAMETER       ''R''       ''X''         8" TO 18"       O' TO 90"       4'-0"       2'-0"       0"         21" & 24"       O' TO 60"       4'-0"       2'-0"       6"         21" & 24"       O' TO 80"       5'-0"       2'-0"       6"         21" & 24"       60' TO 70"       5'-0"       2'-0"       6"         21" & 24"       80' TO 90"       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90"       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60"       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90"       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90"       7'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"   | s  | TANDARD                 | MANHOL                  | E                |          |  |
| 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       8°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       60° TO 70°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       3°         42°       0° TO 35°       6'-0°       6'-0°       0°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       <  | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       8°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       60° TO 70°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42″       0° TO 35°       6'-0°       3'-0°       3°         42″       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       0° TO 35°       6'-0° & 6'-0°       0°       48°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°  | 8" TO 18"       0' TO 90'       4'-0"       2'-0"       0"         21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 80'       5'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       16"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       16"         42"       35' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"   | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7.1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       10°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       60° TO 70°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42°       0° TO 35°       6'-0°       3'-0°       16°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°   | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       8°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42°       0° TO 35°       6'-0°       3'-0°       3°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       0° TO 35°       6'-0°       0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6  | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2″         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2″         30° & 36°       0° TO 60°       5'-0°       3'-0°       10°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42°       0° TO 35°       6'-0°       3'-0°       3°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°  | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       8°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42°       0° TO 35°       6'-0°       3'-0°       3°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°   | 8° TO 18°       0° TO 90°       4'-0°       2'-0°       0°         21° & 24°       0° TO 60°       4'-0°       2'-0°       6°         21° & 24°       0° TO 80°       4'-0°       2'-0°       6°         21° & 24°       60° TO 70°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       6°         21° & 24°       70° TO 80°       5'-0°       2'-0°       7-1/2°         21° & 24°       80° TO 90°       5'-0°       2'-0°       10-1/2°         30° & 36°       0° TO 60°       5'-0°       3'-0°       8°         30° & 36°       60° TO 70°       6'-0°       3'-0°       10°         30° & 36°       80° TO 90°       6'-0°       3'-0°       13°         30° & 36°       80° TO 90°       6'-0°       3'-0°       16°         42°       0° TO 35°       6'-0°       3'-0°       3°         42°       50° TO 90°       7'-0°       6'-0°       0°         48° & 54°       0° TO 35°       6'-0°       0°       0°         48° & 54°       35° TO 90°       8'-0°       6'-0°       0°         48° & 54°       35° TO 90°       8'-0°       6   | SCHEDUL  | E OF GOV                | 1                       | DIMEN            | SIONS    |  |
| 21" & 24"       0 TO 60'       4'-0"       2'-0"       6"         21" & 24"       60 TO 70'       5'-0"       2'-0"       6"         21" & 24"       60 TO 70'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       16"         42"       50' TO 90'       7'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"   | 21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       70 TO 80°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       10-1/2"         30" & 36"       0 TO 60°       5'-0"       3'-0"       8"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       80 TO 90°       6'-0"       3'-0"       13"         30" & 36"       80 TO 90°       6'-0"       3'-0"       16"         42"       0 TO 35'       6'-0"       3'-0"       3"         42"       50 TO 90°       7'-0"       6'-0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         ETOWAH WATER & SEWER AUTHORITY         C   | $\frac{21^{\circ} & 22^{\circ}}{21^{\circ} & 22^{\circ}} \xrightarrow{0} \text{ TO } 60^{\circ} \xrightarrow{1} 4^{\circ} - 0^{\circ} \xrightarrow{2^{\circ}} 0^{\circ} \xrightarrow{0} 6^{\circ}}{2^{\circ}} \xrightarrow{2^{\circ}} 0^{\circ} \xrightarrow{0} 6^{\circ}}{2^{\circ}} \xrightarrow{2^{\circ}} 0^{\circ} \xrightarrow{0} 2^{\circ} - 0^{\circ} \xrightarrow{0} 2^{\circ} - 0^{\circ}}{2^{\circ}} \xrightarrow{0} \xrightarrow{0} 2^{\circ} - 0^{\circ}}{2^{\circ}} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} 2^{\circ} - 0^{\circ}}{2^{\circ}} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} \xrightarrow{0} $  | 21" & 24"       0' TO 60'       4'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       60' TO 70'       5'-0"       2'-0"       6"         21" & 24"       70' TO 80'       5'-0"       2'-0"       6"         21" & 24"       80' TO 90'       5'-0"       2'-0"       7.1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"  | 21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       70 TO 80°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       10-1/2"         30" & 36"       0 TO 60°       5'-0"       3'-0"       8"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       80 TO 90°       6'-0"       3'-0"       13"         30" & 36"       80 TO 90°       6'-0"       3'-0"       16"         42"       0 TO 35'       6'-0"       3'-0"       3"         42"       50 TO 90°       7'-0"       6'-0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         ETOWAH WATER & SEWER AUTHORITY         C  | 21" & 24"       0 TO 60' $4'-0''$ $2'-0''$ $6''$ 21" & 24"       60 TO 70' $5'-0''$ $2'-0''$ $6''$ 21" & 24"       60 TO 70' $5'-0''$ $2'-0''$ $6''$ 21" & 24"       70 TO 80' $5'-0''$ $2'-0''$ $6''$ 21" & 24"       80' TO 90' $5'-0''$ $2'-0''$ $6''$ 21" & 24"       80' TO 90' $5'-0'''$ $2'-0'''$ $10-1/2''$ 30" & 36"       0' TO 60' $5'-0'''''''''''''''''''''''''''''''''''$   | 21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       70 TO 80°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       10-1/2"         30" & 36"       0 TO 60°       5'-0"       3'-0"       10"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       80 TO 90°       6'-0"       3'-0"       13"         30" & 36"       80 TO 90°       6'-0"       3'-0"       16"         42"       0 TO 35'       6'-0"       3'-0"       3"         42"       50 TO 90°       7'-0"       6'-0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         48" & 54"       35' TO 90°       8'-0"       0" <td< td=""><td>21" &amp; 24"       0 TO 60°       4'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70°       5'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70°       5'-0"       2'-0"       6"         21" &amp; 24"       60 TO 70°       5'-0"       2'-0"       6"         21" &amp; 24"       70 TO 80°       5'-0"       2'-0"       6"         21" &amp; 24"       80 TO 90°       5'-0"       2'-0"       10-1/2"         30" &amp; 36"       0 TO 60°       5'-0"       3'-0"       8"         30" &amp; 36"       60 TO 70°       6'-0"       3'-0"       10"         30" &amp; 36"       60 TO 70°       6'-0"       3'-0"       10"         30" &amp; 36"       80 TO 90°       6'-0"       3'-0"       13"         30" &amp; 36"       80 TO 90°       6'-0"       3'-0"       16"         42"       0 TO 35'       6'-0"       3'-0"       3"         42"       50 TO 90°       7'-0"       6'-0"       0"         48" &amp; 54"       35' TO 90°       8'-0"       0"       0"         48" &amp; 54"       35' TO 90°       8'-0"       0"       0"         ETOWAH WATER &amp; SEWER AUTHORITY         C</td><td></td><td>ANGLE A</td><td></td><td></td><td></td><td></td></td<>   | 21" & 24"       0 TO 60°       4'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       60 TO 70°       5'-0"       2'-0"       6"         21" & 24"       70 TO 80°       5'-0"       2'-0"       6"         21" & 24"       80 TO 90°       5'-0"       2'-0"       10-1/2"         30" & 36"       0 TO 60°       5'-0"       3'-0"       8"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       60 TO 70°       6'-0"       3'-0"       10"         30" & 36"       80 TO 90°       6'-0"       3'-0"       13"         30" & 36"       80 TO 90°       6'-0"       3'-0"       16"         42"       0 TO 35'       6'-0"       3'-0"       3"         42"       50 TO 90°       7'-0"       6'-0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         48" & 54"       35' TO 90°       8'-0"       0"       0"         ETOWAH WATER & SEWER AUTHORITY         C   |  | ANGLE A                 |                         |                  |          |  |
| 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         A" & 54"       35' TO 90'       8'-0"       6'-0"       0"         ADTHORITY       ETOWAH WATER & SEWER AUTHORITY  | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD DATE: DEC 1   | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       DATE: DEC       DATE: DEC       DATE: DEC   | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       DATE: DEC       DATE: DEC       DATE: DEC   | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD DATE: DEC 1  | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       DATE: DEC       DATE: DEC       DATE: DEC  | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         STANDARD NO.         NO.       726         DATE: DEC       DATE: DEC       DATE: DEC   | 21" & 24"       70' TO 80'       5'-0"       2'-0"       7-1/2"         21" & 24"       80' TO 90'       5'-0"       2'-0"       10-1/2"         30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD DATE: DEC 1   |  | 201 B BC BC BE          |                         | 19-01 D          | 6"       |  |
| 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         ADTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD DATE: DEC 1  | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         ADTE: DEC 1       DATE: DEC 1       DATE: DEC 1   | 30" & 36"       0" TO 60"       5'-0"       3'-0"       8"         30" & 36"       60" TO 70"       6'-0"       3'-0"       10"         30" & 36"       60" TO 70"       6'-0"       3'-0"       10"         30" & 36"       80" TO 90"       6'-0"       3'-0"       13"         30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         726       DATE: DEC       DATE: DEC       DATE: DEC   | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       Authoritry       STANDARD       Date: DEC       Date: DEC   | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         ADTE: DEC 1       DATE: DEC 1       DATE: DEC 1  | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       DATE: DEC D'       DATE: DEC D'       DATE: DEC D'   | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       0"       0"         ETOWAH WATER & SEWER AUTHORITY   | 30" & 36"       0' TO 60'       5'-0"       3'-0"       8"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AB" & 54"       35' TO 90'       8'-0"       6'-0"       0"         ADTE: DEC 1       DATE: DEC 1       DATE: DEC 1   |  |                         |                         |                  |          |  |
| 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       726       726       726       726         DATE: DEC 1       1       1       1       1       1  | 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       726       726       726       726         DATE: DEC 1       1       1       1       1       1   | 30" & 36"       60" TO 70"       6'-0"       3'-0"       10"         30" & 36"       70" TO 80"       6'-0"       3'-0"       13"         30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         COWAH WATER & SEWER AUTHORITY   | 30" & 36"       60" TO 70"       6'-0"       3'-0"       10"         30" & 36"       70" TO 80"       6'-0"       3'-0"       13"         30" & 36"       80" TO 90"       6'-0"       3'-0"       13"         30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AB" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AB" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AB" & 54"       35" TO 90"       8'-0"       6'-0"       0"         R AUTHORITY       TOWAH WATER & SEWER AUTHORITY       D  | 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       726       726       726       726         DATE: DEC 1       1       1       1       1       1  | 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         A" AB & ADTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.  | 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         A" & 20'       54"       35' TO 90'       8'-0"       0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"       0"         ATE: DEC       DATE: DEC       DATE: DEC       DATE: DEC       DATE: DEC  | 30" & 36"       60' TO 70'       6'-0"       3'-0"       10"         30" & 36"       70' TO 80'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         30" & 36"       80' TO 90'       6'-0"       3'-0"       13"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         726       726       726       726       726         DATE: DEC 1       1       1       1       1       1   |  |                         |                         | 201 M            |          |  |
| 30" & 35"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.       726   | 30" & 35"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.       726  | 30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.   | 30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.   | 30" & 35"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.       726   | 30" & 36"       80" TO 90"       6'-0"       3'-0"       16"         42"       0" TO 35"       6'-0"       3'-0"       3"         42"       35" TO 50"       6'-0"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.  | 30" & 35"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.   | 30" & 35"       80' TO 90'       6'-0"       3'-0"       16"         42"       0' TO 35'       6'-0"       3'-0"       3"         42"       35' TO 50'       6'-0"       6'-0"       6"         42"       50' TO 90'       7'-0"       6'-0"       0"         48" & 54"       0' TO 35'       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         48" & 54"       35' TO 90'       8'-0"       6'-0"       0"         AUTHORITY       ETOWAH WATER & SEWER AUTHORITY       STANDARD NO.       726  |  |                         |                         |                  | 10"      |  |
| 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY   | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY  | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY         STANDARD NO.         726         DATE: DEC 10   | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY         STANDARD NO.         NO.         TOWAH WATER & SEWER AUTHORITY  | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY   | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY         STANDARD NO.         726         DATE: DEC 10  | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY   | 42"       35" TO 50"       6'-0"       6"         42"       50" TO 90"       7'-0"       6'-0"       0"         48" & 54"       0" TO 35"       6'-0" & 7'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         48" & 54"       35" TO 90"       8'-0"       6'-0"       0"         STANDARD NO.         NO.         RAUTHORITY  | 30" & 36"  | 80° TO 90°              | 6'-0"                   | 3'-0"            | 16"      |  |
| 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10   | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10  | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10   | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC  | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10   | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 100   | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10   | 48" & 54"         0" TO 35"         6'-0" & 7'-0"         6'-0"         0"           48" & 54"         35" TO 90"         8'-0"         6'-0"         0"           WAR' & 54"           ETOWAH WATER & SEWER AUTHORITY           STANDARD NO.           726           DATE: DEC 10  |  |                         |                         |                  |          |  |
| 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC 1   | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC 1  | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY<br>STANDARD<br>NO.<br>726<br>DATE: DEC  | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>AUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC  | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC 1   | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY<br>STANDARD<br>NO.<br>726<br>DATE: DEC   | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC 1   | 48" & 54" 35' TO 90' 8'-0" 0"<br>WATER & SEWER AUTHORITY<br>RAUTHORITY STANDARD<br>NO.<br>726<br>DATE: DEC 1  |  |                         |                         |                  |          |  |
| DATE: DEC  | DATE: DEC   | DATE: DEC  | DAIE: DEC  | DATE: DEC  | DATE: DEC   | DATE: DEC  | DATE: DEC   | 42"  | ļ                       |                         |                  |          |  |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>ET              | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>ET              | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>KAUTHORITY      | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>ET              | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>K Authority     | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>K Authority     | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>K Authority     | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>K Authority     | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>ET              | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>K Authority     | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |
|  |   |  |  |  |   |  |   | 42"<br>48" & 54"<br>48" & 54"<br>48" & 54"<br>ET | 0° TO 35°<br>35° TO 90° | 6'-0" & 7'-0'<br>8'-0"  | " 6'-0"<br>6'-0" | 0"<br>0" | TY 726                                   |



**DESIGNING ARCHITECT** 

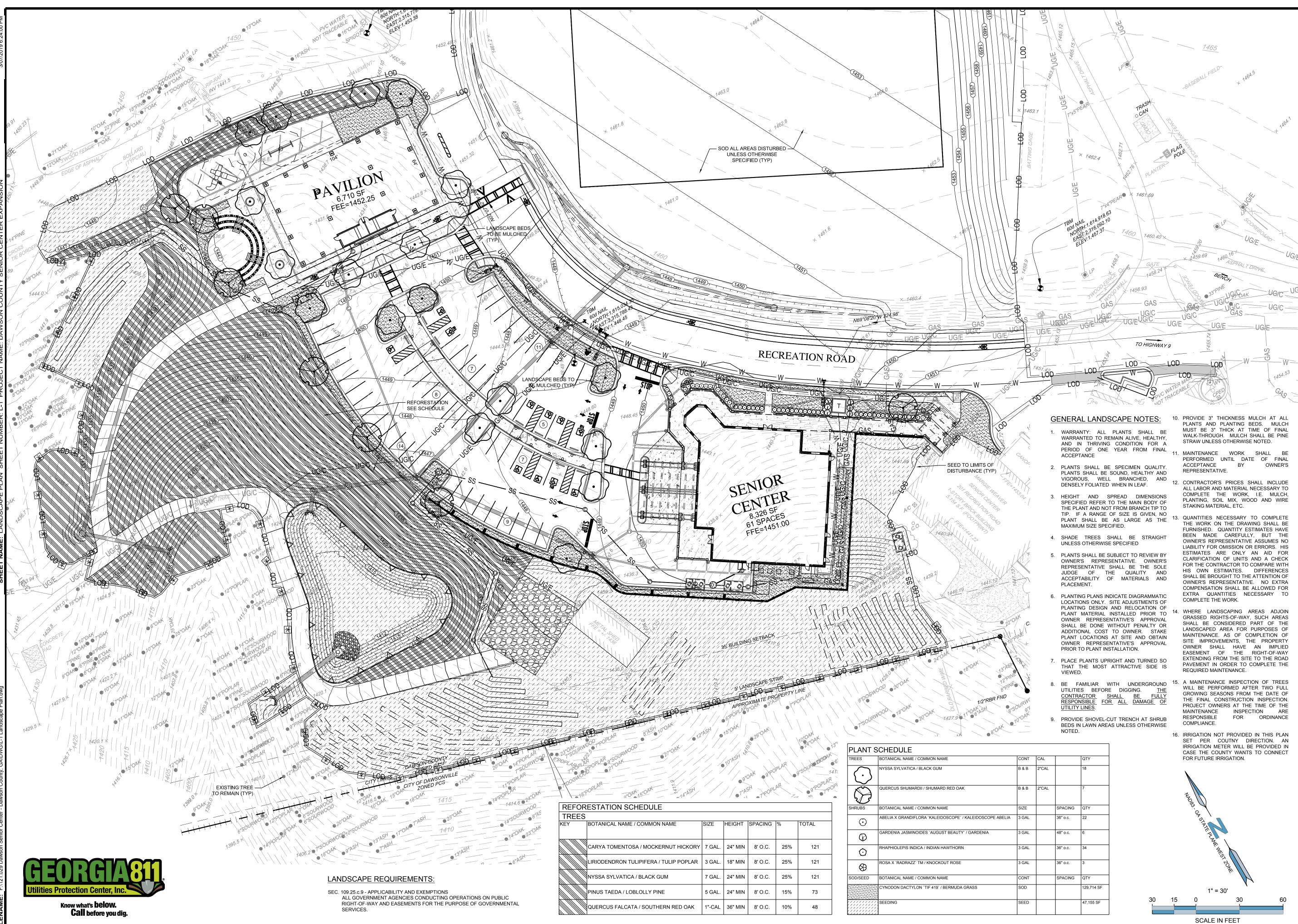
DATE

PROJECT NUMBER

SHEET TITLE

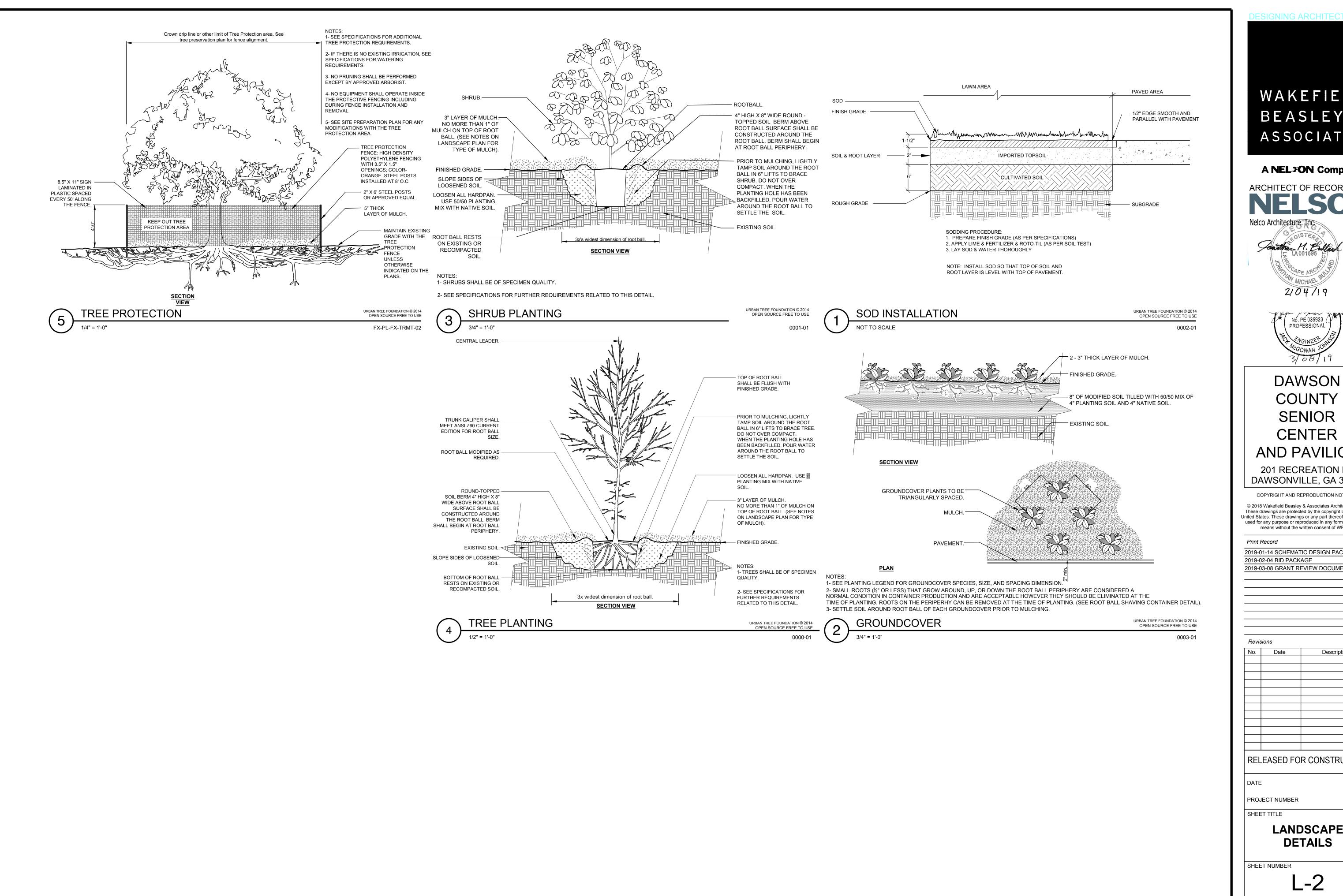
### UTILITY DETAILS

C-6.1



|            | QTY        |
|------------|------------|
|            | 18         |
|            | 7          |
| ING        | QTY        |
| <b>C</b> . | 22         |
| C.         | 6          |
| <b>)</b> . | 34         |
| <b>)</b> . | 3          |
| ING        | QTY        |
|            | 129,714 SF |
|            | 47,155 SF  |
|            |            |

## WAKEFIELD BEASLEY & ASSOCIATES A NEL YON Company ARCHITECT OF RECORD **NELSON** Nelco Architecture, Inc. a licensed affiliate of Nelson Worldwide, LLC. FORCITE Sonthan M. 2104/19 08/1 DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534 COPYRIGHT AND REPRODUCTION NOTICE © 2018 Wakefield Beasley & Associates Architects, Inc. These drawings are protected by the copyright laws of the Jnited States. These drawings or any part thereof may not be used for any purpose or reproduced in any form or by any means without the written consent of WBA. Print Record 2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS Revisions No. Date Description RELEASED FOR CONSTRUCTION DATE PROJECT NUMBER SHEET TITLE LANDSCAPE PLAN SHEET NUMBER





## WAKEFIELD BEASLEY & ASSOCIATES A NEL FON Company ARCHITECT OF RECORD Nelco Architecture, Inc LC. 2104/19 Nó. PE 035923 PROFESSIONAL 00 DAWSON COUNTY SENIOR CENTER AND PAVILION 201 RECREATION RD DAWSONVILLE, GA 30534 COPYRIGHT AND REPRODUCTION NOTICE © 2018 Wakefield Beasley & Associates Architects, Inc. These drawings are protected by the copyright laws of the Jnited States. These drawings or any part thereof may not be used for any purpose or reproduced in any form or by any means without the written consent of WBA. 2019-01-14 SCHEMATIC DESIGN PACKAGE 2019-02-04 BID PACKAGE 2019-03-08 GRANT REVIEW DOCUMENTS Description

| -   |                           |  |  |  |  |  |  |
|-----|---------------------------|--|--|--|--|--|--|
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|     |                           |  |  |  |  |  |  |
| REL | RELEASED FOR CONSTRUCTION |  |  |  |  |  |  |

### LANDSCAPE DETAILS

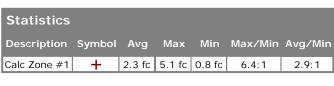


#### Disclaimer

This lighting design is not a professional engineering drawing and is provided for informational purposes only, without warranty as to accuracy, completeness, reliability or otherwise. Frazier Photometrics is not responsible for specifying the lighting or illumination requirements for any specific project. It is the obligation of the end-user to consult with a professional engineering advisor to determine whether this lighting design meets the applicable project requirements for lighting system performance, safety, suitability and effectiveness for use in a particular application. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual field performance to differ from the calculated photometric performance represented in this lighting design. In no event will Frazier Photometrics be held responsible for any loss resulting from any use of this lighting design.

| Sche | edule |       |     |   |                     |  |                 |                             |                    |       |         |
|------|-------|-------|-----|---|---------------------|--|-----------------|-----------------------------|--------------------|-------|---------|
| Sy   | mbol  | Label | QTY | Manufacturer  | Catalog Number      | Description  | Number<br>Lamps | Filename                    | Lumens per<br>Lamp | LLF   | Wattage |
|      | ^<br> | В     | 3   | EATON -<br>STREETWORKS<br>(FORMER COOPER<br>LIGHTING) | NVN-AF-06-LED-U-5WQ | NAVION ROADWAY AND AREA<br>LUMINAIRE (6) 70 CRI, 4000K,<br>1050mA LIGHTSQUARES WITH 16<br>LEDS EACH AND TYPE V WIDE<br>OPTICS  | 96              | NVN-AF-06-LED-U-<br>5WQ.IES | 390                | 0.912 | 333     |
|      |       | D     | 1   | EATON -<br>STREETWORKS<br>(FORMER COOPER<br>LIGHTING) | NVN-AF-06-LED-U-T4W | NAVION ROADWAY AND AREA<br>LUMINAIRE (6) 70 CRI, 4000K,<br>1050mA LIGHTSQUARES WITH 16<br>LEDS EACH AND TYPE IV WIDE<br>OPTICS | 96              | NVN-AF-06-LED-U-<br>T4W.IES | 370                | 0.912 | 333     |





Readings are shown in units of maintained footcandles.
 Total Light Loss Factor (LLF) = .912 LLF for LED

3. Test Plane = 0' Above grade

4. Fixture Mounting Height = 30' Above grade 5. Fixture Spacing = See Plan view.

6. This photometric layout was calculated using specific criteria. Any deviation from stated parameters will affect actual performance.

7. These lighting calculations are not a substitute for independent engineering analysis of lighting system suitability and safety.

| Designer        |
|-----------------|
| <f< td=""></f<> |
| Date            |
| 3/28/2019       |
| Scale           |
| As Shown        |
| Drawing No.     |
| S14919A1        |
| Summary         |
|                 |