

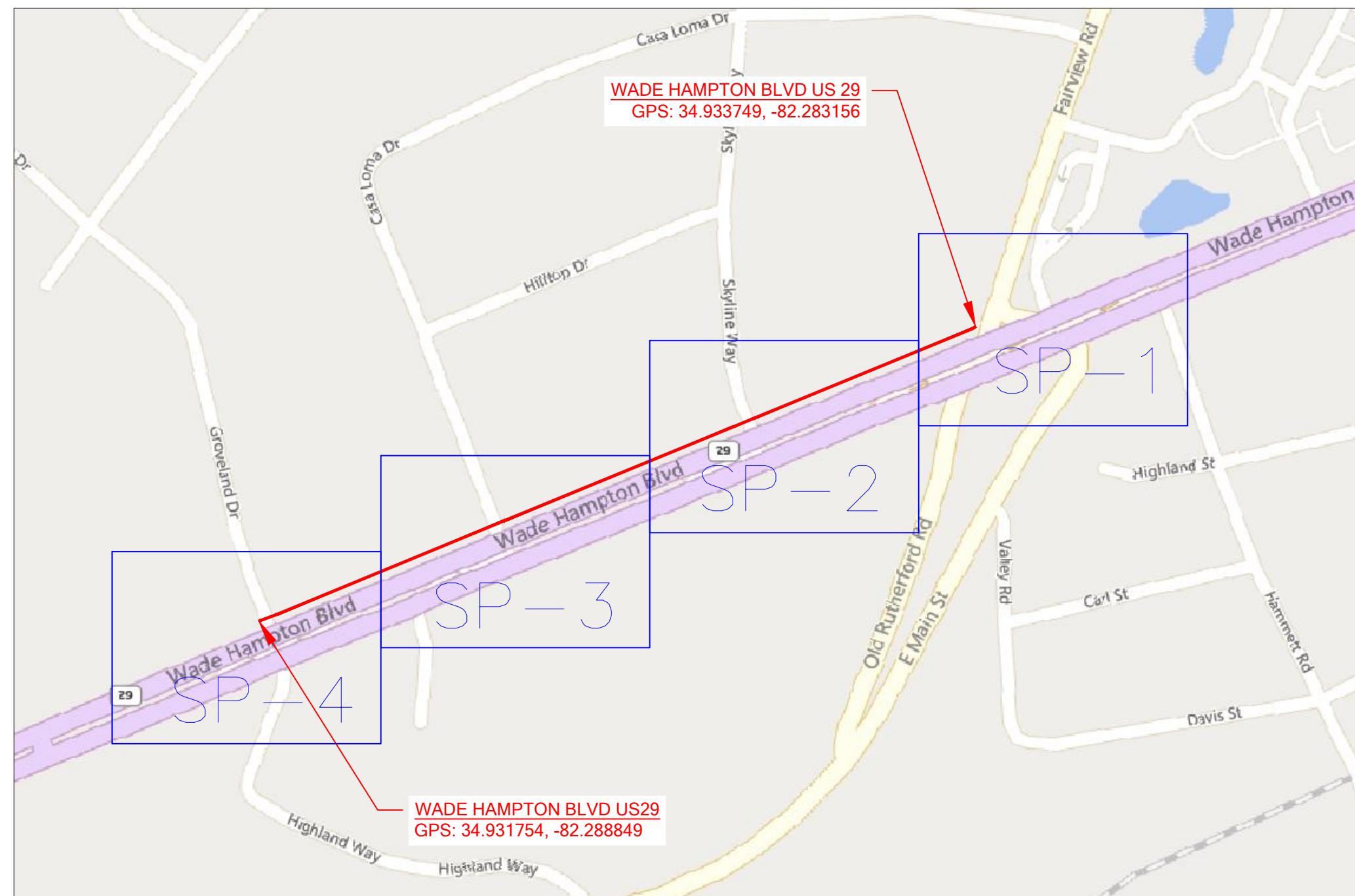
LUMOS NETWORKS
JOB NUMBER: R01963-015
ROUTE NAME: RT_18_FDH_03 (B)

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LUMOS PROPOSED FIBER OPTIC NETWORK PLACEMENT

| CONSTRUCTION METHOD | FOOTAGE |
|---------------------|---------|
| UNDERGROUND | 1864' |
| AERIAL | 0' |

TOTAL PROPOSED FOOTAGE = 1864'



PROJECT INFORMATION

| | |
|---------------|----------------------|
| SITE NAME: | G-RT_18_FDH_03 |
| SITE ADDRESS: | OPP. 320 FAIRVIEW RD |
| COUNTY: | GREENVILLE |
| APPROVER: | |

SUBMITTAL INFORMATION

| REV | DATE | DESCRIPTION | INIT |
|-----|------------|----------------|------|
| 0 | 07/08/2024 | PERMIT DRAWING | CENT |
| | | | |
| | | | |
| | | | |

SHEET TITLE

LOCATION MAP



T-1

1 OF 15

LUMOS:

NAME: RONNY POSTON
(CELL)903-948-3099
NAME: PAUL JERKINS
(CELL)803-413-8686

CENTILLION:

CRAIG BLACK - PROJECT MANAGER
(CELL)720-597-5320

UTILITIES:

SC8II (I-888-72I-7877)

PERMITS:

GREENVILLE COUNTY - PERMIT NUMBER / DATE: TBD
SCDOT - PERMIT NUMBER / DATE: TBD

| LINETYPE LEGEND | |
|-----------------|---|
| EOP | = EX. EDGE OF PAVEMENT |
| C/L | = EX. CENTER LINE |
| R/W | = EX. RIGHT OF WAY |
| ESMT | = EX. EASEMENT |
| | = EX. PROPERTY LINE |
| | = EX. BUILDING EDGE |
| OHF OHF | = EX. OVERHEAD FIBER |
| BFO BFO | = EX. BURIED FIBER |
| EX_STRAND | = EX. BURIED FIBER |
| ○ ○ ○ | = EX. FENCE |
| GR GR | = EX. GUARDRAIL |
| | = RAILROAD |
| | = PROPOSED OVERHEAD FIBER |
| 144 | = PROPOSED BURIED FIBER |
| | = PROPOSED CONDUIT |
| STRAND | = PROPOSED STRAND |
| | = PROPOSED MULTIPORT TAIL |
| SD SD | = STORM DRAINAGE |
| SS SS | = SEWER LINE |
| W W | = WATER LINE |
| T T | = TELCO LINE |
| TV TV | = CABLE TV LINE |
| E E | = ELECTRIC LINE |
| TRAFF TRAFF | = TRAFFIC LINE |
| G G | = GAS LINE |
| | = ALL ROADS HATCHED ARE COUNTY ROADS AND NOT FOR SCDOT PERMIT |

| SYMBOL LEGEND | |
|---------------|---------------------------------|
| | PROPOSED ANCHOR & GUY |
| | FOREIGN/EXISTING ANCHOR & GUY |
| | MGNV |
| | JOINT USE POLE |
| | POWER POLE |
| | COMMUNICATION POLE |
| | STEEL POLE |
| | CATV POLE |
| | PROPOSED POLE |
| | RISER |
| | PROPOSED STORAGE LOOP |
| | PROPOSED AERIAL SPLICING |
| | PROPOSED BURIED SPLICING |
| | PROPOSED AERIAL FIBER DIRECTION |
| | PROPOSED BURIED FIBER DIRECTION |
| | PROPOSED HANDHOLE |
| | EXISTING HANDHOLE |
| | PROPOSED PEDESTAL |
| | EXISTING PEDESTAL |
| | PROPOSED FLOWER POT |
| | PROPOSED LCP CABINET |
| | EXISTING LCP CABINET |
| | CULVERT |
| | PROPOSED TERMINAL SPLICING |
| | FIRE HYDRANT |
| | WATER VALVE / METER |
| | WATER MANHOLE |
| | SEWER MANHOLE |
| | STORM MANHOLE |
| | STORM INLET / CATCH BASIN |
| | GAS VALVE / METER |
| | ELECTRIC MANHOLE |
| | ELECTRIC HANDHOLE |
| | STREET LIGHT |
| | BURIED TRANSFORMER |
| | TRAFFIC HANDHOLE |
| | TRAFFIC POLE / SIGNAL |
| | TELCO MANHOLE |
| | TELCO HANDHOLE |
| | TELCO PEDESTAL |
| | CABLE TV HANDHOLE |
| | CABLE TV PEDESTAL |
| | PROPOSED 1x8 SPLITTER |
| | PROPOSED 1x4 SPLITTER |
| | SIGN |
| | FIBER MARKER |



GENERAL NOTES:

1. ALL WORK WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES, INCLUDING, BUT NOT LIMITED TO, OSHA, NESC, DOT, RPA, ETC. GENERAL NOTES WILL APPLY TO ALL DRAWINGS.
2. ALL TRAFFIC CONTROL DEVICES WILL BE IN PLACE PRIOR TO CONSTRUCTION. DEVICES NO LONGER NEEDED WILL BE REMOVED AS QUICKLY AS POSSIBLE.
3. PEDESTRIAN TRAFFIC AREAS MUST BE MAINTAINED AT ALL TIMES. PEDESTRIANS WILL NOT BE ROUTED ON TO PRIVATE PROPERTY.
4. NO MATERIALS OR EQUIPMENT WILL BE STORED OR ALLOWED TO STAND UNPROTECTED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC IS PRESENT.
5. NO EQUIPMENT OR MATERIALS WILL BE STORED ON ROAD SURFACE DURING NON-WORK PERIODS.
6. NO EQUIPMENT OR MATERIALS MAY BE STORED ON THE SIDEWALK.
7. EXCAVATION MATERIAL WILL BE STORED AWAY FROM THE PAVED ROADWAY. ALL SPILLED MATERIAL WILL BE PICKED UP IMMEDIATELY.
8. MUNICIPAL ROAD SIGNS, DELINEATORS, GUARDRAILS, ETC. WILL NOT BE REMOVED WITHOUT PRIOR WRITTEN PERMISSION FROM THE APPROVING AUTHORITY.
9. ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE CITY, COUNTY, TOWNSHIP AND STATE SPECIFICATIONS AND STANDARDS.
10. GROUND RESTORATION/RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
11. ANY CONDUIT/INNERDUCT RUNNING LINES SHOWN ON PRINT ARE ESTIMATES ONLY. ACTUAL RUNNING LINES TO BE DETERMINED VIA TEST HOLES BY CONTRACTOR PRIOR TO TRENCHING OPERATION. MOST UNDERGROUND UTILITIES ARE NOT SHOWN ON PRINTS. CONTACT UTILITY COMPANIES FOR EXACT LOCATION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO STREETS, CURBS, ROADS, HIGHWAYS, SHOULDERS, DITCHES, EMBANKMENTS, CULVERTS, STORM DRAINS, BRIDGES OR OTHER PUBLIC OR PRIVATE PROPERTY, REGARDLESS OF LOCATION OR CHARACTER, WHICH MAY BE CAUSED BY MOVING, HAULING OR OTHERWISE TRANSPORTING EQUIPMENT MATERIALS OR MEN TO OR FROM WORK OR ANY SITE THERE-OF, WHETHER BY HIM OR HIS CONTRACTOR OR SUBCONTRACTOR.
13. EXTREME CARE SHALL BE EXERCISED TO AVOID HITTING OR CAUSING DAMAGE TO AERIAL AND SUBSURFACE OBSTRUCTIONS, OWNERS OF STRUCTURES WILL BE NOTIFIED IN ADVANCE OF EXCAVATION WORK BY THE CONTRACTOR AND A REQUEST WILL BE MADE TO LOCATE THE AFFECTED PLANT.
14. ALL MATERIAL PLACED SHALL BE APPROVED BY A PROJECT MANAGER.
15. DEVIATIONS FROM THE ENGINEERED ROUTE REQUIRES A PROJECT MANAGER AND RIGHT-OF-WAY OWNER OR CARETAKER APPROVAL PRIOR TO CONSTRUCTION.
16. CABLE SHALL BE UNREELED AND REREELED IN FIGURE 8 FASHION AT BRIDGES, RAILROAD TRACKS, ROADS, STREETS, UTILITY CROSSINGS AND OTHER LOCATIONS TO PREVENT CUTTING OF THE CABLE UNLESS NOTED IN THE DESIGN.
17. WHERE PERMITS FROM STATE, COUNTY, TOWNSHIP, CITY, RAILROAD OR GOVERNMENTAL AGENCIES ARE REQUIRED, ALL WORK PERFORMED WILL COMPLY WITH THESE AGENCIES STANDARD SPECIFICATION.
18. THE CONTRACTOR SHALL NOTIFY BUILDING MANAGEMENT WHEN WORK WILL BEGIN ON BUILDING. CONTRACTOR TO COORDINATE ROOM ACCESS AND WORK START AND STOP TIMES WITH BUILDING MANAGEMENT.

19. CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE DONE TO EXISTING STRUCTURE DURING THE COURSE OF PERFORMING THE JOB INDICATED ON THE PRINTS, REPAIR AND/OR REPLACEMENT OF DAMAGE TO BUILDING SHALL BE DONE SOLELY AT THE CONTRACTORS EXPENSE.
20. THE PROJECT MANAGER WILL RESERVE THE RIGHT TO INSPECT AT ANY TIME THE WORK BEING PERFORMED BY THE CONTRACTOR. IF STC/SNC DETERMINES THAT THE WORK IS NOT BEING PERFORMED TO MINIMUM QUALITY STANDARDS, THEN THE CONTRACTOR SHALL PROVIDE REWORK AT HIS OWN COST.
21. ANY CHANGE IN PROJECT SCOPE, INCLUDING BUT NOT LIMITED TO, CONDUIT LENGTH, CONDUIT PATH, AERIAL PATH ETC., MUST BE APPROVED BY THE PROJECT MANAGER.
22. ALL CORING/CONSTRUCTION THAT WILL CAUSE NOISE AND/OR VIBRATION SHALL BE DONE OUTSIDE NORMAL BUSINESS HOURS OR TO THE DISCRETION OF THE BUILDING MANAGEMENT.
23. THE CONTRACTOR SHALL PROTECT, SHORE, BRACE AND MAINTAIN ALL UNDERGROUND PIPES, CONDUITS, DRAINS AND OTHER UNDERGROUND CONSTRUCTION UNCOVERED OR OTHERWISE AFFECTED BY THE CONSTRUCTION WORK.
24. CERTAIN PIPE LINES, SEWERS, CULVERTS, DRAINS, CABLES AND OTHER EXISTING SUBSURFACE STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE ARE INDICATED ON THE PLANS ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE SURVEY CREW. DAMAGE TO SUBSURFACE STRUCTURES, OR DELAY TO THE CONTRACTOR DUE TO ENCOUNTERING STRUCTURES, CABLES OR PIPELINE NOT SHOWN OR IN LOCATIONS DIFFERENT FROM THOSE INDICATED ON THE PLANS SHALL NOT CONSTITUTE A CLAIM FOR EXTENSION OF WORK DELAYS.
25. THE REMOVAL AND STORAGE OF ALL SHRUBBERY TO BE REPLACED IS THE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL LAND CONSERVATION NOTES:

1. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SILT TRAPS MAINTAINED AND MODIFIED AS REQUIRED DURING CONSTRUCTION PROGRESS.
2. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO RELEASE OF THE BOND, ALL TEMPORARY SILTATION AND EROSION CONTROLS SHALL BE REMOVED UPON THE APPROVAL OF PROJECT MANAGER AND ALL DENUDED AREAS SHALL BE STABILIZED WITH VEGETATION.
3. EXCAVATION MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

CONSTRUCTION NOTES:

1. VERIFICATION OF THE LOCATION OF EXISTING UTILITY CROSSINGS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAND DIGGING WILL BE UTILIZED WHERE REQUIRED.
2. PA-1 CALL 811 ONE-CALL AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION.
3. CONDUIT CAPS WILL BE PLACED ON THE ENDS OF ALL VACANT DUCTS DURING CONSTRUCTION, UPON COMPLETION, AND WHILE AWAITING FIBER INSTALLATION.
4. ALL INSTALLED DUCTS WILL BE PROOFED USING A MANDRILL 1/4" SMALLER THAN THE PIPE ID PVC AS SHOWN ON DRAWING.
5. THE MINIMUM BENDING RADIUS FOR FIBER CABLE WILL BE 20 TIMES THE OUTER DIAMETER OF THE CABLE.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONSTRUCTION AS-BUILT DRAWINGS AND PRESENT A COMPLETE SET OF RED-LINED DRAWINGS TO SHENTEL WITHIN 7 DAYS OF COMPLETION OF THE WORK.
7. CONDUITS WILL BE TERMINATED ABOVE THE MIDPOINT OF MANHOLE. CONTRACTOR WILL PROVIDE ASBUILDS.
8. SOFT DIG (PREFERRED) OR HAND DIG TO LOCATE ALL BURIED UTILITY CABLES AS REQUIRED.
9. ALL BURIED CABLE MUST BE PLACED AT A MINIMUM OF 24" UNLESS IN VDOT RIGHT-OF-WAY, WHERE THE MINIMUM DEPTH WILL BE 36".
10. ALL CONDUIT/INNERDUCT BENDS TO HAVE SWEEP (24") BENDING RADIUS.
11. ALL INNERDUCTS SHALL HAVE A DRAG LINE IN EACH.
12. PLACE CABLE LOCATE MARKERS AT EACH MANHOLE AND AT MINIMUM SPACING OF 1200' OR 4 PER MILE, UNLESS IN A RESIDENTIAL DEVELOPMENT, IN WHICH CASE FIBER MARKERS WILL BE ELIMINATED.
13. INNERDUCTS/CONDUIT SLEEVE TO BE SEALED IN BUILDING CORE BORE WITH THUNDERLINE LINKSEAL, JACK MOON PLUGS OR APPROVED EQUAL.
14. CONTRACTOR SHALL RECORD SEQUENCE # OF FIBER CABLE AT EVERY POLE, MANHOLE, SLACK COIL AND TAIL LOCATION. CONTRACTOR TO PROVIDE PROJECT MANAGER WITH SEQUENCE NUMBERS AT PROJECT COMPLETION AND OR REDLINE COPY.
15. SLACK COIL AND SLACK LOOP LOCATIONS SHALL BE DETERMINED ON CONSTRUCTION DRAWINGS.
16. FIBER CABLE SHALL NOT BE PULLED WITH MORE THAN 600 LBS. DYNAMIC TENSION. SAFEGUARDS SUCH AS 600 LB. BREAK AWAY SWIVEL AND A 600 LB. CLUTCH CAPSTAN MUST BE USED.
17. FIBER OPTIC WARNING TAPE WILL BE PLACED 12" ABOVE CABLE/CONDUIT.
18. CABLE LUBRICATION SHALL BE USED TO REDUCE PULLING TENSION. LUBRICANTS MUST NOT CONTAIN ANY PETROLEUM PRODUCTS.
19. IRON RACKING SHALL BE PLACED IN MANHOLES TO SECURE SLACK COILS AND SPLICE CASES.
20. GROUND RODS TO BE INSTALLED AT ALL SPLICE LOCATIONS.
21. 48, 72 AND 96 LCP CABINETS WILL HAVE (1) ONE EACH 1x32 SPLITTER, AND A 144 LCP CABINET WILL HAVE (2) TWO EACH 1x32 SPLITTERS.
22. 288 LCP CABINET WILL HAVE (3) THREE EACH 1x32 SPLITTERS, AND A 432 LCP CABINET WILL HAVE (4) FOUR EACH 1x32 SPLITTERS.
23. ALL DUCT DEEMED FOR FUTURE DROPS SHALL BE BROKEN AT EACH FLOWERPOD MANHOLE AS DESIGNATED ON THE WORKPRINTS

AERIAL CABLE PLACEMENT:

1. CONVENTIONAL AERIAL CONSTRUCTION TECHNIQUES WILL BE USED IN THE PLACEMENT OF FIBER OPTIC CABLE.
2. CABLE TENSION WILL BE MONITORED AND RECORDED AS THE CABLE IS PULLED THROUGH CABLE ROLLERS.
3. CABLE ROLLERS WILL BE SPACED AT A MAXIMUM INTERVAL OF THIRTY-FIVE FEET (35'). TYPE "B" ROLLERS WILL BE USED. CONTRACTORS ARE REQUIRED TO PROVIDE SUFFICIENT ROLLERS AND PULL-LINE TO PLACE AT LEAST FIVE KILOMETERS (5 KM) OF CABLE IN A SINGLE PULL.
4. AERIAL CABLE GUIDES WILL BE USED.
5. AERIAL STRAND WILL BE USED AND TENSIONED WITH A STRAND DYNAMOMETER.
6. STRAND WILL BE PLACED AS SPECIFIED ON ENGINEERING PLANS.
7. PRELASHING OF CABLE TO STRAND WILL NOT BE ALLOWED. CABLE WILL BE DOUBLE LASHED WITH 45 MIL STAINLESS LASHING WIRE.
8. ONLY NEW HARDWARE, i.e. LASHING WIRE, LASHING WIRE CLAMPS, ETC., WILL BE ACCEPTED.
9. LASHING WIRE CLAMPS SHALL BE PLACED 12" EACH FROM CENTER THROUGH BOLT, AND METAL STRAP WITH 1/4" SPACER SHALL BE PLACED 10" FROM CENTER THROUGH BOLT.
10. OVERLASHING OPERATIONS REQUIRE THE LOWERING OF EXISTING FIBER OPTIC CABLE SLACK COILS AND SPLICE CASES PRIOR TO OVERLASHING THE PROPOSED FIBER OPTIC CABLE (UNLESS OTHERWISE NOTED).
11. ALL UTILITY POLE HARDWARE MUST BE TIGHTENED BEFORE LASHING OPERATIONS.
12. LASHING WIRES SHALL BE TERMINATED IN A MANNER SO AS NOT TO CROSS ONE ANOTHER OR ANY OTHER SHARP OBJECTS, WHICH MIGHT CREATE FUTURE BREAKS IN THE WIRE. ENDS OF LASHING WIRE AND METAL STRAPS SHALL BE TRIMMED, TUCKED, AND KEPT NEAT.
13. FIBER OPTIC WARNING TAGS SHALL BE PLACED AT EVERY WORK POLE, MANHOLE, SLACK COIL, SPLICE CASE AND WHERE SO INDICATED BY PROJECT MANAGER.
14. COMPLY WITH NESC REGULATION PART 92 AND RUS BULLETIN 1751F-815 REQUIRING EIGHT OR MORE BONDS PER MILE.
15. ALL ANCHORS WILL BE IN PLACE PRIOR TO PLACING AND TENSIONING OF STRAND. TEMPORARY GUYING CAN BE USED IF AVAILABLE IF APPROVED BY SHENTEL PROJECT MANAGER, AND MUST BE MADE PERMANENT WITH APPROVED ANCHORS ASAP.

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER



SIGNATURE
8/2/12
DATE



SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

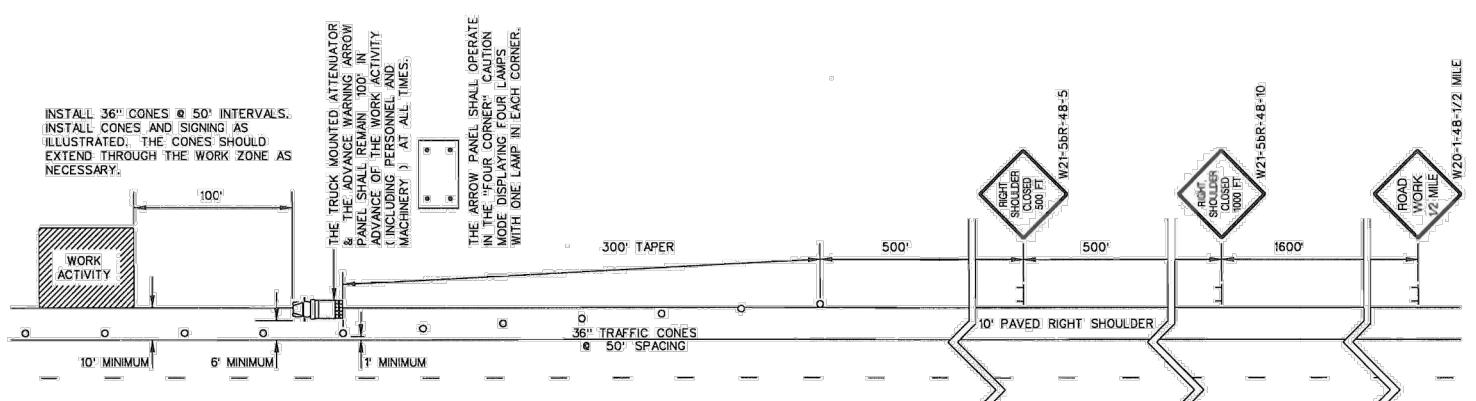
RIGHT
SHOULDER CLOSURE
(CASE I / CASE II)
INTERSTATE ROUTES

610-305-00

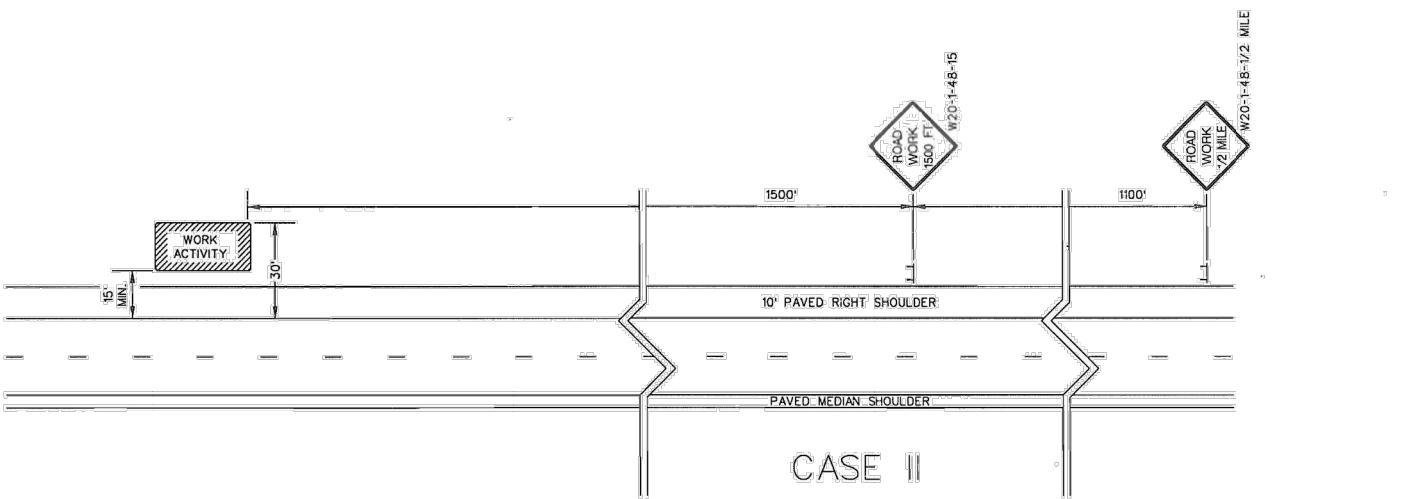
EFFECTIVE LETTING DATE: JAN, 2013 THIS DRAWING IS NOT TO SCALE

GENERAL NOTES

- ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
- INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
- SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
- ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
- REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
- ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org
- THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER BRIDGE PARAPET WALLS OR DOUBLE FACED GUARDRAIL.
- THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR DAYTIME SHOULDER CLOSURES ARE 36" CONES. THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR NIGHTTIME SHOULDER CLOSURES ARE PORTABLE PLASTIC DRUMS. DURING DAYTIME SHOULDER CLOSURES, 42" OVERSIZED CONES MAY BE SUBSTITUTED FOR 36" CONES. DURING NIGHTTIME SHOULDER CLOSURES, 42" OVERSIZED CONES ARE PROHIBITED FOR USE. IF THIS TRAFFIC CONTROL SETUP EXTENDS INTO THE HOURS OF DARKNESS, REPLACE ALL CONES, 36" OR 42" OVERSIZED, WITH PORTABLE PLASTIC DRUMS.
- THE 36" CONES UTILIZED DURING DAYLIGHT HOURS ARE NOT REQUIRED TO BE REFLECTORIZED. REFLECTORIZ ALL 42" OVERSIZED CONES UTILIZED DURING DAYTIME SHOULDER CLOSURES WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. REFLECTORIZ ALL PORTABLE PLASTIC DRUMS WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
- THE DEPARTMENT PROHIBITS CONDUCTING WORK WITHIN THE LIMITS OF A PAVED SHOULDER OR WITHIN 10' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE UNDER A SHOULDER CLOSURE. ALL WORK THAT MAY REQUIRE THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES OTHER THAN A TRUCK MOUNTED ATTENUATOR WITHIN THE LIMITS OF A PAVED SHOULDER OR WITHIN 10' OF THE NEAR EDGE OF AN ADJACENT TRAVEL LANE SHALL BE CONDUCTED UNDER A LANE CLOSURE.
- CASE I: WHENEVER ANY PORTION OF THE SHOULDER AREA BEYOND THE LIMITS OF THE PAVED SHOULDER AND WITHIN 15' BUT NOT CLOSER THAN 10' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE IS OCCUPIED BY EQUIPMENT, PERSONNEL, MATERIALS OR ANY VEHICLES OTHER THAN A TRUCK MOUNTED ATTENUATOR TO CONDUCT THE WORK, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL DEVICES AS ILLUSTRATED.
- CASE II: WHENEVER THE WORK IS CONDUCTED BEYOND 15' BUT WITHIN 30' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE, INCLUDING THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR VEHICLES, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL DEVICES AS ILLUSTRATED.
- CONDUCT THE WORK IN SUCH A MANNER THAT WILL NOT REQUIRE ENCROACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY VEHICLES OTHER THAN A TRUCK MOUNTED ATTENUATOR ON A PAVED SHOULDER OR WITHIN 10' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE.
- PLACE THE TRUCK MOUNTED ATTENUATOR AT A LOCATION 100' IN ADVANCE OF THE WORK ACTIVITY AND NO CLOSER THAN 6' FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE.
- IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS AT THE SAME TIME UNDER CASE I SHOULDER CLOSURES, SEPARATE THE TWO LOCATIONS BY NO LESS THAN 1 MILE FROM THE END OF THE FIRST CASE I CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CASE I CLOSURE. A MINIMUM SEPARATION DISTANCE OF ONE-HALF MILE IS RECOMMENDED BETWEEN SHOULDER CLOSURES WHEN ONE OR BOTH SHOULDER CLOSURES IS A CASE II CLOSURE.
- THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
- THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF SHOULDER CLOSURES IN THE RIGHT SHOULDER AREAS OF INTERSTATE HIGHWAYS.



CASE I



CASE II

PORTABLE TRUCK MOUNTED ATTENUATOR

- UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT (GVW) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM, A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
- LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
- PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96". WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE, WITH ONE LAMP IN EACH CORNER. DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

LEGEND
○ 36" TRAFFIC CONES

HOURS OF OPERATION:

WORKING HOURS
MON-FRI: 9AM-4PM



SHEET TITLE

TRAFFIC CONTROL PLAN

TC-1

4 OF 15

REFERENCES

DRAWING 610-005-20 NOTES

- SEE STANDARD DRAWING NO. 610-005-00 FOR ALL GENERAL NOTES AND REQUIREMENTS. THE FOLLOWING NOTES ARE SPECIFIC REQUIREMENTS FOR THIS STANDARD DRAWING.
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENROACH UPON THE "LIMITS OF THE INTERSECTION", DO NOT ALLOW THE "APPROACH TAPER" OR THE "DOWNSTREAM TAPER" OF THE LANE CLOSURE TO ENROACH UPON THE "LIMITS OF THE INTERSECTION". ONLY THE "BUFFER SPACE" OR THE "WORK ACTIVITY AREA" OF THE LANE CLOSURE MAY ENROACH UPON THE "LIMITS OF THE INTERSECTION".
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENROACH UPON THE "LIMITS OF THE INTERSECTION" WITH "STOP SIGN CONTROLLED" "SIDE ROADS", UTILIZE FLAGGERS TO CONTROL THE TRAFFIC FROM THE INTERSECTING "SIDE ROADS"; UNLESS OTHERWISE DIRECTED BY THE ENGINEER, MAINTAIN THESE FLAGGERS IN PLACE FOR THE DURATION THAT ANY PORTION OF THE "BUFFER SPACE" OR THE "WORK ACTIVITY AREA" MAY ENROACH UPON THE "LIMITS OF THE INTERSECTION".
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENROACH UPON THE "LIMITS OF THE INTERSECTION" WITH "STOP SIGN CONTROLLED" "SIDE ROADS", THE CONTRACTOR SHOULD CONTINUE THE WORK OPERATIONS THROUGH THE INTERSECTION TO A LOCATION POINT BEYOND THE "LIMITS OF THE INTERSECTION" THAT WILL PERMIT THE WORK TRAIN TO CLEAR THE INTERSECTION AND THE LOCATION OF THE SUBSEQUENT "FLAGGER STATION" BE NO LESS THAN 200' PAST THE "LIMITS OF THE INTERSECTION" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- WHEN THE WORK ZONE PROCEEDS THROUGH A "STOP SIGN CONTROLLED" "SIDE ROAD" INTERSECTION, CONTINUE THE WORK OPERATIONS THROUGH THE INTERSECTION TO A SPECIFIC LOCATION POINT WITHIN THE "DEPARTURE LANE" NO LESS THAN 300' FT TO 500' FT BEYOND THE LIMITS OF THE INTERSECTION TO ALLOW THE WORK TRAIN AND ALL PORTIONS OF THE LANE CLOSURE TO CLEAR THE INTERSECTION.
- Maintain the maximum time duration of .5 to 7½ minutes for stopped traffic on the roadway where the work activity is located and being conducted; unless otherwise directed by the engineer. When any portion of the "work activity area" encroaches upon the "limits of the intersection", various types of work may require traffic to and from the "side roads" be stopped for time durations greater than the maximum time duration of .5 to 7½ minutes. Only when approved by the engineer may the maximum time duration of .5 to 7½ minutes for stopped traffic for the side road traffic be exceeded. In the event the type of work requires the side road traffic be stopped for time durations greater than .5 to 7½ minutes, the side road traffic may be stopped for time periods up to 20 minutes if approved by the engineer. If the side road traffic must be stopped for time periods greater than 20 minutes, closure of the "side roads" may be considered if approved by the engineer. In the event closure of the "side roads" is approved, close the "side roads" to traffic in accordance with the requirements of standard drawing no. 610-510-00. Install and maintain appropriate detours when necessary and as directed by the engineer.

WORK ZONE TRAFFIC CONTROL ENGINEER

**SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
NO. 24242
WILLIE E. McCONNELL, P.E.
18**

W. McConnell
SIGNATURE
6/1/2018
DATE

| | |
|---|--|
| 5 | |
| 4 | |
| 3 | |
| 2 | |
| 1 | 4-27-18 WEM REVISED WORK ACTIVITY DIMENSION AND NOTE 5 |
| 0 | 1-15-15 JCS NEW DRAWING |
| # | CHK DESCRIPTION |

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
FLAGGING OPERATIONS
WORK ZONES
CONTINUING THROUGH
STOP SIGN
CONTROLLED
SIDE ROADS

610-005-20
EFFECTIVE LETTING DATE JAN 2019
THIS DRAWING IS NOT TO SCALE

TABLE A

SIGN PLACEMENT INTERVALS

| SPEED LIMIT | * |
|-------------------------------------|-----|
| * 35 MPH LOW SPEED | 200 |
| * 40 - 50 MPH INTERMEDIATE SPEED | 350 |
| * 55 MPH HIGH SPEED | 500 |

* REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK

TABLE B

**TRAFFIC CONTROL DEVICE SPACING INTERVALS
WORK ACTIVITY / BUFFER SPACE AREAS**

| SPEED LIMIT | SPACING INTERVALS |
|-------------|-------------------|
| ≤ 35 MPH | 25 FEET |
| 40 - 55 MPH | 50 FEET |



PREPARED BY: 110 SAMARITAN DR, SUITE 211
CUMMING, GA 30041. USA

The logo for Centillion Solutions LLC features a blue globe icon with an orange swoosh around it, followed by the company name in blue and orange text.

PROJECT INFORMATION

| | |
|---------------|----------------------|
| SITE NAME: | G-RT_18_FDH_03 |
| SITE ADDRESS: | OPP. 320 FAIRVIEW RD |
| COUNTY: | GREENVILLE |
| APPROVER: | |
| | |

SUBMITTAL INFORMATION

| REV | DATE | DESCRIPTION |
|-----|------------|----------------|
| 0 | 07/08/2024 | PERMIT DRAWING |
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| | | |

HOURLS OF OPERATION:

WORKING HOURS
MON-FRI: 9AM-4PM



SHEET TITLE

DRAWING SHEET
5 OF 15

AppendixB: Pipelines

Figure6-Longitudinal Installation of UtilitiesinRoadway Shoulders

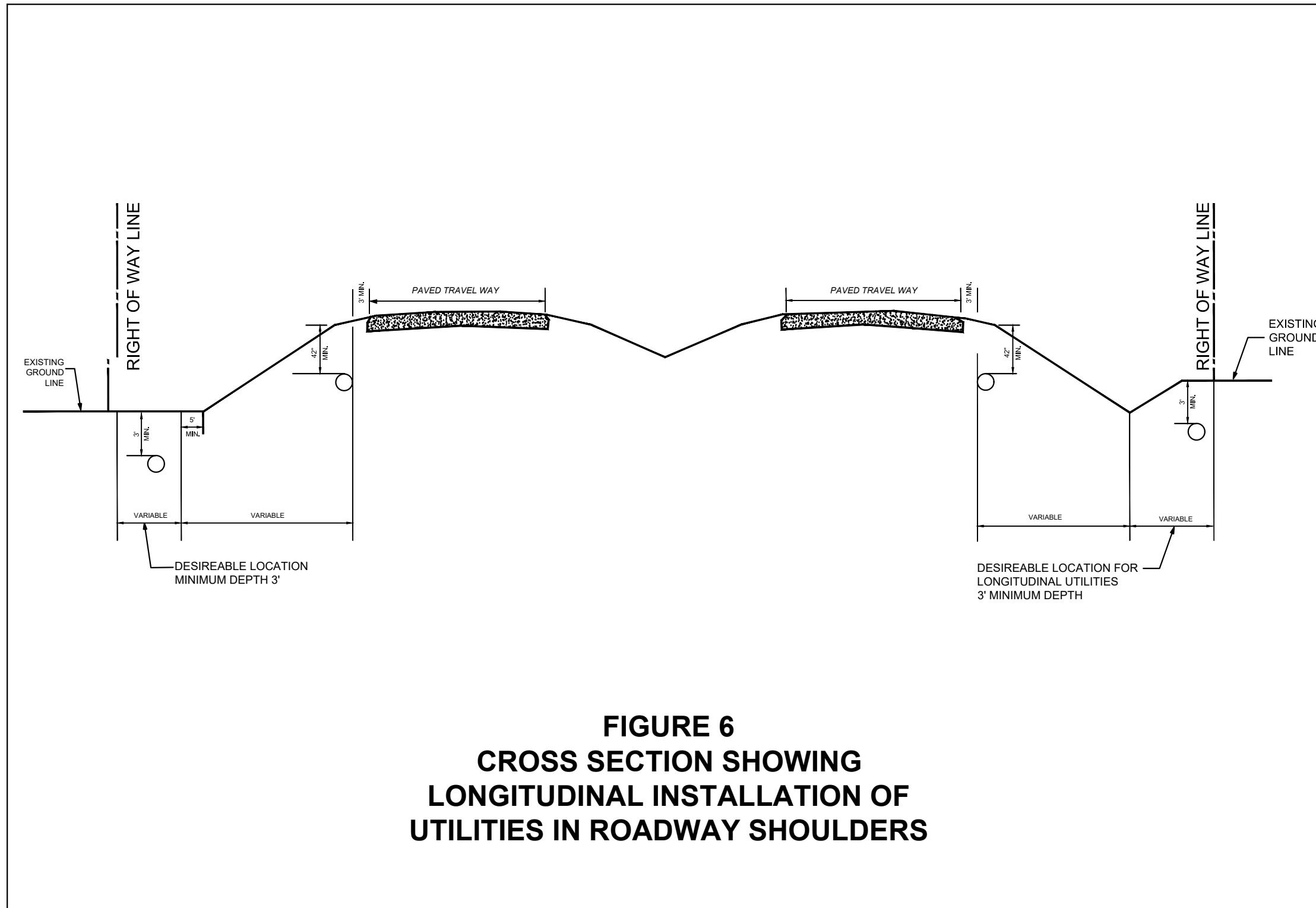
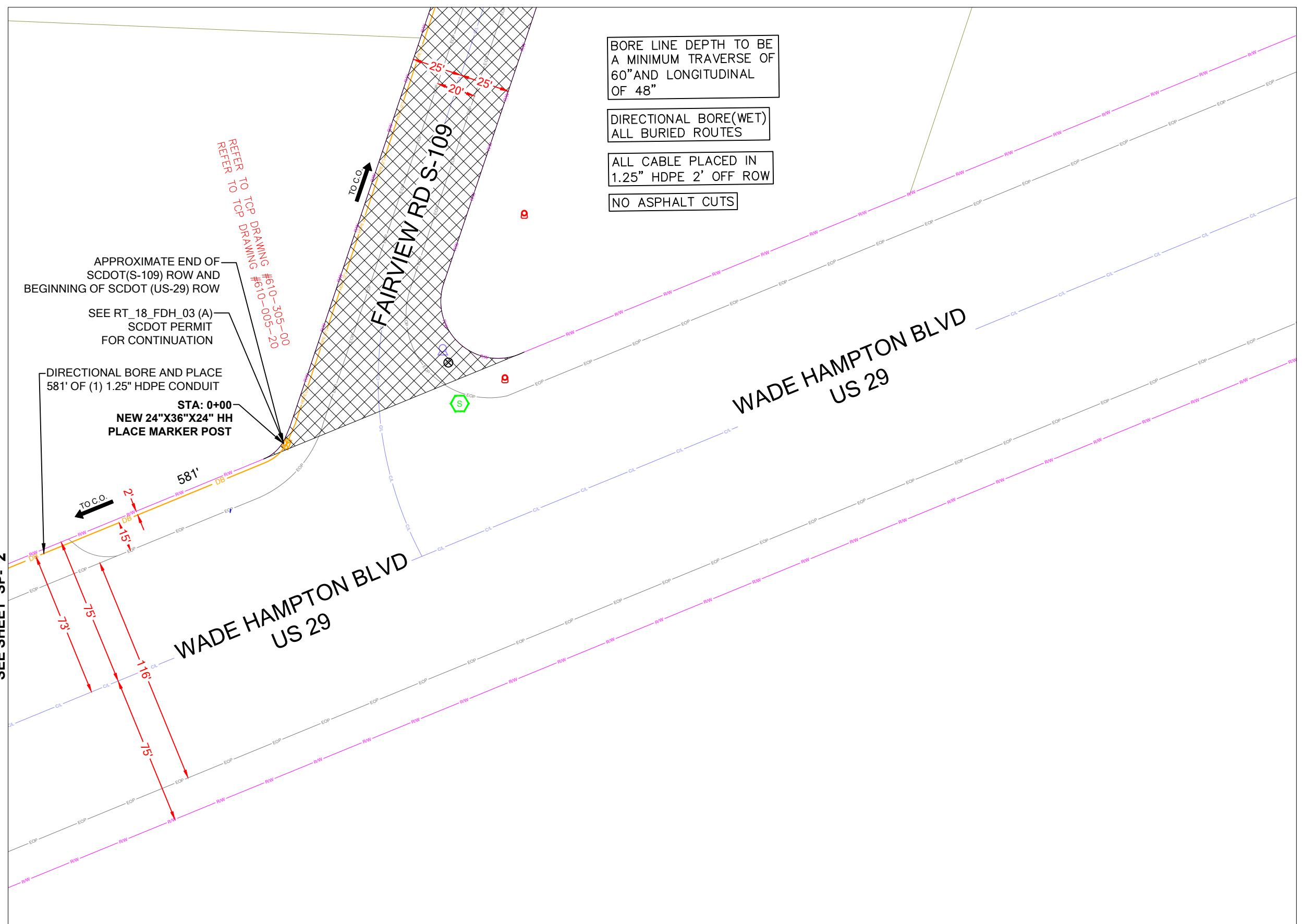


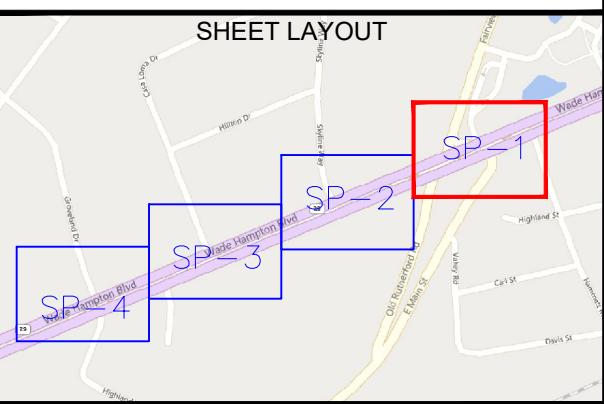
FIGURE 6
CROSS SECTION SHOWING
LONGITUDINAL INSTALLATION OF
UTILITIES IN ROADWAY SHOULDERS



CONSTRUCTION NOTES



SCDOT ROW FILE: 23.650
SHEET # 17



NOTE: LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.

NOTE: ALL EXISTING UTILITIES
PLACED ON PRINTS FOR
REFERENCE ONLY.
(NOT TO SCALE)



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CUMMING, GA 30041. USA

PREPARED BY: 110 SAMARITAN DR, SUITE 212

PROJECT INFORMATION

NAME: G-RT 18 FDH 03

ADDRESS: OPP. 320 FAIRVIEW RD

TY: GREENVILLE

ROVER:

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HOURS OF OPERATION:

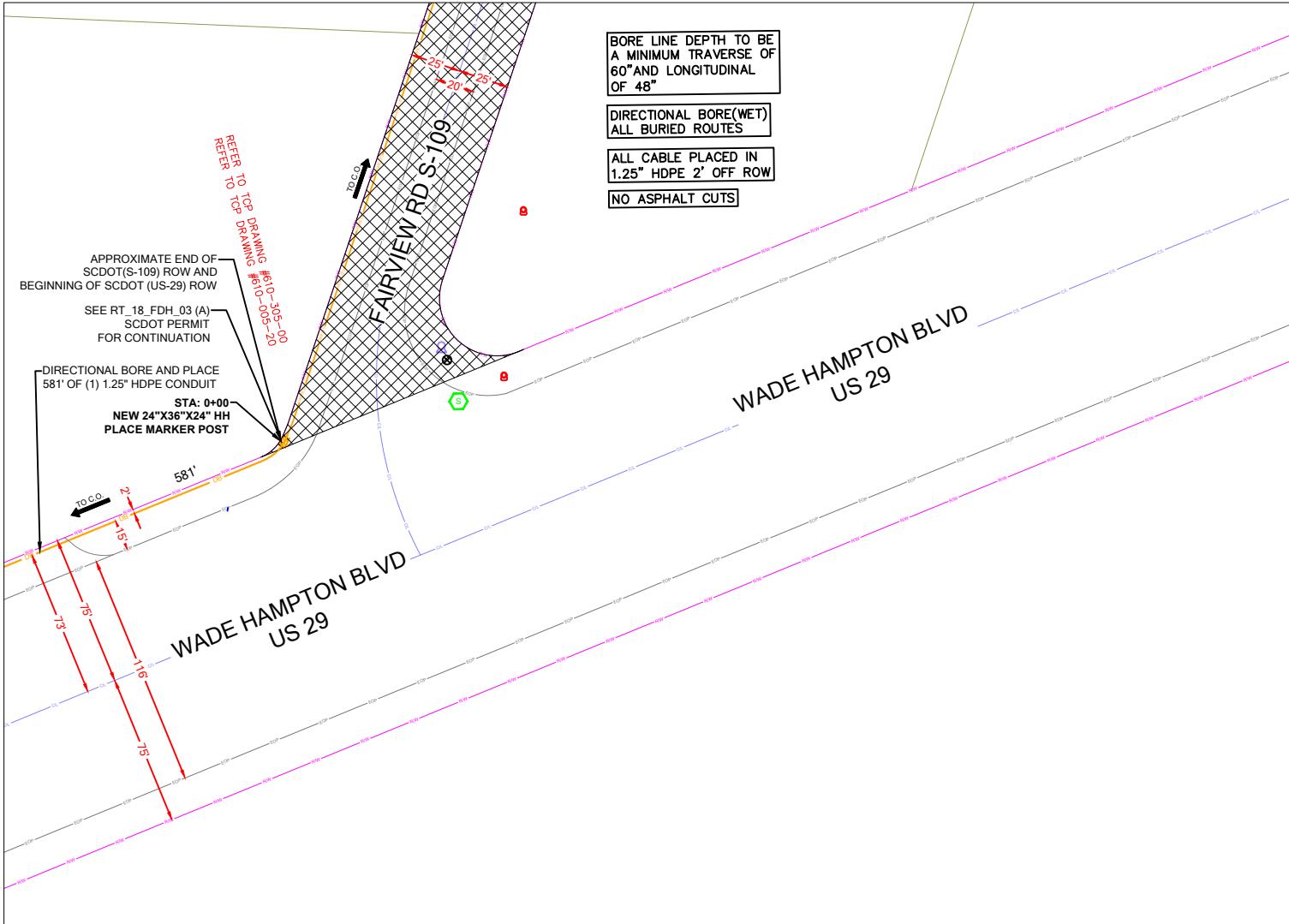
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MON-FRI: 9AM-4PM

SHEET TITLE

PERMIT DRAWING

DRAWING SHEET

7 OF 15



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DETAILED VIEW

SHEET NUMBER
SP-1A

DRAWING SHEET
8 OF 15

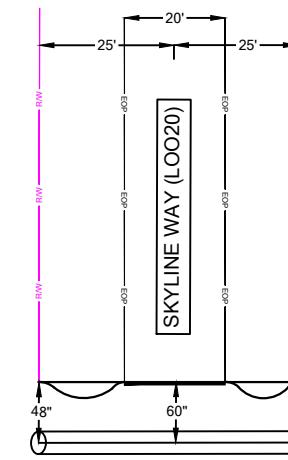
CONSTRUCTION NOTES



SCDOT ROW FILE: 23.650
SHEET # 17

SKYLINE WAY (LOO20)
FACING DIRECTION (NORTH EAST SOUTH WEST)

DIRECTIONAL BORE



50' FIBER OPTICAL CABLE PLACE
IN 1.25" HDPE AT MINIMUM
DEPTH OF 60"

SHEET LAYOUT



NOTE: LOCATE ALL
UTILITIES PRIOR TO
CONSTRUCTION.

NOTE: ALL EXISTING UTILITIES
PLACED ON PRINTS FOR
REFERENCE ONLY.
(NOT TO SCALE)



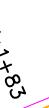
SEE SHEET SP- 3

WADE HAMPTON BLVD
US 29

DIRECTIONAL BORE AND PLACE
647' OF (1) 1.25" HDPE CONDUIT

EX JOINT USE POLE STA: 1+83

TO C.O.



DB

RW

EOP

CA

CL

SEE SHEET SP- 1

5251
VL

DIRECTIONAL BORE AND PLACE
581' OF (1) 1.25" HDPE CONDUIT

REFER TO TCP DRAWING #610-305-00
REFER TO TOP DRAWING #610-005-20

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BORE LINE DEPTH TO BE
A MINIMUM TRAVERSE OF
60" AND LONGITUDINAL
OF 48"

DIRECTIONAL BORE(WET)
ALL BURIED ROUTES

ALL CABLE PLACED IN
1.25" HDPE 2' OFF ROW

NO ASPHALT CUTS
SHOULD BE NEEDED FOR
THIS ROAD CROSSING

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PREPARED BY: 110 SAMARITAN DR, SUITE 212
CUMMING, GA 30041. USA
**CENTILLION
SOLUTIONS LLC**

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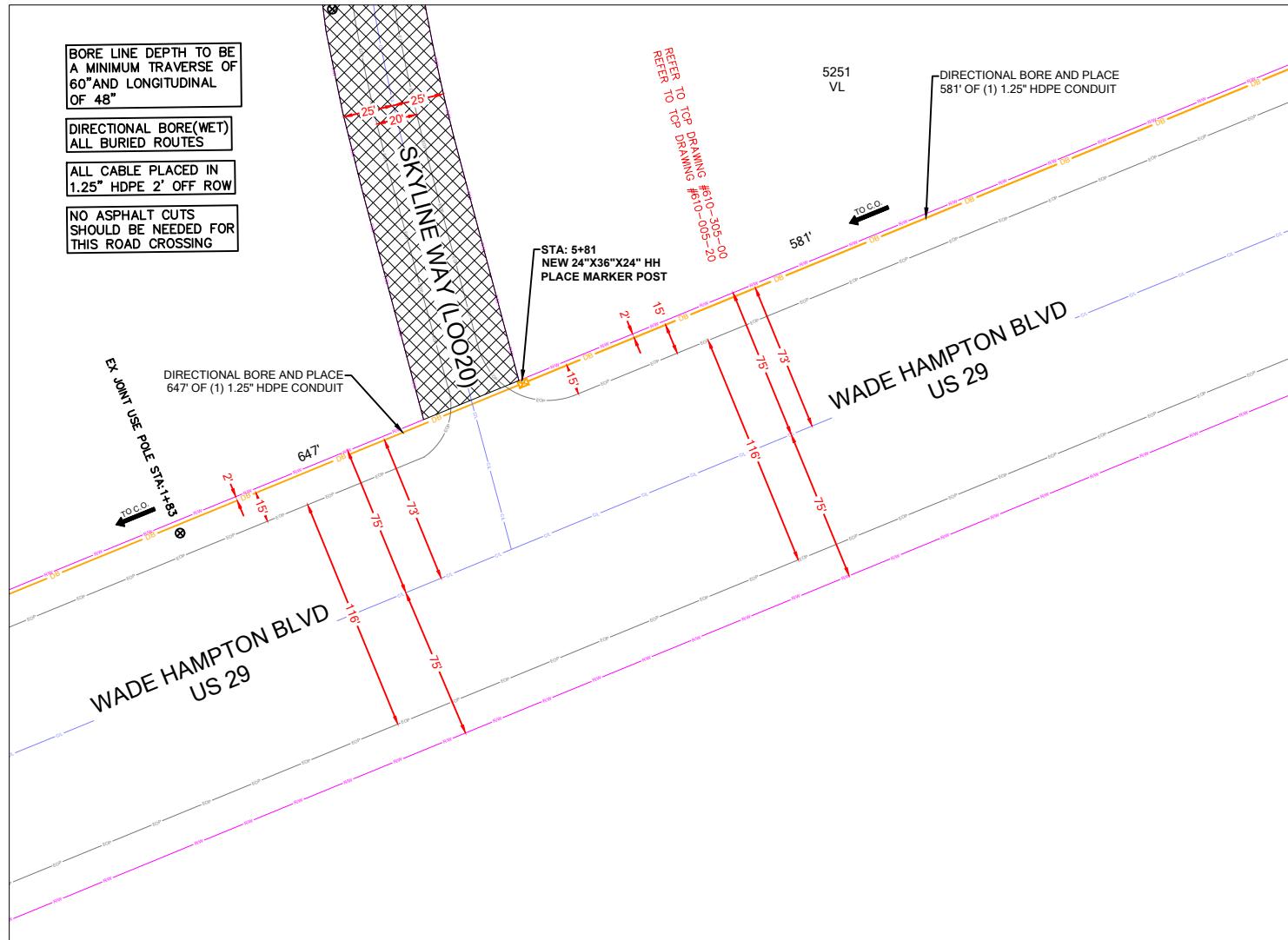
COUNTY: GREENVILLE

APPROVER:

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REV: 0 DATE: 07/08/2024 DESCRIPTION: PERMIT DRAWING INIT: CENT

0 07/08/2024 PERMIT DRAWING CENT</p



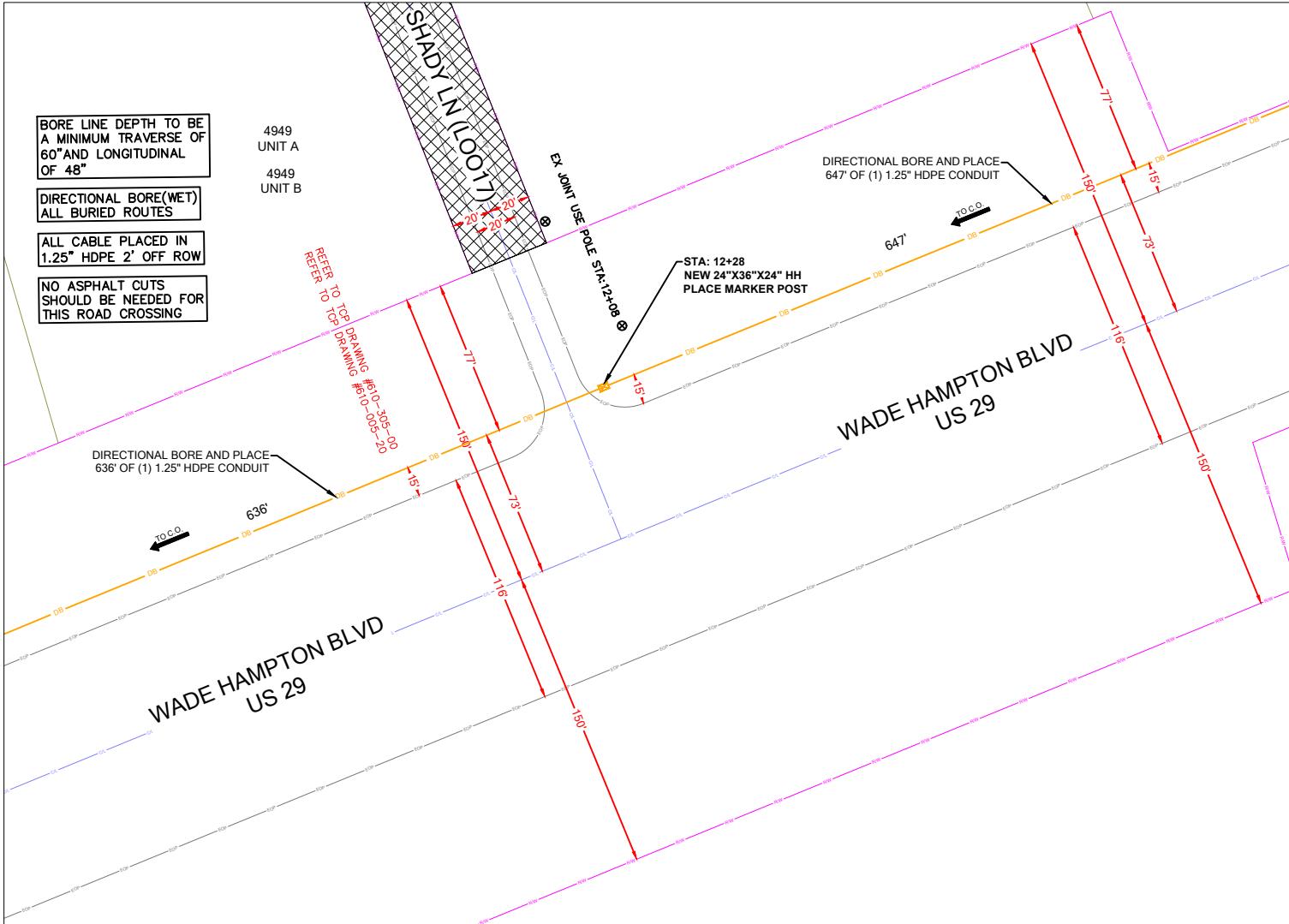
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| SITE ADDRESS: | OPP. 320 FAIRVIEW RD |
| COUNTY: | GREENVILLE |
| APPROVER: | |
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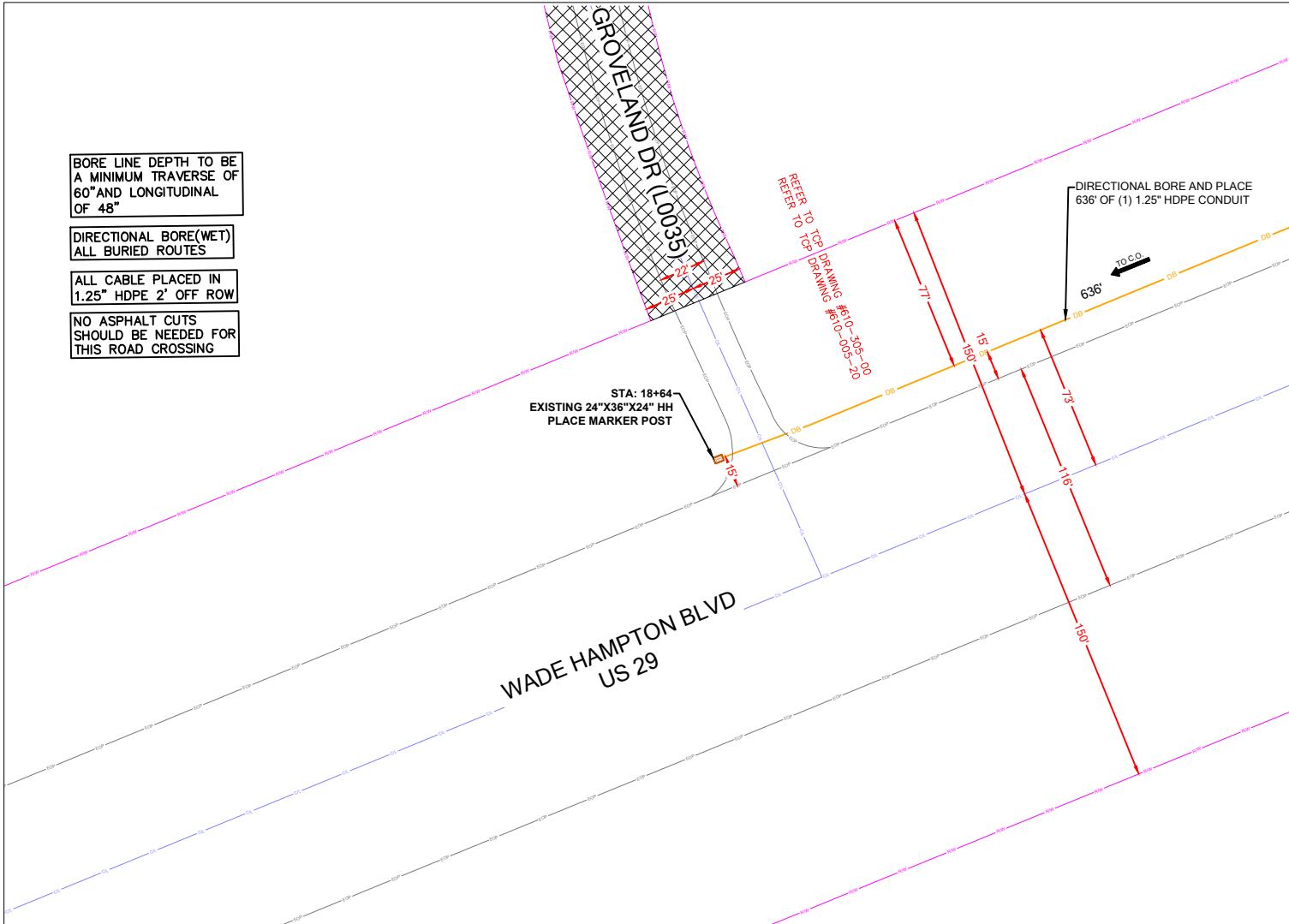
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| HOURS OF OPERATION: | |
|---------------------|------------------|
| IT | WORKING HOURS |
| NT | MON-FRI: 9AM-4PM |
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| DETAILED VIEW | |
| SHEET NUMBER | DRAWING SHEET |
| SP-2A | 10 OF 15 |





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| SITE ADDRESS: | OPP. 320 FAIRVIEW RD |
| COUNTY: | GREENVILLE |
| APPROVER: | |

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| REV | DATE | DESCRIPTION | INIT |
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| 0 | 07/08/2024 | PERMIT DRAWING | CENT |
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HOURS OF OPERATION:

WORKING HOURS
MON-FRI: 9AM-4PM



SHEET TITLE

DETAILED VIEW

SP-4A

14 OF 15

STATE REFERENCE

WADE HAMPTON BLVD US 29 - DOCKET NUMBER: 23.650 - PAGE NUMBER: 16-17 OF 316

PROJECT INFORMATION

SITE NAME: G-RT_18_FDH_03

SITE ADDRESS: OPP. 320 FAIRVIEW RD

COUNTY: GREENVILLE

APPROVER:

SUBMITTAL INFORMATION

REV DATE DESCRIPTION INIT

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HOURS OF OPERATION:

WORKING HOURS
MON-FRI: 9AM-4PM



SHEET TITLE

SCDOT ROW PLANS

SHEET NUMBER
S-REF

DRAWING SHEET
15 OF 15