CAM SITE DETAIL FOR OVERHEAD ELECTRICAL SERVICE

ROADWAY

- 1-2" HDPE CONDUIT (RED)
- (3) #6 COPPER CONDUCTORS
- SERVICE BOX WITH METER

CAM SITE DETAIL FOR UNDERGROUND ELECTRICAL SERVICE

ROADWAY

- 1-2" HDPE CONDUIT
- (3) #6 COPPER CONDUCTORS
- SERVICE BOX WITH METER

DMS SITE DETAIL FOR UNDERGROUND ELECTRICAL SERVICE

ROADWAY

- (2) #4 AWG SEVEN STRAND CABLE
- 1-2" HDPE CONDUIT
- SERVICE BOX WITH METER

NOT TO SCALE

This detail from the typical site shown for a site detail according to the specific project of SCDOT is not to scale. The drawing may be subject to change based on required conductor size. Conductors must be filled for service only if required if the power company requires. The plan sheets provided by the SCDOT are not to scale. The drawings provided by the SCDOT are not to scale. The drawings provided by the SCDOT are not to scale. The drawings provided by the SCDOT are not to scale.
DETAILS & CLEARANCE DIAGRAM FOR OVERHEAD SIGNS

NOTE:
- Maintenance walkway shall extend from centerline of road to the full height of the sign.
- Top of sign shall be one foot above the high side of the existing or final grade.
- Bottom of foot of sign shall be one (1) foot above the edge of all signs.
- Signs shall be extended a minimum of one (1) foot outside the edge of all signs.
CCTV STEEL 50' POLE - TYPICAL DETAIL

- Bonded to anchor foundation & cabinet with maximum of (4) 5/8 in x 8' ground rods at 12' spacing.
- 2 point ground < 15 ohms.
- 31" T base 17".
- Breakaway 1 ft base 17".
- 2" Non Metallic Flex.
- 2" Sch 80 PVC conduit at every elec box with 16" red marker post.
- 17" x 30" x 28" D box.
- 5' / 10' anchor depending on soil conditions.
- Upper handhole ID tag placed just above 6'.
- #4 Copper ground bare stranded.
- Each ground rod exothermic welds at 60" W/Marking tape.
- 36" cover min.
- 6" ID tag placed just above 6'.
- CCTV Steel 50' pole - Typical detail.
**TYPICAL GROUNDING GRID / SITE LAYOUT**

- PVC-MAUL four-point grounding spike #4 AWG seven-stranded bare copper
- PEDESTAL MOUNTED CABINET
- 1-2" G.R.S. OFFSET FEMALE ADAPTER
- 1-2" SCHEDULE 80
- WITHOUT CABINET *MOUNTED DISCONNECT PANEL SHOWN
- 90 DEG ELBOW 1-2" SCHEDULE 80 PVC
- MINIMUM OF 4 COPPER-CLAD TANK LUG GROUND EACH CORNER
- EXOTHERMIC WELDS AT CONDUIT, CABINET GROUND 1-2" SCHEDULE 80 PVC
- 8"x8" CONCRETE PEDESTAL CONDUIT, CABINET GROUND 1-2" SCHEDULE 80 PVC
- #4 AWG SEVEN STRANDED BARE COPPER 7'x7' (MIN.) FOUR POINT GROUNDING GRID AND CABINET GROUND TIED INTO GROUNDING GRID
- SCDOT SERVICE BOX GROUND TIED INTO GROUNDING GRID AND CABINET GROUND
- MINIMUM OF 4 COPPER-CLAD RUS 13 GROUNDING RODS 5/8"x8'
- MINIMUM OF 4 COPPER-CLAD TANK LUG GROUND EACH CORNER
- EXOTHERMIC WELDS AT EACH CORNER

**GROUND WIRE -**

One or more grounding rods shall be installed at the service pole and where applicable at the controller itself. The grounding rods shall be min. 16 mm by 2.4 meters (5/8 in by 8 ft). Copper-clad PVC conduit shall be used in general, and grounding rods may be used to achieve proper resistance to ground. The controller grounding rod shall be exothermically welded (by personnel properly trained to make exothermic welds). Grounding system shall be no greater than 15 ohms. Grounding systems shall be tested using the fall of potential method and shall be overseen by the engineer.

**GROUND WIRE -**

Grounding wire for the service shall be No. 6 AWG, 7 stranded bare. Note that this is in addition to the solid grounding wire running down each wooden pole and shall be stapled at a min. of every 16 feet, with a coil of solid copper wire at the bottom and top of the pole. For grids, the grounding wire shall be #4 and #2, or 27 stranded around concrete poles and #4 on layers around hub building. The grounding for the service shall be connected to the cabinet ground rod with #4 and the pole grounding system shall be connected to the cabinet ground rod in the electric service pull box located at the cabinet to make up a complete grounding system.

**GROUND WIRE -**

**GROUND WIRE -**
CONCRETE POLE

NAME PLATE

FOR CAMERA LOWERING DEVICES

CRUSH AND RUN TYPICAL OR AS REQUIRED PER SOIL CONDITIONS.

DEPTH WHICH IS APPROXIMATELY 10% OF LENGTH PLUS 4 FEET MINIMUM OR AS REQUIRED BY SOIL ANALYSIS CONDUCTED BY CONTRACTOR

60 FT. POLE REQUIRES 36" DIAMETER HOLE
40FT POLE REQUIRES 24" DIAMETER HOLE

MIN. 36 INCHES
12 INCHES ELEVATED BASE

FOUNDATION DETAILS

24"
18"
5'
50'

WARNING TAPE (SEE SPECS)

2 INCH CONDUIT FOR SM

SGU CABLE ENT.

HANDHOLE LOCATION DEFINES 0

TYPICAL DETAIL CCTV / DETECTOR POLE

OFFSET

LOWERING ARM

CONCRETE FOUNDATION DOT CLASS A

INTERNAL CONDUITS

SHALL MATCH PLANS OR AS LISTED ABOVE.

ANCHOR BOLTS--NUMBER, SIZE, & LOCATION PER MANUFACTURER TEMPLATE

BE DETERMINED FOR 40% CROSS-SECTION MAXIMUM FILLED WITH CABLES

ALL CONDUIT TO BE CAPPED DURING CONSTRUCTION WORK AND DUCT-SEALED AT COMPLETION

AND DOT CABINET TYPE

ALL RIGID CONDUIT ENDS TO HAVE BUSHING

1" SCH. 80 PVC CONDUIT 
†" X 8' MIN

1" TELEPHONE SERVICE

2" TYP. ELECTRICAL SERVICE

2" TYP. FEED TO DMS or CCTV

2" SPARE

2" SPARE

1" FOR GROUNDING

R=RISER (12")

PORED IN PLACE

PRE-FAB BASE SET ON 48"x48" BED OF CRUSH AND RUN AND SHALL BE 12" DEEP, COMPACTED, AND LEveled.

FOR BASE MOUNTED CABINET

SCDOT FIBER OPTIC

PVC CONDUIT

GROUND ROD 
†" X 8' MIN

MARKER POST

16" ORANGE BURY 18" DEEP

ORDER WITH 1250 POUND QUAD TAPE

SEE SPECS TO GROUND ROD

MIN. 36" DEPTH SHALL BE MAINTAINED.
NEW 2 IN GRS CONDUIT ATTACHED TO BACK OF EXISTING WALL / BRIDGE PARAPET AS SHOWN WITH 144 F.O. CABLE (TYP.)

NEW EXPANSION COUPLING (TYP.) AT EVERY BRIDGE EXPANSION JOINT

ADDITIONAL CONDUIT FOR POWER IF REQUIRED (TYP.)

PINCH BOTTOM OF UNI-STRUT AFTER INSTALLATION IS COMPLETED

NOTES:

INSTALL (1) 2 IN GRS CONDUIT WITH CONDUIT MOUNTING TO EXISTING BRIDGE PARAPET WALL

CONDUIT MOUNTING EQUIPMENT SHALL BE KINDORF.

THE FOLLOWING PART NO.'S SHALL APPLY FOR CHANNEL ASSEMBLY:

- CHANNEL (12" LONG) - STAINLESS STEEL
- 2" PIPE STRAP - STAINLESS STEEL
- 3/8" FLAT WASHER - STAINLESS STEEL
- 3/8" x 2" WEDGE ANCHOR - STAINLESS STEEL
- DRILL 3/8" DIA. HOLE IN OUTSIDE PARAPET WALL

EPoxy SHALL BE USED WITH WEDGE ANCHORS

CONDUIT MOUNTING EQUIPMENT SHALL BE KINDORF.

KINDORF CHANNEL EQUIPMENT SHALL BE PLACED IT 08

EXPANSION COUPLINGS AT EVERY BRIDGE JOINT

EVERY 5 FT MIN ALONG BRIDGE LENGTH.

NOTES:

CONTRACTOR TO REQUEST SPECIFICATIONS OF ATTACHMENT DEVICE FROM DEVICE MANUFACTURER.
1) INTELLIGENT TRANSPORTATION SYSTEM (ITS) TO BE CONSTRUCTED UNDER THE STATEWIDE ITS REPAIR & INSTALLATION CONTRACT.

2) APPROXIMATE LOCATION OF CAMERA POLES IS SPECIFIED ON THE PLAN SHEET. APPROXIMATE LOCATION OF SERVICE BOXES/LOCAL CONTROLLER CABINETS IS SHOWN ON THE PLAN SHEET, EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION. CONTACT THE SCDOT FIELD OPERATIONS MANAGER IF SUBSURFACE OR OTHER CONDITIONS WARRANT LOCATING EQUIPMENT/DEVICES ELSEWHERE.

3) CONTRACTOR SHALL INSTALL (1) 2" HDPE ORANGE CONDUIT WITH A MINIMUM OF 36" OF COVER. ALL CONDUITS ARE TO BE PLACED AT LEAST 30' FROM THE EDGE OF TRAVEL WAY, UNLESS FIELD CONDITIONS DICTATE OTHERWISE. IF CONDUITS ARE PLACED NEAR A RIGHT OF WAY LINE, PLACE A MINIMUM OF 3' INSIDE RIGHT OF WAY LINE UNLESS FIELD CONDITIONS DICTATE OTHERWISE.

4) CONTRACTOR SHALL INSTALL 96 CT SINGLEMODE FIBER OPTIC CABLE WITHIN DESIGNATED CONDUIT, UNLESS DICTATED DIFFERENTLY ON PLAN SHEET. REEL END SPICES ARE NOT SHOWN ON THE PLAN SHEET. THE CONTRACTOR SHALL SUBMIT REEL END SPICE LOCATIONS TO THE SCDOT FIELD OPERATIONS MANAGER FOR APPROVAL.

5) NON-METALLIC WARNING TAPE SHALL BE BURIED 12" BELOW GRADE WHERE ELECTRIC AND COMMUNICATION CONDUIT IS INSTALLED. ADDITIONALLY, DETECTABLE MULE TAPE IS TO BE INSTALLED INSIDE CONDUIT WITH FIBER OPTIC CABLE.

6) CONTRACTOR TO INSTALL NEW FIBER OPTIC SERVICE BOX EVERY 2450' OR AS INDICATED ON THE PLAN SHEET. COILED SLACK TO BE PLACED IN EACH SERVICE BOX. 200' SLACK FOR ALL SERVICE BOXES WITH OR WITHOUT A SPLICE ENCLOSURE. PLACE '10' OF SLACK FOR DROP CABLES IN SERVICE BOX FOR MID SPANS.

7) ALL PULL BOXES SHALL BE ARMORCAST OR HIGH LINE. SERVICE BOX COVERS USED FOR COMMUNICATIONS SHALL HAVE 'SCDOT FIBER' EMBEDDED IN THE COVERS, PULL BOX COVERS USED FOR ELECTRIC SHALL HAVE 'SCDOT ELEC' EMBEDDED IN THE COVER, AND PULL BOX COVERS USED FOR TRAFFIC SIGNALS SHALL HAVE 'SCDOT TRAFFIC' EMBEDDED IN THE COVER.

8) CONTRACTOR TO PROVIDE FIBER OPTIC MARKER POSTS AT ALL NEW SERVICE BOX LOCATIONS AND DEFLECTIONS IN THE CONDUIT ALIGNMENT, AT A MAXIMUM OF 2450'.

9) ALL BORES INDICATED ON PLAN SHEET ARE APPROXIMATE VALUES, TRUE VALUES MAY VARY. ANY LOCATION MARKED AS CONVENIENCE BORES ARE CONSIDERED PLOWABLE.

10) ITS DEVICES/SYMBOLS (CAMERA, SERVICE BOX, DMS, CABINET, ETC.) ARE SCALED UP FOR VISIBILITY ON PLANS, THEY ARE NOT TO THE SCALE OF THE DRAWING.

11) CONTRACTOR IS RESPONSIBLE FOR CONTACTING PUPS/811 FOR LOCATION OF EXISTING UTILITIES.

12) ALL PLANS ARE SCHEMATIC IN NATURE. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD.

13) BELOW IS A LEGEND THAT IS APPLICABLE TO THIS PROJECT. ADDITIONAL DRAWINGS MAY BE NEEDED AS DETERMINED IN FIELD DURING CONSTRUCTION.

14) CAMERA POLES SHALL BE 18 1/2' FROM WHITE LINE WITH GUARD RAIL INSTALLED IN FRONT.