GENERAL NOTES:

1. THE LIMITS OF WORK FOR THIS PROJECT SHALL BE AS DETAILED IN THE SPECIAL PROVISIONS AND SHOWN ON THE CONDUIT PLANS.

2. CLEAN AND LINING WORKS TO BE PERFORMED TO PROVIDE MAXIMUM VISIBILITY OF ADJACENT AREAS.

3. SURFACE MOUNTED CONDUIT SHALL BE MOUNTED ON STRUCTURED SURFACES, FENCING, STUCCO OR OTHER WALLS. IN-STRUCTURE CONDUIT SHALL BE THAT CONDUIT INSTALLED UNDER THE BRIDGE DECK AND WILDO THE SITES SUPPORTED FIBER OPTIC CABLE SHALL BE STRAPPED TO EXISTING SURFACE MOUNTED OR IN-STRUCTURE CONDUIT.


5. IN AREAS WHERE THE MAINLINE CONDUIT CROSSES THE EXISTING ILLUMINATION DUCT, THE CONTRACTOR WILL BE REQUIRED TO HAND EXCAVATE. THE CONTRACTOR WILL BE INSTALLED AT A SUBSURFACE DMK TWO HUNDRED UNLESS OTHERWISE ADDED TO THE ILLUMINATION AND TRAFFIC MONITORING STATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. MARK OUT THE ILLUMINATION AND TRAFFIC MONITORING STATIONS WILL NOT REQUIRE THE CONTRACTOR OF RESPONSIBILITY.

6. THE CONTRACTOR SHALL CONTACT MR. ROBERT KENNEDY OF HIGHWAY OPERATIONS AT 860-594-2400 ONCE THE LOCATIONS OF THE FULL BOXES AND VENTS ARE STATED FOR APPEARANCE. THE LOCATIONS OF THESE ITEMS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY AND SHALL BE CHANGED FOR FIELD CONDITIONS.

7. IT IS NOT THE INTENT OF THESE DRAWINGS TO INCLUDE EVERY DETAIL OF THE WORK REQUIRED TO BE PERFORMED BY THE CONTRACTOR TO COMPLETE A COMPLETE INSTALLATION. ITEMS NOT SPECIFICALLY SHOWN ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS AND THOSE ITEMS SHOWN ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS AND THOSE ITEMS SHOWN ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS THAT THE CONTRACTOR PERFORM THE WORK, ARE TO BE INCLUDED AS PART OF THE CONTRACTOR'S WORK.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURE THAT CALL BEFORE YOU DIG LOCATION RULES AND REQUIREMENTS PRIOR TO EXCAVATION.

9. THESE PLANS DEPICT THE INSTALLATION OF A 4" (100) MULTI-DUCT CONDUIT TO ACCOMMODATE A FIBER OPTIC CABLE AS WELL. 2" (50) BRANCH CONDUIT OVERLAPS WITHIN THE SAME TRENCH AS THE 4" (100) MAINLINE CONDUIT.

10. THE INSTALLATION OF 4" (100) CONDUIT SHALL INCLUDE AN EXPANSION COUPLING AT EACH BRIDGE JOINT AS NOTED IN APPROPRIATE DETAILS.

11. AT SPECIFIED LOCATIONS SHOWN ON THE PLANS, THE 4" (100) MAINLINE CONDUIT WILL SHARE THE MAINLINE CONDUIT TRENCH WITH A 2" (50) RIGID METAL CONDUIT (RMC) FOR THE BRIDGE CROSSING OVERLAPS. THESE 2" (50) BRANCH CONDUITS WILL SERVE AS FUTURE SERVICE CONNECTIONS FOR CCTV AND VMS LOCATIONS, TERMINATING AT MULLEDER AND TYPE II CONCRETE HANDHOLES.

TYPICAL CROSS SECTION NOTES:

THESE TYPICAL PLAN AND CROSS SECTION DETAILS ARE DRAWN TO SCALE AND PROVIDE FOR INFORMATIONAL PURPOSES ONLY. THESE DETAILS DO NOT NECESSARILY REFLECT ALL OF THE SITE CONDITIONS IN THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE FIELD CONDITIONS AND SELECTING THE APPROPRIATE DETAIL FOR INSTALLATION OF THE CONDUIT.

LEGEND

- CONCRETE PULL BOX
- CAST IRON JUNCTION BOX - SIZE AS INDICATED
- CONCRETE VAULT
- CONCRETE HOHOLE TYPE I OR II
- 2" (50) RMC OR 4" (100) PVC (MULTI-DUCT)
- 2" (50) RMC OR 4" (100) RMC UNDER ROADWAY (MULTI-DUCT)
- EXISTING LUMINARES
- EXISTING CATCH BASIN
- EXISTING CONCRETE HANDHOLE
- EXISTING GUIDE RAIL

PREPARED BY:

CHECKED BY:

DESIGNER/DRAFTER:
CONDUIT SUPPORT INSTALLATION SEQUENCE:

A. Mount conduit supports on existing bridges and walls. Place supports according to mounting layouts and details as shown. Drill holes in existing structures according to field fasteners notes and structural notes.

B. Fasten conduit to supports with U-bolts.

4" (100) SURFACE MOUNTED CONDUIT SUPPORT SPACING NOTES:

A. Space conduit supports at 14'-9" (4.5 m) O.C. maximum for structure mounted 4" (100) conduit. Surface mounted as shown on the details and as directed by the engineer.

B. Fasten conduit to supports with U-bolts.

NOTE:

- Bridge railing not shown.
- Bridge railing & approach railing not shown.
- Notes on drawing.

CONDUIT EXPANSION JOINT

1. BRIDGE RAILING NOT SHOWN
2. BRIDGE PARAPET RAILING & APPROACH
3. CORE DRILL 5" (130) HOLE IN WING WALL
4. PROVIDE 1/8" (19) DIA. HOLES FOR 1/4" (16) DIA. NAIL OR BRIDGE EXP. JOINT
5. INSTALL EXPANSION JOINTS AS RECOMMENDED BY THE MANUFACTURER.
6. INSTALLATION OF JUNCTION BOXES MAY BE REQUIRED.

CONDUIT ATTACHMENT DETAILS

- CONDUIT - PARAPET TO FILL
- CONDUIT - PARAPET MOUNTED TO CLEAR
- CONDUIT SUPPORTS ON BRIDGE PARAPET NOT SHOWN
- BRIDGE RAILING NOT SHOWN

CONDUIT SUPPORT SPACING: SPACE 4" (100) CONDUIT SUPPORTS AT 14'-9" (4.5 m) O.C. MAXIMUM.

CONDUIT EXPANSION JOINT (NOM.)

24" (600) (MAX.)

CONDUIT SUPPORT-SEE DETAIL THIS SHEET

FINAL DESIGN REVIEW

INCIDENT MANAGEMENT SYSTEM INSTALLATIONS ALONG ROUTE 3 AND ROUTE 72

FARMINGTON TO CROMWELL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

INTEL-XX-IMS-CTDOT-STANDARD DTLS.dgn

DEPARTMENT OF TRANSPORTATION

ID-XX-IMS-CTDOT-STANDARD DTLS.dgn

ID-02
CLEVIS HANGER DETAIL

PAY LIMITS FOR,

REVISION DESCRIPTION

ONE HOLE CLAMP & FIELD FASTENER DETAILS

WALL PENETRATION DETAILS

FIELD FASTENER NOTES:

CLEVIS HANGER NOTES:

1. FIELD DRILL HOLES IN CONCRETE STRUCTURES. HOLE DIAMETER & ANCHOR DEPTH FOR THE CHEMICAL ANCHORAGE TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

2. CHEMICAL ANCHORS - SYSTEM APPROVED BY CONN. D.O.T. WITH THREADED ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

3. ONE HOLE CLAMP SHALL BE A MALLEABLE IRON CONDUIT CLAMP AS SHOWN AND AS MANUFACTURED BY ITT GRINNELL CO., FIG. 126, OR APPROVED EQUAL. THE CLEVIS, INCLUDING ALL HARDWARE, THREADED RODS AND NUTS SHALL BE GALVANIZED. THE THREADED RODS SHALL BE A MINIMUM OF 3/8 (16) IN DIAMETER.

4. SPACE CLAMPS AT 60" (1500) MAXIMUM.

ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A121(M), CLASS 2. (GRADE B, STRAIN HARDENED.) NUTS SHALL BE NYLON INSERT LOCK NUTS AND CONFORM TO ASTM A194(M), GRADE 8, STRAIN HARDENED. WASHERS SHALL CONFORM TO ASTM A160(M), TYPE 316, STAINLESS STEEL.

FIELD PENETRATION NOTES:

1. CONTRACTOR SHALL USE FIELD PENETRATION DETAILS, SUCH AS A PACHOMETER, TO DETERMINE THE LOCATION OF REINFORCING STEEL IN EXISTING WALL IN ORDER TO PLACE CORE IN THE LOCATION OF REINFORCING STEEL IN EXISTING WALL. THE CONTRACTOR IS PROHIBITED FROM PLACING CORE IN ANY LOCATION WHICH WOULD ALTER THE LOCATION OF REINFORCING STEEL.

2. USE EPOXY SEALANT TO SEAL GAP BETWEEN STEEL PIPE SLEEVE AND FIBERGLASS CONDUIT. CONTRACTOR SHALL SUBMIT DETAILS OF SEALANT TO ENGINEER FOR APPROVAL.

CHANNEL CONDUIT SUPPORT NOTES:

1. MOUNT CONDUIT & CLEVIS HANGER ABOVE BOTTOM OF BARS (C.N.O.).

2. SEE "R.M.C. IN STRUCTURE" DETAILS FOR ADD'L INFORMATION.

3. FIELD DRILL 5/8" (16) O.A. HOLES IN FLANGES OF DIAPHRAGMS OR BEAMS.

CHANNEL CONDUIT SUPPORT:

CONDUIT SUPPORTS SHALL BE ATTACHED TO THE EXISTING STRUCTURES UTILIZING ONE OF THE FOLLOWING METHODS AS APPROVED BY THE ENGINEER:

1. FIELD DRILL RIGID METAL CONDUIT HOLES IN CONCRETE STRUCTURES. HOLE DIAMETER & ANCHOR DEPTH FOR THE CHEMICAL ANCHOR TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

2. CHEMICAL ANCHORS - SYSTEM APPROVED BY CONN. D.O.T. WITH THREADED ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

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1. FIELD DRILL HOLES IN CONCRETE STRUCTURES. HOLE DIAMETER & ANCHOR DEPTH FOR THE CHEMICAL ANCHOR TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

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3. ONE HOLE CLAMP SHALL BE A MALLEABLE IRON CONDUIT CLAMP AS SHOWN AND AS MANUFACTURED BY ITT GRINNELL CO., FIG. 126, OR APPROVED EQUAL. THE CLEVIS, INCLUDING ALL HARDWARE, THREADED RODS AND NUTS SHALL BE GALVANIZED. THE THREADED RODS SHALL BE A MINIMUM OF 3/8 (16) IN DIAMETER.

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PROJECT TITLE:

INCRUMENT MANAGEMENT SYSTEM INSTALLATIONS ALONG ROUTE 9 AND ROUTE 72

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

INCIDENT MANAGEMENT SYSTEM INSTALLATIONS ALONG ROUTE 9 AND ROUTE 72

FARMINGTON TO CROMWELL

DATE: 12/9/2011

ID-04
**CONDUIT CROSSING UNDER EXISTING UTILITY OR DRAINAGE PIPE**

**TYPICAL GUIDE RAIL CROSSING**

**TYPICAL RAMP CROSSING**

**NOTES:**
- Contractor to restore areas disturbed by trench to original condition.
- Contractor shall install conduit at a minimum depth of 40" (1000).
- Contractor shall be responsible for ensuring that conduit will not conflict with underground utilities.

**EXISTING GRADE**

10 (MIN.)*

**SAND BACKFILL** (MIN.)

1

**EXISTING UTILITY PIPE OR CONDUIT**

2" (50)

36" (900)

**RIGID METAL CONDUIT**

**METAL BEAM RAIL**

**POST**

**FLEXIBLE METAL CONDUIT**

**RIGID METAL CONDUIT**

**P.V.C. OR RMC AS SPECIFIED**

**120" (3000) LENGTH MINIMUM**

**NOTES:**
- 2" OR 4" (50 OR 100) DIA.
- 22.5° - 48" (1200) RADIUS FOR 4" (100) RIGID METAL CONDUIT
- Contractor shall be responsible for assuring that conduit will not conflict with underground utilities.
- Contractor shall install conduit at a minimum depth of 40" (1000).
- Contractor to restore areas disturbed by trench to original condition.
- Will not conflict with underground utilities.

**4" (100) CONDUIT TREATMENT AT SIGN SUPPORT**

**CIRCULAR SHAFT SIGN SUPPORT FOUNDATION**

**RMC CONDUIT**

**FLEXIBLE METAL CONDUIT**

**120" (3000) LENGTH MINIMUM**

**NOTES:**
- The contractor shall be required to install a minimum of 120" (3000) of flexible conduit on each side of the pull box. This is required to ensure that the innerducts entering and exiting the pull box will line up and be straight.
- The contractor shall be responsible to ensure that the radius of the installed flexible metal pipe is greater than the minimum allowed for the fiber optic cable.

**TYPICAL PULL BOX INSTALLATION - CONDUIT UNDER ROADWAY**

**TYPICAL IMS CONDUIT CROSSING DETAILS**

**FINAL DESIGN REVIEW**

**INCIDENT MANAGEMENT SYSTEM INSTALLATIONS ALONG ROUTE 9 AND ROUTE 72**

**FARMINGTON TO CROMWELL**

**TYPICAL IMS CONDUIT CROSSING DETAILS**

**DESIGNER/DRAFTER:**

**CHECKED BY:**

**PROJECT TITLE:**

**TOWN:**

**DRAWING TITLE:**

**PROJECT NO.:**

**DRAWING NO.:**

**SHEET NO.:**

**FILENAME:**

**SHEET NO.**

**REV.:**

**DATE:**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF CONNECTICUT**

**SCALE 1"=20'**

**20**

**40**

**0**

**SCALE IN FEET**

**OF WORK WHICH WILL BE REQUIRED.**

**THE CONDITIONS OF ACTUAL QUANTITIES**

**IN NO WAY WARRANTED TO INDICATE**

**INVESTIGATIONS BY THE STATE AND IS**

**SHEETS IS BASED ON LIMITED**

**THE INFORMATION, INCLUDING ESTIMATED**

**SHEETS IS BASED ON LIMITED**

**TYPICAL PULL BOX INSTALLATION - CONDUIT UNDER ROADWAY**

**4" (100) CONDUIT TREATMENT AT SIGN SUPPORT**

**CIRCULAR SHAFT SIGN SUPPORT FOUNDATION**

**RMC CONDUIT**

**FLEXIBLE METAL CONDUIT**

**120" (3000) LENGTH MINIMUM**

**NOTES:**
- The contractor shall be required to install a minimum of 120" (3000) of flexible conduit on each side of the pull box. This is required to ensure that the innerducts entering and exiting the pull box will line up and be straight.
- The contractor shall be responsible to ensure that the radius of the installed flexible metal pipe is greater than the minimum allowed for the fiber optic cable.

**TYPICAL PULL BOX INSTALLATION - CONDUIT UNDER ROADWAY**

**4" (100) CONDUIT TREATMENT AT SIGN SUPPORT**

**CIRCULAR SHAFT SIGN SUPPORT FOUNDATION**

**RMC CONDUIT**

**FLEXIBLE METAL CONDUIT**

**120" (3000) LENGTH MINIMUM**

**NOTES:**
- The contractor shall be required to install a minimum of 120" (3000) of flexible conduit on each side of the pull box. This is required to ensure that the innerducts entering and exiting the pull box will line up and be straight.
- The contractor shall be responsible to ensure that the radius of the installed flexible metal pipe is greater than the minimum allowed for the fiber optic cable.
NOTES:
1. The detail provided presents a typical median cross section. For more details, refer to civil drawings.
2. For details on conduit attachment to underside of bridge, refer to the typical installation detail sheets.

CONDUIT INSTALLATION ADJACENT TO BRIDGE PIER

ILLUMINATION HANDHOLE AS SPECIFIED
ILLUMINATION CONDUIT AS SPECIFIED
CONDUIT INSTALLATION ADJACENT TO BRIDGE PIER

12" (300) MEDIAN DETAILS
CONCRETE MEDIAN BARRIER
PULL BOX
4" (100) PVC MULTIDUCT CONDUIT

ILLUMINATION HANDHOLE AS SPECIFIED
ILLUMINATION CONDUIT AS SPECIFIED
CONDUIT AS SPECIFIED ON TYPICAL INSTALLATION DETAIL SHEETS

TYPICAL IMS CONDUIT
MEDIAN DETAILS

CONCRETE BRIDGE PIER
CONCRETE BRIDGE PIER
CONCRETE BRIDGE PIER
CONCRETE MEDIAN BARRIER
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CONCRETE HANDHOLE NOTES:

1) Block unused openings of handhole on the outside with pressure treated plywood.
2) Grout around all conduits.
3) Use 1" x 10" (40 x 10) concrete insert. Standard thread, stainless steel, flat head bolt, recessed in plate cover. Inserts to have cleanouts.
4) Type II handhole 30" (760) side installed parallel to road unless otherwise noted.
5) Use 13" (35) insert (typ in two places for all handholes). Standard thread, stainless steel, flat head bolt, recessed in plate cover. Inserts to have cleanouts.
6) 12-#3 reinforcing bars required for all handholes.

HANDHOLE COVERS

- " (10) BOLTS, STAINLESS STEEL
- " (5) SS BOLTS
- " (16) DIA. HOLE *
- " (22) SS C'SINK (TYP.)
- " (23) SS R.BLUE R" (25)
- " (25) DIA. HOLE LUG
- " (30) DIA. HOLE

CONCRETE HANDHOLE TYPE II
CLASS "PCC" CONCRETE

- 2" (50) INSULATING BONDING BUSHING
- 2 5 ' " (6 3 0 ) O .C . PLATE OPENING
- 2 7 ' " (6 9 0 ) TONGUE TO MATCH SYSTEM INSTALLATIONS
- 9' (235) R.M.C. SWEEP
- 3" (75) TYP.
- 3" (75) TYP.

SECTION "C-C"

CONCRETE HANDHOLE TYPE II
CLASS "PCC" CONCRETE
VAULT DETAILS

LIVE LOAD DESIGN CRITERIA:

EARTH PRESSURE

PULL BOX - DETAIL

VAULT - DETAIL

GENERAL NOTES:

1) SUITABLE FOR OFF-STREET LOCATIONS WHERE NOT SUBJECTED TO HIGH DENSITY TRAFFIC.

2) FOR EACH PULL BOX INSTALLED, ONE OF THE SPECIAL TOOLS REQUIRED TO OPEN THE HEX BOLTS SHALL BE PROVIDED TO THE STATE. COST OF TOOL IS INCLUDED IN THE ITEM FOR PULL BOX.

3) PULL BOXES SHALL BE INSTALLED SO THAT THE KNOCKOUTS ARE PARALLEL TO THE MAINLINE CONDUIT DIRECTION.

DESIGN CRITERIA:

LIVE LOAD

PULL BOX AND COVER SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT HO2 LIVE LOAD, WITH 30% IMPACT.

EARTH PRESSURE

AN EQUIVALENT FLUID PRESSURE (HORIZONTAL) OF NOT LESS THAN 53 lbs./S.F. (264 kg./Sq. m) SHALL BE USED FOR DESIGN. SITE CONDITIONS MAY NECESSITATE MODIFICATIONS TO THE EQUIVALENT FLUID PRESSURE (IE. SLOPING, BACKFILL, WATER TABLE, ETC.). THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS WITH REGARD TO DESIGN REQUIREMENTS.

COST OF TOOL IS INCLUDED IN THE ITEM FOR PULL BOX.

PULL BOX AND COVER SHALL BE DESIGNED TO SUPPORT Ho2 LIVE LOAD, WITH 30% IMPACT.

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

FARMINGTON TO CROMWELL

INCIDENT MANAGEMENT SYSTEM INSTALLATIONS ALONG ROUTE 9 AND ROUTE 72

PULL BOX AND VAULT DETAILS

FINAL DESIGN REVIEW

D.K. SWINBURNE

R.A. KENNEDY

DESIGNER/DRAFTER:

CHECKED BY:

PROJECT TITLE:

TOWN:

DRAWING TITLE:

PROJECT NO.

DRAWING NO.

SHEET NO.

GENERAL NOTES:

THE CONDITIONS OF ACTUAL QUANTITIES IN NO WAY WARRANTED TO INDICATE INVESTIGATIONS BY THE STATE AND IS BASED ON LIMITED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED QUANTITIES OF WORK, SHOWN ON THESE SHEETS.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK WHICH WILL BE REQUIRED.

FILED DATE:

Plotted Date:

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION
5. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION REQUIREMENTS FOR EXPANSION BOLTS OF SUFFICIENT LENGTH AND DIAMETER TO SUPPORT 100lbs. (45kg). STAINLESS STEEL BANDS OR TO A CONCRETE WALL/BRIDGE USING 2 STAINLESS STEEL BOLTS, NUTS AND WASHERS CONFORMING TO ASTM A449.

4. THE BRACKETS SHALL BE ATTACHED WITH MANUFACTURER APPROVED ½" (20) WIDE, 0.02" (0.6) THICK, 3" (75) DEEP, ROUND SHAFT (CCTV/DETECTOR POLE) OR SIGN SUPPORT MOUNTING DETAIL.

3. BRACKET SUPPORT TO BE PROVIDED BY TRAFFIC FLOW MONITOR MANUFACTURER.

2. CHEMICAL ANCHORS-SYSTEM APPROVED BE CONNECTICUT D.O.T. WITH THREADED RODS, ANCHOR DEPTH & DIAMETER TO BE IN ACCORDANCE WITH THE CHEMICAL ANCHORAGE MANUFACTURER'S RECOMMENDATIONS. (TYP)

1. FIELD DRILL HOLES IN CONCRETE STRUCTURES, HOLE DIAMETER & ANCHOR DEPTH TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (TYP). HOLE DIAMETER & ANCHOR DEPTH TO BE IN ACCORDANCE WITH THE CHEMICAL ANCHORAGE MANUFACTURER'S RECOMMENDATIONS. (TYP)
TRAFFIC MANAGEMENT SYSTEM CABINET AND MINI-HUB CABINET

TRAFFIC MANAGEMENT SYSTEM CABINET AND MINI-HUB CABINET NOTES:

1. CALL SEAM BETWEEN CABINET AND CONCRETE FOUNDATION.
2. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 30" X 30" (750 X 750), MIN. 4" (100) THICK.
3. LEVEL FOUNDATION WITH A PROJECTION OF 6" (150) ABOVE FINISHED GRADE.
4. INSTALL FOUNDATION ON 6" (150) GRANULAR FILL, IN ACCORDANCE WITH SECTION 2.13.
5. FRONT CABINET DOOR TO OPEN FIELD SIDE.
6. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.
7. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.
8. TRANSFORMER TO BE ATTACHED TO CABINET ON SAME SIDE AS METER LOCATION. CABINETS WITH METERS INSTALLED. THE OPENINGS SHALL BE CAPPED WITH A 2" (50) GROUT LEVEL WITH THE TOP OF THE FOUNDATION BELOW THIS POINT.

TRAFFIC CONTROL FOUNDATION NOTES:

1. INSTALL FOUNDATION ON 6" (150) GRANULAR FILL IN ACCORDANCE WITH SECTION 2.13.
2. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 30" X 30" (750 X 750), MIN. 4" (100) THICK.
3. LEVEL FOUNDATION WITH A PROJECTION OF 6" (150) ABOVE FINISHED GRADE.
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TRAFFIC CONTROL FOUNDATION NOTES PRE-CAST:

1. PLACE NO. 6 CRUSHED STONE IN THE CENTER OPENINGS AFTER THE CONDUITS AND GROUND ROD HAVE BEEN INSTALLED.
2. DUCT SEAL ALL CONDUITS THAT CONTAIN CABLE. CAP ALL UNUSED CONDUITS.
3. CONCRETE: CLASS PCC04460 CONFORMING TO ARTICLE M.03.
4. #4 REBAR, 2" (50) MIN COVER AROUND ALL OPENINGS. 3 - #4 RE-BARS IN EACH CORNER.
5. CONDUITS SHALL NOT PROJECT MORE THAN 2" (50) ABOVE FOUNDATION.
6. INSTALL A MINIMUM OF 24" (600) OUTSIDE THE FOUNDATION. THE OPENINGS SHALL BE CAPPED WITH A 2" (50) GROUT LEVEL WITH THE TOP OF THE FOUNDATION BELOW THIS POINT.
7. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.
8. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.
9. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.
10. INSTALL CONCRETE SIDEWALK ON FRONT AND BACK SIDE OF FOUNDATION, 36" X 36" (900 X 900), MIN. 4" (100) THICK.

I/O PANEL & POWER DISTRIBUTION PANEL HINGE DETAIL

1. INSTALL FOUNDATION ON 6" (150) GRANULAR FILL IN ACCORDANCE WITH SECTION 2.13.
2. LEVEL FOUNDATION WITH A PROJECTION OF 6" (150) ABOVE FINISHED GRADE.
3. CONCRETE: CLASS PCC04460 CONFORMING TO ARTICLE M.03.
4. #4 REBAR, 2" (50) MIN COVER AROUND ALL OPENINGS. 3 - #4 RE-BARS IN EACH CORNER.
5. CONDUITS SHALL NOT PROJECT MORE THAN 2" (50) ABOVE FOUNDATION.
6. INSTALL A MINIMUM OF 24" (600) OUTSIDE THE FOUNDATION.
NOTES:
1. EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED OR COVERED, INCLUDING THOSE PAVEMENT MARKINGS OUTSIDE OF THE TRANSWAY.
2. THE APPROPRIATE TYPE DE-7 AND DE-7A DELINEATORS SHALL BE INSTALLED ON THE TEMPORARY PRECAST CONCRETE BARRIER CURB AS SPECIFIED ON THE STANDARD DRAWING "TYPICAL DELINEATION AND DELINEATOR AND OBJECT MARKER DETAILS".
3. EXISTING SIGNS ARE TO BE RELOCATED AS NEEDED AND AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION SO THAT THEY ARE IN THE APPROPRIATE LOCATION AND VISIBLE TO MOTORISTS. SOME SIGNS MAY HAVE TO BE TEMPORARILY LOCATED WITHIN THE WORK AREA. THIS WORK WILL BE PAID FOR UNDER ITEM #097101A-MAINTENANCE AND PROTECTION OF TRAFFIC.
4. EXISTING SIGNS IN CONFLICT WITH TEMPORARY SIGNS SHALL BE COVERED, REMOVED, OR REVISED TO MEET FIELD CONDITIONS.
5. TEMPORARY SIGNS SHALL BE MOUNTED ON POSTS WHEN FEASIBLE.
6. TEMPORARY SIGNS SHALL BE MOUNTED ON POSTS WHEN FEASIBLE.
7. THE LOCATIONS OF TEMPORARY SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET FIELD CONDITIONS AND TO CLEARLY DEFINE ACCESS TO AND EXIT FROM ALL ROADWAYS AND DRIVeways.
8. THE WEIGHT OF THE TEMPORARY SHEET PILING SHALL NOT EXCEED 10% OF THE WEIGHT OF THE TEMPORARY PRECAST CONCRETE BARRIER CURB.
9. AS DIRECTED BY THE ENGINEER, INSTALL SERIES LS ROAD WORK AHEAD - POSTS DOUBLE ROAD WORK AHEAD AND SHOULDER CLOSED AHEAD, 10' OF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS. INSTALL BARCODE MARKING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
OFFICE OF ENGINEERING
UPGRADE OF THE INCIDENT MANAGEMENT SYSTEM
GREATER NEW HAVEN AREA
NEW HAVEN AREA
MAINTENANCE & PROTECTION OF TRAFFIC DETAILS

L. A. KENNEDY
E. H. ATWOOD

STATE ENGINEER
DEPARTMENT OF TRANSPORTATION
UPGRADE OF THE INCIDENT MANAGEMENT SYSTEM
GREATER NEW HAVEN AREA
NEW HAVEN AREA
MAINTENANCE & PROTECTION OF TRAFFIC DETAILS

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STATE ENGINEER
DEPARTMENT OF TRANSPORTATION
UPGRADE OF THE INCIDENT MANAGEMENT SYSTEM
GREATER NEW HAVEN AREA
NEW HAVEN AREA
MAINTENANCE & PROTECTION OF TRAFFIC DETAILS

REV. 3-2011
DATE
AA
REVISION DESCRIPTION
POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
AND TO CLEARLY DEFINE ACCESS TO AND EGRESS FROM ALL ROADWAYS AND DRIVEWAYS.

6. TEMPORARY SIGNS SHALL BE MOUNTED ON POSTS WHEN FEASIBLE.
5. THE LOCATIONS OF TEMPORARY SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET FIELD CONDITIONS.
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2. THE APPROPRIATE TYPE DE-7 AND DE-7A DELINEATORS SHALL BE INSTALLED ON THE TEMPORARY PRECAST CONCRETE BARRIER CURB AS SPECIFIED ON THE STANDARD DRAWING "TYPICAL DELINEATION AND DELINEATOR AND OBJECT MARKER DETAILS".
1. EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED OR COVERED, INCLUDING THOSE PAVEMENT MARKINGS OUTSIDE OF THE TRANSWAY.

NOTE:
UNLESS OTHERWISE NOTED, ALL WORK ITEMS AS SHOWN ON DWG. MPT-1 ARE SPECIFIC TO THE CONSTRUCTION OF VMS FOUNDATIONS AND ARE INCLUDED IN THE PRICE BID FOR ITEM 1202247A.
### Schedule of Materials

<table>
<thead>
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<th>METHOD OF MOUNTING</th>
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#### Detailed Description

1. **Sign to be Furnished by Contractor and Installed by the Contractor:**
   - Hardware and materials required for sign installation.

2. **Highway Advisory Radio Tune to XXXX AM:**
   - Instructions for tuning the radio.

3. **Urgent Message When Flashing:**
   - Instructions for handling urgent messages.

4. **Remote Control Flashing Light:**
   - Details on remote control functionality.

5. **Auto Dimming Photocell:**
   - Photocell setup instructions.

6. **Battery Cabinet Detail:**
   - Specifications for battery cabinets.

7. **Pager Cabinet Detail:**
   - Specifications for pager cabinets.

8. **Beam Detail:**
   - Details on beam construction.

9. **Back View of Sign:**
   - Diagram showing back view of the sign.

10. **Front View of Sign:**
    - Diagram showing front view of the sign.

11. **Solar Panel:**
    - Specifications for solar panels.

12. **Flashlight Cabinet Detail:**
    - Details for flashlight cabinets.

### NOTES:

1. Signs to be furnished by the department and installed by the contractor. The contractor is responsible for coordinating the sign order and installation. The contractor will call (860) 258-4675 to request a sign order. See typical sheets entitled "Post Mounted Signs on Breakaway Coupling System".

2. Refer to standard sheets entitled "Sign Face Sheet Aluminum Large Sign Accessory and Mounting Details."

3. A sign shall be ordered from DOT sign catalog 52-0910 and 41-5600.

4. Signs shall be furnished by the contractor. See installation instructions in the state typical drawings.

5. The contractor shall call (860) 258-4675 to request a sign order. See typical sheets entitled "Post Mounted Signs on Breakaway Coupling System".

6. Refer to typical sheets entitled "Sign Face Sheet Aluminum Large Sign Accessory and Mounting Details."
HAR GROUND PLANE AND POLE INSTALLATION PLANS

1. If any field conditions preclude compliance with the drawings and/or conditions specified, the contractor shall immediately notify the engineer and small job proceed with any affected work. Contractor shall provide reasons and recommendations in writing for approval to change.

2. The contractor shall submit the engineer 7 days prior to the installation of the reinforcing cage and the concrete pour.

3. Install anchor bolts per manufacturer's recommendation.

4. Concrete operations shall start as soon as possible after completion of the excavation. The bottom of the excavated hole shall be clean with no standing water.

5. Depth of the pole foundations shown is minimum.

6. All portions of the foundations which will remain exposed to view shall be neatly finished with a wood float and given a smooth finish. All exposed portions of concrete foundations to be protected with a 2" x 2" x (25 x 25) check as shown.

7. Foundations to be paid for under the Item Traffic Control Foundation - Span Pole - Type B.

8. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

9. Concretes for pole foundations shall be class "A" concretes. Non-shrink grout shall conform to Form 815, Section M.03.01-12.

10. Anchor bolts for the poles shall conform to ASTM A449M. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

11. Insulating bonding bushing.

12. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

13. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

14. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

15. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

16. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

17. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

18. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

19. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.

20. All reinforcement shall be deformed steel bars and conform to ASTM A615M grade 400.
NOTES:
1. OPTIC CABLE SPLICE ENCLOSURE.
2. INSTALLATION DETAILS TO EXISTING UTILITY POLES SIMILAR.
3. SPLICE CASES SHALL BE PAID UNDER THE ITEM "FIBER CABLE-DROP INSTALLATION"

- CONDUIT STAND-OFF INSTALLATION
- CONDUIT CLAMP DETAIL
- SPLICE CASE
- CABLE LASHING AT A CORNER POLE DETAIL

- TYPICAL WOOD POLE AND GUY INSTALLATION
- BREAK STAND-OFF DETAIL
- CABLE GUARD
- COVER ASSEMBLY
- END CAP

- ATTACHMENT, UNLESS OTHERWISE DIRECTED ON PLANS.
- AND AT LEAST 12" (300) ABOVE HIGHTEST COMMUNICATIONS ATTACHMENT,
- 40" (1000) BELOW LOWEST POWER COMPANY ATTACHMENT,

- ENSURE THE ATTACHMENT POINT HAS CLEARANCES OF AT LEAST Double Lashed to Messenger (TYP.)

- THE CONDITIONS OF ACTUAL QUANTITIES IN NO WAY WARRANTED TO INDICATE INVESTIGATIONS BY THE STATE AND IS SHEETS IS BASED ON LIMITED QUANTITIES OF WORK, SHOWN ON THESE THE INFORMATION, INCLUDING ESTIMATED \( \frac{3}{15}/2021 \)

- THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

- DRAWING TITLE:
- PROJECT NO.
- DRAWING NO.
- SHEET NO.
- PROJECT TITLE:
- TOWN:

- STATE: ID-XX-IMS-CTDOT-STANDARD DTLS.dgn
- Plotted Date:

- C O N N E C T I D E M A T E R

- R A T I O N