

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

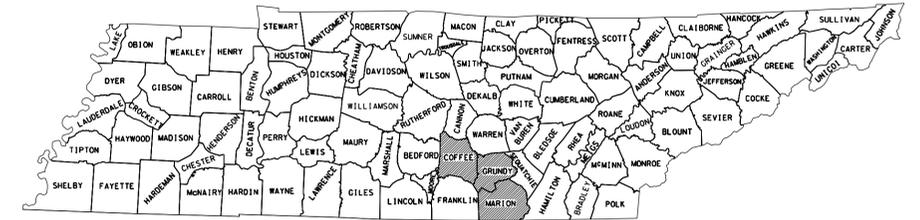
INDEX OF SHEETS
ON SHEET 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT
COFFEE COUNTY / GRUNDY COUNTY / MARION COUNTY

TENN.	YEAR 2014	SHEET NO. 1
FED. AID PROJ. NO.	IM/NH-24-2(143)	
STATE PROJ. NO.	98028-3123-44	

INTELLIGENT TRANSPORTATION SYSTEM (ITS)
REGION TWO SMARTWAY RURAL EXPANSION

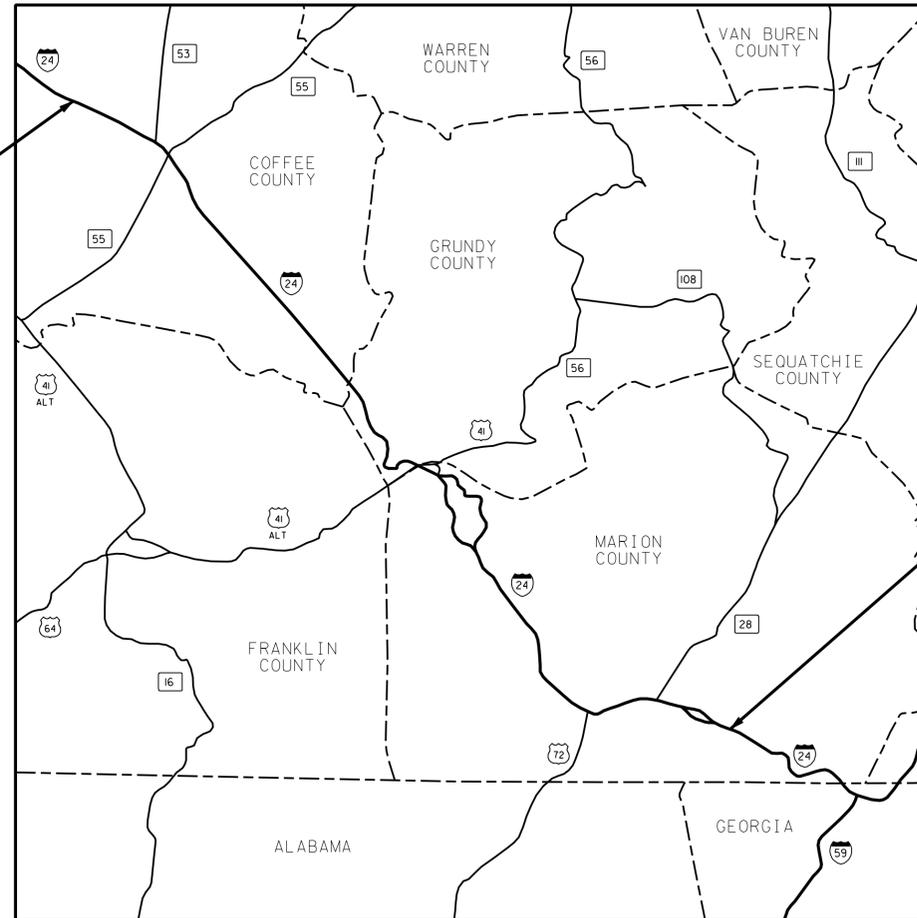
CONSTRUCTION
INTERSTATE HIGHWAY NO. I-24



PROJECT LOCATIONS SHADED

BEGIN PROJECT
IM/NH-24-2(143)
98028-3123-44
I-24
MM 109.1
E: 1937115.00
N: 427980.00

THIS PROJECT DOES NOT
REQUIRE ANY R.O.W.
ACQUISITION OR EASEMENTS.



1" = 26,000'

END PROJECT
IM/NH-24-2(143)
98028-3123-44
I-24
MM 156.9
E: 2086175.00
N: 259265.00

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APPROVED: *Paul D. Degges*
PAUL D. DEGGES, CHIEF ENGINEER

DATE: _____

APPROVED: *John Schroer*
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT MANAGER SAID EL SAID, P.E.
DESIGNED BY KIMLEY-HORN AND ASSOCIATES, INC.
DESIGNER R. BRADFORD WALDSCHMIDT, P.E. CHECKED BY CHRISTOPHER D. RHODES, P.E.
P.E. NO. 98027-1157-44
PIN NO. 115780.00

TOTAL PROJECT LENGTH 47.8 MILES

- I-24 (COFFEE COUNTY): 18.0 MILES
- I-24 (GRUNDY COUNTY): 7.3 MILES
- I-24 (MARION COUNTY): 22.5 MILES

NO EQUATIONS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____
DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	1A

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24	I-24 LAYOUT / MP 137.4 / CONDUIT
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27	I-24 LAYOUT / MP 138.5 / CONDUIT
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DEPARTMENT OF TRANSPORTATION

INDEX
OF
SHEETS

NOTE: NO PROJECT COMMITMENTS
SHEET INCLUDED IN THIS
SET OF PLANS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	1B

STANDARD ROADWAY DRAWINGS

DRAWING NUMBER	CURRENT REVISION DATE	STANDARD TITLES
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ROADWAY DESIGN STANDARDS

RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-5	05-01-08	STANDARD LEGEND FOR EPSC
RD-L-6	03-30-10	STANDARD LEGEND FOR EPSC
RD-L-7	05-24-12	STANDARD LEGEND FOR EPSC

ROADWAY AND PAVEMENT APPEARANCES

RP-J-23	07-25-12	CONCRETE PAVEMENT REPAIR DETAILS
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SAFETY DEVICES AND FENCE

S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-3		SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-GR31-1		W-BEAM GUARDRAIL
S-GR31-2		MEDIAN DIVIDER GUARDRAIL
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRT-1		TYPE 12 GUARDRAIL TERMINAL (BURIED-IN-BACKSLOPE)
S-GRT-2		TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-2R		EARTH PAD FOR TYPE 38 (RETROFIT)
S-GRT-3		TYPE 21 GUARDRAIL TERMINAL
S-GRT-3D		TYPE 21 GUARDRAIL TERMINAL (DETAILS)
S-GRT-3P		EARTH PAD FOR TYPE 21 TERMINAL
S-GRT-4		TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-GRA-1		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL
S-GRA-1A		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL (ALTERNATIVE)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 21, 13, AND IN-LINE TERMINALS
S-SSMB-1	08-19-13	32" SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-2	08-19-13	51" SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-7	12-04-13	FOOTING DETAIL FOR OVERHEAD SIGN STRUCTURES 32" MEDIAN BARRIER WALL
S-SSMB-8	12-04-13	FOOTING DETAIL FOR OVERHEAD SIGN STRUCTURES 51" MEDIAN BARRIER WALL
S-F-10	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE
S-F-10A	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE WITH TIMBER POSTS
S-F-10B	05-14-10	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE

DRAWING NUMBER	CURRENT REVISION DATE	STANDARD TITLES
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TRAFFIC CONTROL

T-M-4	11-01-11	STANDARD INTERSECTION PAVEMENT MARKINGS
T-S-9	11-01-11	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-15	12-07-90	STANDARD CONDUIT & GROUND DETAILS FOR OVERHEAD & CANTILEVER SIGN STRUCTURES
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-5	12-04-13	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-9	12-04-13	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	12-04-13	MISCELLANEOUS SIGNAL DETAILS
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-SG-13	06-01-09	FLASHING BEACON DETAIL
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-13-09	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-13	03-13-09	TWO - OUTSIDE LANE CLOSURE ON FREEWAY OR EXPRESSWAY
T-WZ-14	03-13-09	TWO - OUTSIDE LANE CLOSURE ON INTERSTATES AND EXPRESSWAYS (PORTABLE BARRIER RAIL)
T-WZ-15	04-02-12	INTERIOR LANE CLOSURE ON FREEWAYS OR EXPRESSWAYS
T-WZ-16	03-13-09	LANE SHIFT ON DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-18	03-13-09	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-L-1	12-04-13	STANDARD LIGHTING FOUNDATION DETAILS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-8	08-01-12	FILTER SOCK
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	08-01-12	SEDIMENT TUBE

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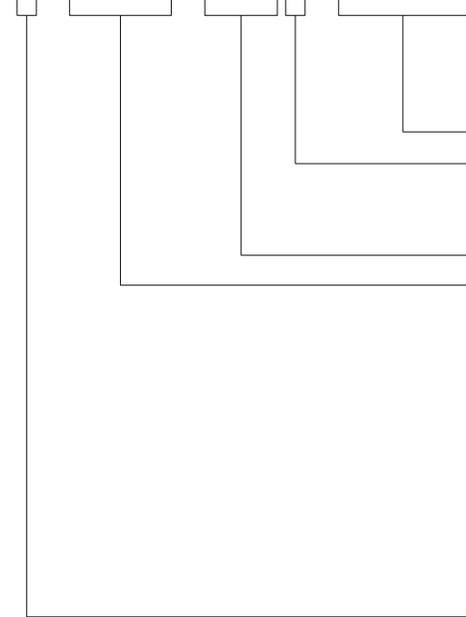
STANDARD
ROADWAY
DRAWINGS

ITS LAYOUT SHEET LEGEND

EXISTING	PROPOSED	DESCRIPTION
		FIELD CABINET (POLE-MOUNTED)
		FIELD CABINET (WITH CONCRETE FOUNDATION)
		PTZ CCTV CAMERA, POLE, AND FOUNDATION
		PTZ INFRARED CAMERA, POLE, AND FOUNDATION WITH NON-PTZ STATIC CAMERA
		RADAR DETECTION STATION (MOUNTED ON STRUCTURE)
		RADAR DETECTION STATION AND POLE
		FREEWAY DMS
		SPEED FEEDBACK SIGN
		MULTI-COLOR DMS
		ROAD WEATHER INFORMATION SYSTEM AND POLE
		OVERHEAD SIGN STRUCTURE
		DEMARICATION SITE POLE (POWER AND/OR COMMUNICATION)
		GUARDRAIL
		MILE POST MARKER
		PULL BOX (TYPE C)
		PULL BOX (TYPE D)
		PULL BOX (TYPE E)
		ELECTRICAL MANHOLE
		TRANSFORMER
		ITS CONDUIT
		ITS COMMUNICATION TRUNKLINE CONDUIT
		ITS ELECTRICAL CONDUIT
		ITS OR ELECTRICAL CONDUIT ATTACHED TO EXISTING STRUCTURES
		ITS OR ELECTRICAL CONDUIT PASSING UNDERNEATH A BRIDGE/OVERPASS
		DETECTION ZONE FOR RDS
		OVERHEAD UTILITY LINES
		RAILROAD TRACK
		SELECTIVE TREE AND VEGETATION TRIMMING, REMOVAL, AND CLEAN-UP

ITS FIELD CABINET/FIELD DEVICE IDENTIFIER

C-CCTV-024W-111.2



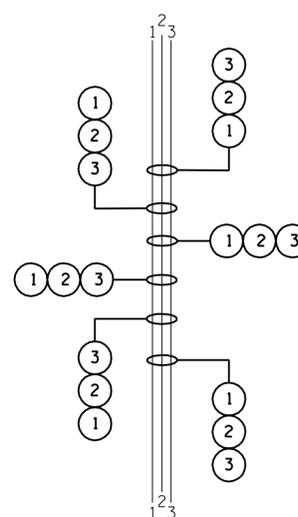
- MILEPOST LOCATION OF FIELD CABINET OR FIELD DEVICE
- DIRECTION OF TRAVEL:
N - NORTH S - SOUTH
E - EAST W - WEST
- ROUTE NUMBER (INTERSTATE OR STATE ROUTE NUMBER)
- TYPE OF FIELD DEVICE:
CCTV - CLOSED CIRCUIT TELEVISION CAMERA
DEM1 - DEMARCATION SITE (TYPE 1)
DEM2 - DEMARCATION SITE (TYPE 2)
DEM3 - DEMARCATION SITE (EXISTING)
FDBK - SPEED FEEDBACK SIGN
FDMS - FREEWAY DYNAMIC MESSAGE SIGN
INFR - INFRARED CAMERA
RDS1 - RADAR DETECTION SYSTEM (TYPE 1)
RDS4 - RADAR DETECTION SYSTEM (TYPE 4)
SGNL - TRAFFIC SIGNAL
C = FIELD CABINET
D = FIELD DEVICE

EXAMPLE ABOVE WOULD BE A CCTV CABINET ON WESTBOUND I-24 AT MILEPOST 111.2.

CONDUIT AND CABLING IDENTIFIER

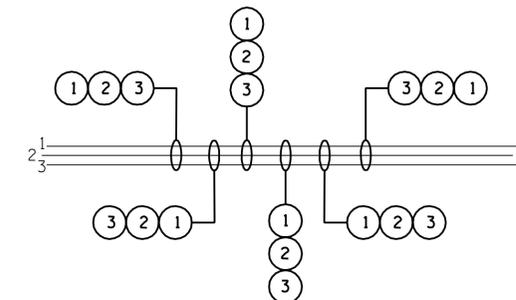
CONDUIT LABELING KEY	
ALPHA-DIGIT	GENERAL USE
A	ITS COMMUNICATIONS CONDUIT(S)
B	ITS COMMUNICATIONS BRANCH CONDUIT(S)
C	ITS FIELD DEVICE CONDUIT(S)
E	ELECTRICAL CONDUIT(S)

CONDUIT LABELING DIRECTIONAL KEY



- CONDUIT AND CABLE IDENTIFIER OF TYPE, SIZE, AND CABLING AS SHOWN ON PLANS.
- NUMERIC IDENTIFIER (SEE CONDUIT AND CABLE SCHEDULE ON PLANS)
- ALPHA - CONDUIT USE (SEE CONDUIT LABELING KEY ABOVE)

- NOTES: 1. THE NUMERIC IDENTIFIER CHANGES ONLY WHEN THE CONTENTS OF THE CONDUIT CHANGE OR WHEN THE CONDUIT TYPE CHANGES (I.E. PVC TO RGS).
2. CONDUIT AND CABLE IDENTIFIERS ARE ASSOCIATED INDEPENDENTLY WITH EACH INDIVIDUAL SHEET, AND ARE NOT CONTINUOUS ONTO THE ADJACENT SHEETS.



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	1C

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PLANS
LEGEND

ESTIMATED QUANTITIES

FOOTNOTE	ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	
	1	201-01	CLEARING AND GRUBBING	LS	1
	2	201-07.01	REMOVAL AND DISPOSAL OF BRUSH AND TREES	LS	1
		203-04	PLACING AND SPREADING TOPSOIL	C.Y.	50
	4, 5	209-03.21	FILTER SOCK (12 INCH)	L.F.	2,780
	4, 5	209-05	SEDIMENT REMOVAL	C.Y.	10
	4, 5	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	8,340
	4, 5	209-09.01	SANDBAGS	BAG	330
	4, 5	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	2,420
	4, 5	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	5
	4, 5	209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	5
	3, 4, 5	303-01	MINERAL AGGREGATE, TY A BASE, GRADING D	TON	10
	4, 5	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	5
		501-01	PORTLAND CEMENT CONCRETE PAVEMENT (REPLACEMENT)	S.Y.	40
	28	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	80
	6	703-01	CEMENT CONCRETE DITCH PAVING	C.Y.	1
		705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	1,200
		705-04.03	GUARDRAIL TERMINAL (TYPE 13)	EACH	5
		705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350-TL3)	EACH	8
		705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	8
	7	705-08.51	PORTABLE IMPACT ATTENUATOR (NCHRP 350-TL3)	EACH	2
	7	705-14.20	RELOCATE OR REWORK IMPACT ATTENUATOR	EACH	8
		706-01	GUARDRAIL REMOVED	L.F.	150
	8	706-03.01	POSTS FURNISHED	EACH	30
	8	706-03.10	POST BLOCKOUTS & BACKUP PLATES	EACH	30
	9	706-05	GUARDRAIL ADJUSTMENT	L.F.	300
	10	706-10.73	REMOVAL OF GUARDRAIL & POST FOR REUSE	L.F.	300
	11	707-01.11	CHAIN LINK FENCE (6 FOOT)	L.F.	16
	11	707-01.13	GATE - CHAIN-LINK FENCE-6 FOOT (WITH PADLOCK)	EACH	2
	4, 5, 28	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	170
		711-02.04	REINFORCED CONCRETE MEDIAN BARRIER (SEE PLANS DETAILS)	L.F.	30
	12, 14	712-01	TRAFFIC CONTROL	LS	1
	12	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	500
	12	712-02.36	REMOVE AND RELOCATE PORTABLE BARRIER RAIL	L.F.	2,000
	12	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	250
	12	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	26
	12	712-05.01	WARNING LIGHTING (TYPE A)	EACH	100
	12	712-05.03	WARNING LIGHTING (TYPE C)	EACH	150
	12, 13	712-06	SIGNS (CONSTRUCTION)	S.F.	1,000
	12	712-08.03	ARROW BOARD (TYPE C)	EACH	10
	12	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	6
	12	713-16.02	TRUCK MOUNTED IMPACT ATTENUATOR (WITH FLASHING ARROW BOARD)	EACH	1
	15, 31	713-16.20	SIGNS (SPEED FEEDBACK SIGN)	EACH	2
		713-16.21	SIGNS (EXIT 143 1 MILE AHEAD)	EACH	1
	27	713-16.41	RELOCATE SIGN	LS	1
	15, 30	714-04.03	CONDUIT (4IN CONDUIT W/BANK)	L.F.	22,260
	15, 30	714-04.04	CONDUIT (4IN CONDUIT BORED W/BANK)	L.F.	160
	15, 25	714-05.15	ELECTRIC MANHOLE	EACH	45
	15	714-06.08	CABLE (25KV 1/C #1/0 AWG. ALUMINUM)	L.F.	47,040
	15	714-06.09	CABLE (600V 1/C #4 AWG. ALUMINUM)	L.F.	23,520
	18	714-08.09	LIGHT STANDARDS (25' POLE HEIGHT)	EACH	2
		716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	40
	22	717-01	MOBILIZATION	LS	1
	15	725-20.01	CCTV POLE & FOUNDATION (50FT POLE W/LWRNG DVICE)	EACH	11
	15	725-20.02	CCTV POLE & FOUNDATION (80FT POLE W/LWRNG DVICE)	EACH	1
	15	725-20.03	LOWERING TOOL FOR CAMERA LOWERING DEVICE	EACH	2
	15, 16	725-20.22	STEEL OVERHEAD SIGN STRUCTURE (SPANS 51 FT TO 70 FT)	EACH	5
	15, 16	725-20.23	STEEL OVERHEAD SIGN STRUCTURE (SPANS 71 FT TO 90 FT)	EACH	1
	15, 17	725-20.31	STEEL SIGN STRUCTURE (MULTI-COLOR DMS)	EACH	2
	15, 25	725-20.43	PULL BOX (TYPE C)	EACH	70
	15, 25	725-20.45	PULL BOX (TYPE E)	EACH	33
	15	725-20.54	CABLE (1/C #8 AWG.)	L.F.	1,340
	15	725-20.55	CABLE (1/C #6 AWG.)	L.F.	2,160
	15	725-20.56	CABLE (1/C #4 AWG.)	L.F.	6,880
	15	725-20.58	CABLE (1/C #1/0 AWG.)	L.F.	4,520
	15, 20	725-20.71	ELECTRICAL CONNECTION (DUCK RIVER EMC)	LS	1
	15, 20	725-20.72	ELECTRICAL CONNECTION (SEQUACHEE VALLEY EC)	LS	1
	15, 21	725-20.75	COMMUNICATION CONNECTION (BEN LOMAND)	LS	1
	15, 21	725-20.76	COMMUNICATION CONNECTION (AT&T)	LS	1
	15	725-20.91	CCTV CAMERA SYSTEM (PAN TILT & ZOOM)	EACH	8
	15	725-20.92	CCTV CAMERA SYSTEM (STATIC)	EACH	4
	15	725-20.93	CCTV CAMERA SYSTEM (INFRARED)	EACH	4

FOOTNOTES

- 1 INCLUDES ALL REQUIRED CLEARING, GRUBBING, REMOVAL, AND DISPOSAL OF ALL VEGETATION AND DEBRIS FOR PROPOSED CONDUIT, POLE, AND FIELD DEVICE INSTALLATION AND OPERATION.
- 2 THIS ITEM NUMBER IS LISTED AS SELECTIVE TREE AND VEGETATION TRIMMING, REMOVAL, AND CLEAN-UP IN THE PLANS. SEE SHEET 2D - SPECIAL NOTES - FOR FURTHER INFORMATION.
- 3 ITEM NUMBER SHALL BE USED FOR SELECT BACKFILL MATERIAL WHEN EXCAVATED MATERIAL IS NOT ACCEPTABLE.
- 4 REFER TO THE SERIES 33 SHEETS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
- 5 SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
- 6 INCLUDES ALL OF THE NECESSARY ITEMS FOR REPAIRING AND/OR REPLACING CONCRETE DRAINAGE FLUMES. USE OF THIS PAY ITEM SHALL BE AT THE DISCRETION OF THE ENGINEER.
- 7 THIS ITEM NUMBER SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350, OR A TRACC. THE ITEM NUMBER WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.
- 8 THESE PAY ITEMS INCLUDE THE FURNISHING AND INSTALLATION OF SINGLE TYPE 2 GUARDRAIL POSTS/BLOCKOUTS FOR AREAS WHERE STRENGTHENING OF EXISTING GUARDRAIL IS NEEDED AS DIRECTED BY THE ENGINEER (I.E. THE REDUCTION OF POST SPACING BY DOUBLING THE NUMBER OF POSTS).
- 9 ITEM NUMBER SHALL BE USED FOR ANY ADJUSTMENTS NEEDED WHEN TYING PROPOSED GUARDRAIL INTO EXISTING GUARDRAIL AS DIRECTED BY THE ENGINEER.
- 10 TEMPORARY REMOVAL OF GUARDRAIL MAY BE NEEDED FOR CONSTRUCTION PURPOSES ONLY. THIS ITEM NUMBER SHALL INCLUDE THE COST TO REINSTALL THE GUARDRAIL ONCE CONSTRUCTION OF PROPOSED ITS ELEMENTS ARE FINISHED.
- 11 LIMITED ACCESS GATES SHALL BE INSTALLED WHERE REQUIRED BY THE ELECTRICAL OR COMMUNICATIONS UTILITY PROVIDERS. SEE SHEET 3U.
- 12 WILL REQUIRE RELOCATIONS OF TRAFFIC CONTROL DEVICES TO DIFFERENT SITES. NO SEPARATE PAYMENT WILL BE ALLOWED FOR MOVING TRAFFIC CONTROL DEVICES FROM ONE TEMPORARY SITE TO ANOTHER. THIS ITEM NUMBER SHALL ALSO INCLUDE THE COST FOR 36" TRAFFIC CONES FOR SHORT-TERM, SHORT DURATION, DAYLIGHT SHOULDER CLOSURES. SEE TRAFFIC CONTROL NOTES SHEET 34.
- 13 INCLUDES THE INSTALLATION AND MAINTENANCE OF SIGN PANELS, SHEETING, AND SUPPORTS.
- 14 PAY ITEM INCLUDES THE USE OF TDOT REGION 2 CHANGEABLE MESSAGE SIGNS FOR TRAFFIC CONTROL PURPOSES AT THE DIRECTION OF THE ENGINEER. SEE TRAFFIC CONTROL NOTES SHEET 34.
- 15 SEE SPECIAL PROVISION 725 FOR DESCRIPTION AND SPECIFICATIONS FOR THESE ITEMS.
- 16 INCLUDES THE DESIGN OF THE SIGN STRUCTURE, THE SIGN STRUCTURE, ALL FOOTINGS, AND ALL RELATED INCIDENTAL ITEMS TO PROVIDE A COMPLETE STEEL OVERHEAD SIGN STRUCTURE CAPABLE OF SUPPORTING THE REQUIRED DMS AND STATIC SIGNS.
- 17 INCLUDES THE DESIGN OF THE SIGN STRUCTURE, THE SIGN STRUCTURE, ALL FOOTINGS, AND ALL RELATED INCIDENTAL ITEMS TO PROVIDE A COMPLETE STEEL SIGN STRUCTURE CAPABLE OF SUPPORTING THE REQUIRED MULTI-COLOR DMS.
- 18 ITEM NUMBER SHALL INCLUDE THE COST OF THE FOUNDATION (BOTH DESIGN AND CONSTRUCTION) FOR EACH LIGHT STANDARD.
- 19 MULTIPLE CONDUIT RUNS MAY BE SHARED WITHIN THE SAME TRENCH (SEE ITS LAYOUT SHEETS FOR LOCATIONS). TRENCHING IS NOT BROKEN OUT AS A SEPARATE PAY ITEM; IT SHALL BE INCLUDED IN THE COST OF CONDUIT. A TOTAL OF APPROXIMATELY 25,000 LINEAR FEET OF TRENCHING IS ANTICIPATED FOR THIS PROJECT.

FOOTNOTES (CONTINUED)

- 20 THESE ITEM NUMBERS COVER ELECTRICAL SERVICE CONNECTION COSTS FOR DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION AND SEQUACHEE VALLEY ELECTRIC COOPERATIVE FOR CONNECTIONS TO APPLICABLE DEMARCATION SITES. BID PRICE IS ESTIMATED TO BE \$50.00 FOR ITEM NUMBER 725-20.71, AND \$60,547.00 FOR ITEM NUMBER 725-20.72. THIS PRICE IS ONLY AN ESTIMATE PROVIDED BY THE UTILITY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ACTUAL COSTS.
- 21 THESE ITEM NUMBERS COVER COMMUNICATIONS SERVICE CONNECTION COSTS FOR BEN LOMAND AND AT&T FOR CONNECTIONS TO APPLICABLE DEMARCATION SITES. BID PRICE IS ESTIMATED TO BE \$500.00 FOR ITEM NUMBER 725-20.75, AND \$500.00 FOR ITEM NUMBER 725-20.76. THIS PRICE IS ONLY AN ESTIMATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ACTUAL COSTS.
- 22 THE MOBILIZATION ITEM NUMBER IS PROJECT INCLUSIVE AND IS NOT BROKEN DOWN INTO INDIVIDUAL SITES.
- 23 THIS PAY ITEM SHALL ONLY BE UTILIZED WHERE CONDUIT BANK (TYPE 4) IS TO BE PROVIDED AND ROCK IS ENCOUNTERED, AS DIRECTED BY THE ENGINEER.
- 24 SEE SHEETS 3E-3G - TYPICAL FIELD CABINET DETAILS - AND THE TECHNICAL SPECIAL PROVISIONS FOR INFORMATION ON THE DIFFERENT CABINET TYPES.
- 25 PAY ITEM SHALL INCLUDE GPS COORDINATE DATA FOR EACH PULL BOX AND ELECTRIC MANHOLE INSTALLATION FOR INCLUSION IN THE AS-BUILT PLANS, AS WELL AS ELECTRONIC MARKER SYSTEMS FOR EACH PULL BOX
- 26 THIS PAY ITEM SHALL HAVE A PRE-ESTABLISHED UNIFORM PLACEHOLDER BID PRICE OF \$25,000.00.
- 27 THIS ITEM NUMBER INCLUDES THE RELOCATION OF DUAL POST, CANTILEVER, AND BRIDGE-MOUNTED SIGN PANELS FROM EXISTING STRUCTURES (TO BE REMOVED) TO PROPOSED OVERHEAD STRUCTURES. SEE SHEETS 35-35J (SIGN SCHEDULES AND DMS LAYOUT SHEETS) FOR ADDITIONAL INFORMATION. INCLUDES THE REMOVAL AND DISPOSAL OF SIGN BRACING, OVERHEAD / CANTILEVER / DUAL POST SIGN STRUCTURES, FOUNDATIONS AND ALL OTHER EXISTING FEATURES OF SIGN LOCATIONS REFERENCED FOR REMOVAL. THIS ITEM NUMBER SHALL ALSO INCLUDE ANY BACKFILLING REQUIRED DUE TO THE VOID LEFT BY THE REMOVED FOUNDATION.
- 28 THIS PAY ITEM IS FOR THE IMPLEMENTATION OF FOUR (4) TEMPORARY CONSTRUCTION EXITS, TO BE CONSTRUCTED PER STANDARD DRAWING EC-STR-25. THESE TEMPORARY CONSTRUCTION EXITS SHALL BE LOCATED AND USED AT THE DISCRETION OF THE ENGINEER.
- 29 EACH SIGNAL HEAD ASSEMBLY SHALL INCLUDE A YELLOW RETROREFLECTIVE STRIP WITH A WIDTH OF 2 INCHES, PLACED ALONG THE PERIMETER OF THE FACE OF THE SIGNAL BACKPLATE.
- 30 THESE ITEM NUMBERS SHALL INCLUDE THE COST OF FOUR (4) INCH CONDUIT INSTALLED IN THE SAME TRENCH OR BORE AS THE RELATED CONDUIT BANK TYPE AS SPECIFIED IN THE PLAN SHEETS.
- 31 THIS ITEM NUMBER SHALL INCLUDE ONE (1) SIGN, TWO (2) FLASHING BEACONS, AND EQUIPMENT NECESSARY TO PROVIDE A PHYSICAL CONNECTION TO THE PROGRAMMABLE LOGIC CONTROLLER.
- 32 THIS ITEM NUMBER INCLUDES THE REMOVAL AND DISPOSAL OF CONDUIT AND PULL BOXES AS DEPICTED AND NOTED ON ITS LAYOUT SHEETS 23-26. THIS DISTANCE FOR REMOVAL AND DISPOSAL IS APPROXIMATELY 6,500 LINEAR FEET. NO SEPARATE PAYMENT WILL BE PROVIDED FOR THE CONTRACTOR TO REMOVE AND DISPOSE OF THE CONDUIT AND PULL BOXES LOCATED ALONG THIS EXISTING CONDUIT ROUTE.
- 33 THIS ITEM NUMBER INCLUDES THE REMOVAL AND DISPOSAL OF CONDUIT AND PULL BOXES AS DEPICTED AND NOTED ON ITS LAYOUT SHEETS 26 AND 29. THIS DISTANCE FOR REMOVAL AND DISPOSAL IS APPROXIMATELY 1,500 LINEAR FEET. NO SEPARATE PAYMENT WILL BE PROVIDED FOR THE CONTRACTOR TO REMOVE AND DISPOSE OF THE CONDUIT AND PULL BOXES LOCATED ALONG THIS EXISTING CONDUIT ROUTE.
- 34 THIS ITEM NUMBER IS FOR LOCATIONS WHERE A 40' WOOD POLE IS REQUIRED TO RECEIVE THE PRIMARY ELECTRICAL SERVICE FEED FROM SEQUACHEE VALLEY EC. CONTRACTOR TO COORDINATE WITH SEQUACHEE VALLEY EC FOR POLE REQUIREMENTS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2

**UNOFFICIAL
SET
NOT FOR
BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
QUANTITIES

ESTIMATED QUANTITIES

FOOTNOTE	ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
15	725-21.01	DYNAMIC MESSAGE SIGN	EACH	5
15	725-21.02	DYNAMIC MESSAGE SIGN (MULTI-COLOR)	EACH	2
15	725-21.11	NETWORK SWITCH (TYPE A)	EACH	10
15	725-21.14	NETWORK CONFIGURATION	LS	1
15	725-21.16	ETHERNET BRIDGE	EACH	8
15	725-21.17	ETHERNET BRIDGE (MULTI-T1 TMC)	EACH	2
15	725-21.32	CAT 6 CABLE	L.F.	2,810
15	725-21.41	DEMARCACTION SITE (OVERHEAD PWR/COMM)	EACH	13
15, 34	725-21.43	DEMARCACTION SITE (OVERHEAD POWER)	EACH	2
15	725-21.73	TRANSFORMER (15 KVA)	EACH	6
15	725-21.91	RADAR DETECTION SYSTEM	EACH	6
15	725-21.96	RDS COMM CABLE	L.F.	3,780
15, 19	725-22.21	CONDUIT BANK (TYPE 1)	L.F.	3,100
15, 19	725-22.23	CONDUIT BANK (TYPE 3)	L.F.	480
15, 19	725-22.24	CONDUIT BANK (TYPE 4)	L.F.	8,910
15, 19, 33	725-22.31	CONDUIT BANK BORED (TYPE 1)	L.F.	320
15, 19	725-22.33	CONDUIT BANK BORED (TYPE 3)	L.F.	530
15, 19, 32	725-22.34	CONDUIT BANK BORED (TYPE 4)	L.F.	160
15, 19, 22	725-22.44	CONDUIT BANK IN ROCK (TYPE 4)	L.F.	13,360
15, 19	725-22.71	2IN CONDUIT	L.F.	4,100
15, 19	725-22.72	2IN CONDUIT BORED	L.F.	1,160
15, 19	725-22.74	2IN CONDUIT W/BANK	L.F.	420
15, 19	725-22.75	2IN CONDUIT BORED W/BANK	L.F.	530
15	725-23.01	ITS CABLE MARKER	EACH	110
15	725-23.12	FIBER OPTIC CABLE (48 F)	L.F.	28,300
15	725-23.21	FIBER OPTIC DROP CABLE (12 F)	L.F.	1,740
15	725-23.26	FIBER OPTIC CLOSURE (12 F)	EACH	10
15	725-23.28	FIBER OPTIC SPLICE FUSION	EACH	10
15	725-23.29	FIBER OPTIC TERMINATION CABINET	EACH	8
15	725-23.31	FIBER OPTIC DROP PANEL (12 F)	EACH	8
15, 24	725-24.01	CABINET (TYPE A)	EACH	4
15, 24	725-24.02	CABINET (TYPE B)	EACH	13
15, 24	725-24.03	CABINET (TYPE C)	EACH	2
15	725-24.21	PREVENTIVE MAINTENANCE FOR SYSTEM	LS	1
15	725-24.25	UNSCHEDULED MAINTENANCE LABOR	HOURL	100
15	725-24.31	SPARE PARTS	LS	1
15, 26	725-24.32	EQUIPMENT REPLACEMENT	DOLL	25,000
15	725-24.41	BURN-IN PERIOD	LS	1
15	725-24.51	SYSTEM INTEGRATION	LS	1
15	725-24.55	AS-BUILT PLANS	LS	1
15	725-24.61	TRAINING	LS	1
	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	1
29	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	4
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	3
	730-05.04	MODIFY EXISTING ELECTRICAL SERVICE CONNECTION	EACH	1
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	350
	730-12.08	CONDUIT 2" DIAMETER (RGS)	L.F.	250
	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	1
	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	1
	730-16.03	CONTROLLER (FLASHING BEACON)	EACH	2
15	730-16.14	CONTROLLER (PROGRAMMABLE LOGIC)	EACH	3
4, 5, 28	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	290
4, 5	740-11.02	TEMPORARY SEDIMENT TUBE 12IN (EPSC)	L.F.	2,780
4, 5	801-01	SEEDING (WITH MULCH)	UNIT	20
4, 5	801-02	SEEDING (WITHOUT MULCH)	UNIT	16
4, 5	801-02.15	FERTILIZER	TON	1
4, 5	801-03	WATER (SEEDING AND SOD)	M.G.	39
4, 5	803-01	SODDING (NEW SOD)	S.Y.	3,660
4, 5	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	1,830

FOOTNOTES

- 1 INCLUDES ALL REQUIRED CLEARING, GRUBBING, REMOVAL, AND DISPOSAL OF ALL VEGETATION AND DEBRIS FOR PROPOSED CONDUIT, POLE, AND FIELD DEVICE INSTALLATION AND OPERATION.
- 2 THIS ITEM NUMBER IS LISTED AS SELECTIVE TREE AND VEGETATION TRIMMING, REMOVAL, AND CLEAN-UP IN THE PLANS. SEE SHEET 2D - SPECIAL NOTES - FOR FURTHER INFORMATION.
- 3 ITEM NUMBER SHALL BE USED FOR SELECT BACKFILL MATERIAL WHEN EXCAVATED MATERIAL IS NOT ACCEPTABLE.
- 4 REFER TO THE SERIES 33 SHEETS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
- 5 SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
- 6 INCLUDES ALL OF THE NECESSARY ITEMS FOR REPAIRING AND/OR REPLACING CONCRETE DRAINAGE FLUMES. USE OF THIS PAY ITEM SHALL BE AT THE DISCRETION OF THE ENGINEER.
- 7 THIS ITEM NUMBER SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350, OR A TRACC. THE ITEM NUMBER WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.
- 8 THESE PAY ITEMS INCLUDE THE FURNISHING AND INSTALLATION OF SINGLE TYPE 2 GUARDRAIL POSTS/BLOCKOUTS FOR AREAS WHERE STRENGTHENING OF EXISTING GUARDRAIL IS NEEDED AS DIRECTED BY THE ENGINEER (I.E. THE REDUCTION OF POST SPACING BY DOUBLING THE NUMBER OF POSTS).
- 9 ITEM NUMBER SHALL BE USED FOR ANY ADJUSTMENTS NEEDED WHEN TYING PROPOSED GUARDRAIL INTO EXISTING GUARDRAIL AS DIRECTED BY THE ENGINEER.
- 10 TEMPORARY REMOVAL OF GUARDRAIL MAY BE NEEDED FOR CONSTRUCTION PURPOSES ONLY. THIS ITEM NUMBER SHALL INCLUDE THE COST TO REINSTALL THE GUARDRAIL ONCE CONSTRUCTION OF PROPOSED ITS ELEMENTS ARE FINISHED.
- 11 LIMITED ACCESS GATES SHALL BE INSTALLED WHERE REQUIRED BY THE ELECTRICAL OR COMMUNICATIONS UTILITY PROVIDERS. SEE SHEET 3U.
- 12 WILL REQUIRE RELOCATIONS OF TRAFFIC CONTROL DEVICES TO DIFFERENT SITES. NO SEPARATE PAYMENT WILL BE ALLOWED FOR MOVING TRAFFIC CONTROL DEVICES FROM ONE TEMPORARY SITE TO ANOTHER. THIS ITEM NUMBER SHALL ALSO INCLUDE THE COST FOR 36" TRAFFIC CONES FOR SHORT-TERM, SHORT DURATION, DAYLIGHT SHOULDER CLOSURES. SEE TRAFFIC CONTROL NOTES SHEET 34.
- 13 INCLUDES THE INSTALLATION AND MAINTENANCE OF SIGN PANELS, SHEETING, AND SUPPORTS.
- 14 PAY ITEM INCLUDES THE USE OF TDOT REGION 2 CHANGEABLE MESSAGE SIGNS FOR TRAFFIC CONTROL PURPOSES AT THE DIRECTION OF THE ENGINEER. SEE TRAFFIC CONTROL NOTES SHEET 34.
- 15 SEE SPECIAL PROVISION 725 FOR DESCRIPTION AND SPECIFICATIONS FOR THESE ITEMS.
- 16 INCLUDES THE DESIGN OF THE SIGN STRUCTURE, THE SIGN STRUCTURE, ALL FOOTINGS, AND ALL RELATED INCIDENTAL ITEMS TO PROVIDE A COMPLETE STEEL OVERHEAD SIGN STRUCTURE CAPABLE OF SUPPORTING THE REQUIRED DMS AND STATIC SIGNS.
- 17 INCLUDES THE DESIGN OF THE SIGN STRUCTURE, THE SIGN STRUCTURE, ALL FOOTINGS, AND ALL RELATED INCIDENTAL ITEMS TO PROVIDE A COMPLETE STEEL SIGN STRUCTURE CAPABLE OF SUPPORTING THE REQUIRED MULTI-COLOR DMS.
- 18 ITEM NUMBER SHALL INCLUDE THE COST OF THE FOUNDATION (BOTH DESIGN AND CONSTRUCTION) FOR EACH LIGHT STANDARD.
- 19 MULTIPLE CONDUIT RUNS MAY BE SHARED WITHIN THE SAME TRENCH (SEE ITS LAYOUT SHEETS FOR LOCATIONS). TRENCHING IS NOT BROKEN OUT AS A SEPARATE PAY ITEM; IT SHALL BE INCLUDED IN THE COST OF CONDUIT. A TOTAL OF APPROXIMATELY 25,000 LINEAR FEET OF TRENCHING IS ANTICIPATED FOR THIS PROJECT.

FOOTNOTES (CONTINUED)

- 20 THESE ITEM NUMBERS COVER ELECTRICAL SERVICE CONNECTION COSTS FOR DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION AND SEQUACHEE VALLEY ELECTRIC COOPERATIVE FOR CONNECTIONS TO APPLICABLE DEMARCACTION SITES. BID PRICE IS ESTIMATED TO BE \$50.00 FOR ITEM NUMBER 725-20.71, AND \$60,547.00 FOR ITEM NUMBER 725-20.72. THIS PRICE IS ONLY AN ESTIMATE PROVIDED BY THE UTILITY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ACTUAL COSTS.
- 21 THESE ITEM NUMBERS COVER COMMUNICATIONS SERVICE CONNECTION COSTS FOR BEN LOMAND AND AT&T FOR CONNECTIONS TO APPLICABLE DEMARCACTION SITES. BID PRICE IS ESTIMATED TO BE \$500.00 FOR ITEM NUMBER 725-20.75, AND \$500.00 FOR ITEM NUMBER 725-20.76. THIS PRICE IS ONLY AN ESTIMATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ACTUAL COSTS.
- 22 THE MOBILIZATION ITEM NUMBER IS PROJECT INCLUSIVE AND IS NOT BROKEN DOWN INTO INDIVIDUAL SITES.
- 23 THIS PAY ITEM SHALL ONLY BE UTILIZED WHERE CONDUIT BANK (TYPE 4) IS TO BE PROVIDED AND ROCK IS ENCOUNTERED, AS DIRECTED BY THE ENGINEER.
- 24 SEE SHEETS 3E-3G - TYPICAL FIELD CABINET DETAILS - AND THE TECHNICAL SPECIAL PROVISIONS FOR INFORMATION ON THE DIFFERENT CABINET TYPES.
- 25 PAY ITEM SHALL INCLUDE GPS COORDINATE DATA FOR EACH PULL BOX AND ELECTRIC MANHOLE INSTALLATION FOR INCLUSION IN THE AS-BUILT PLANS, AS WELL AS ELECTRONIC MARKER SYSTEMS FOR EACH PULL BOX
- 26 THIS PAY ITEM SHALL HAVE A PRE-ESTABLISHED UNIFORM PLACEHOLDER BID PRICE OF \$25,000.00.
- 27 THIS ITEM NUMBER INCLUDES THE RELOCATION OF DUAL POST, CANTILEVER, AND BRIDGE-MOUNTED SIGN PANELS FROM EXISTING STRUCTURES (TO BE REMOVED) TO PROPOSED OVERHEAD STRUCTURES. SEE SHEETS 35-35J (SIGN SCHEDULES AND DMS LAYOUT SHEETS) FOR ADDITIONAL INFORMATION. INCLUDES THE REMOVAL AND DISPOSAL OF SIGN BRACING, OVERHEAD / CANTILEVER / DUAL POST SIGN STRUCTURES, FOUNDATIONS AND ALL OTHER EXISTING FEATURES OF SIGN LOCATIONS REFERENCED FOR REMOVAL. THIS ITEM NUMBER SHALL ALSO INCLUDE ANY BACKFILLING REQUIRED DUE TO THE VOID LEFT BY THE REMOVED FOUNDATION.
- 28 THIS PAY ITEM IS FOR THE IMPLEMENTATION OF FOUR (4) TEMPORARY CONSTRUCTION EXITS, TO BE CONSTRUCTED PER STANDARD DRAWING EC-STR-25. THESE TEMPORARY CONSTRUCTION EXITS SHALL BE LOCATED AND USED AT THE DISCRETION OF THE ENGINEER.
- 29 EACH SIGNAL HEAD ASSEMBLY SHALL INCLUDE A YELLOW RETROREFLECTIVE STRIP WITH A WIDTH OF 2 INCHES, PLACED ALONG THE PERIMETER OF THE FACE OF THE SIGNAL BACKPLATE.
- 30 THESE ITEM NUMBERS SHALL INCLUDE THE COST OF FOUR (4) INCH CONDUIT INSTALLED IN THE SAME TRENCH OR BORE AS THE RELATED CONDUIT BANK TYPE AS SPECIFIED IN THE PLAN SHEETS.
- 31 THIS ITEM NUMBER SHALL INCLUDE ONE (1) SIGN, TWO (2) FLASHING BEACONS, AND EQUIPMENT NECESSARY TO PROVIDE A PHYSICAL CONNECTION TO THE PROGRAMMABLE LOGIC CONTROLLER.
- 32 THIS ITEM NUMBER INCLUDES THE REMOVAL AND DISPOSAL OF CONDUIT AND PULL BOXES AS DEPICTED AND NOTED ON ITS LAYOUT SHEETS 23-26. THIS DISTANCE FOR REMOVAL AND DISPOSAL IS APPROXIMATELY 6,500 LINEAR FEET. NO SEPARATE PAYMENT WILL BE PROVIDED FOR THE CONTRACTOR TO REMOVE AND DISPOSE OF THE CONDUIT AND PULL BOXES LOCATED ALONG THIS EXISTING CONDUIT ROUTE.
- 33 THIS ITEM NUMBER INCLUDES THE REMOVAL AND DISPOSAL OF CONDUIT AND PULL BOXES AS DEPICTED AND NOTED ON ITS LAYOUT SHEETS 26 AND 29. THIS DISTANCE FOR REMOVAL AND DISPOSAL IS APPROXIMATELY 1,500 LINEAR FEET. NO SEPARATE PAYMENT WILL BE PROVIDED FOR THE CONTRACTOR TO REMOVE AND DISPOSE OF THE CONDUIT AND PULL BOXES LOCATED ALONG THIS EXISTING CONDUIT ROUTE.
- 34 THIS ITEM NUMBER IS FOR LOCATIONS WHERE A 40' WOOD POLE IS REQUIRED TO RECEIVE THE PRIMARY ELECTRICAL SERVICE FEED FROM SEQUACHEE VALLEY EC. CONTRACTOR TO COORDINATE WITH SEQUACHEE VALLEY EC FOR POLE REQUIREMENTS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2A

**UNOFFICIAL
SET
NOT FOR
BIDDING**

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
QUANTITIES

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2B

SCOPE OF WORK AND GENERAL NOTES

SCOPE OF WORK

THIS PROJECT IS FOR THE CONSTRUCTION, INSTALLATION, AND TESTING FOR ADDITIONAL GEOGRAPHIC COVERAGE WITHIN THE EXISTING TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) REGION 2 SMARTWAY INTELLIGENT TRANSPORTATION SYSTEM (ITS). ADDITIONAL GEOGRAPHIC COVERAGE ALONG INTERSTATE 24 (I-24) IS DESIRED BY TDOT SPECIFICALLY IN THE VICINITY OF THE CITY OF MANCHESTER AND THE TOWN OF MONTEAGLE. THE TOTAL PROJECT LENGTH IS 47.8 MILES, WITH 18.0 MILES IN COFFEE COUNTY, 7.3 MILES IN GRUNDY COUNTY, AND 22.5 MILES IN MARION COUNTY.

THIS PROJECT – INTELLIGENT TRANSPORTATION SYSTEM (ITS) FOR REGION TWO SMARTWAY RURAL EXPANSION – WILL INCLUDE BUT WILL NOT BE LIMITED TO THE FURNISHING AND INSTALLATION OF POLES, CABINETS, FOUNDATIONS, GUARDRAIL, CONDUIT, ELECTRONIC EQUIPMENT, LEASED LINE COMMUNICATIONS SERVICE, ELECTRICAL POWER SERVICE, AND COMMUNICATIONS CABLES FOR EIGHT (8) PAN/TILT/ZOOM (PTZ) CLOSED CIRCUIT TELEVISION (CCTV) CAMERAS, FIVE (5) DYNAMIC MESSAGE SIGNS (DMS), SIX (6) RADAR DETECTION SYSTEMS (RDS), FOUR (4) INFRARED PTZ CAMERAS, FOUR (4) STATIC NON-PTZ CAMERAS, TWO (2) MULTI-COLOR DMS AT AN EXISTING TRUCK INSPECTION STATION, ONE (1) TRAFFIC SIGNAL UPGRADE AND QUEUE DETECTION SYSTEM AT AN EXISTING TRUCK INSPECTION STATION, ONE (1) SPEED FEEDBACK SYSTEM, AND TWO (2) RUNAWAY TRUCK RAMP OCCUPANCY DETECTION SYSTEMS. COMMUNICATION TO/FROM ALL FIELD DEVICES WILL BE ACCOMPLISHED VIA LEASED LINE COMMUNICATIONS TO THE REGION 2 TRAFFIC MANAGEMENT CENTER (TMC). THIS PROJECT ALSO INCLUDES THE INSTALLATION OF COMMUNICATION EQUIPMENT AT THE REGION 2 TMC IN ORDER TO COMMUNICATE WITH THE FIELD DEVICES AS PART OF THIS PROJECT.

THE PROJECT WILL ALSO INCLUDE THE COMPLETE CONSTRUCTION AND TESTING OF THE ITS COMMUNICATIONS DEVICES, BOTH ACTIVE AND PASSIVE, EITHER WIRED OR WIRELESS AS SHOWN ON THE PLANS TO CONNECT THE ROADSIDE ITS DEVICES TO CABINETS, AND CABINETS TO BOTH A LEASED LINE COMMUNICATIONS SERVICE AND AN ELECTRICAL POWER SERVICE. THE USE OF NATIONAL TRANSPORTATION COMMUNICATIONS FOR ITS PROTOCOLS (NTCIP) SHALL BE REQUIRED FOR CERTAIN DEVICES AS SHOWN IN THE TECHNICAL SPECIAL PROVISIONS (TSP) 725.

TESTING WILL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- FACTORY DEMONSTRATION OR FACTORY ACCEPTANCE TESTING OF SELECTED ITS DEVICES.
- STAND-ALONE TESTING FOR ALL LEASED LINE COMMUNICATIONS, WIRELESS COMMUNICATIONS SERVICES, CCTV, DMS, SPEED FEEDBACK SIGN, AND RDS.
- INITIAL APPLICATIONS SOFTWARE TESTING AND SYSTEM TESTING TO DEMONSTRATE ITS DEVICE CONTROL AND FUNCTIONALITY THROUGH FIELD COMMUNICATIONS CONCENTRATION EQUIPMENT.
- FULL SYSTEM OPERATIONAL TESTING. ALL EQUIPMENT INSTALLED BY THE CONTRACTOR WILL BE REQUIRED TO INTERFACE WITH TDOT'S CENTRAL SYSTEM SOFTWARE CURRENTLY OPERATIONAL IN THE REGION 2 TMC.

GENERAL NOTES

GRADING

- ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

- SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.
- ITEM NO. 805-12.02 SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

- ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.
- ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL

- THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.
- IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

UTILITIES

- THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

MISCELLANEOUS

- NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

SIGNING

- THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.
- AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.
- THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.
- THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

SIGNALIZATION

- EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.
- SALVAGEABLE EQUIPMENT SHALL BE COME THE PROPERTY OF TDOT AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY TDOT.
- ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK
AND
GENERAL NOTES

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2C

GENERAL NOTES (CONTINUED)

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

- AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

SEDIMENT CONTROL

- EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

- SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

- NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

- EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.
- INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.
- OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

MATERIALS

- WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

SWPPP, PERMITS, PLANS, RECORDS

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.

- ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER, AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.
- IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS OR MODIFICATIONS OF THE SWPPP ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.
- PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORM WATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
- THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

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GENERAL NOTES

SPECIAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2D

SPECIAL NOTES

SIGNALIZATION

- (1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

EROSION PREVENTION AND SEDIMENT CONTROL

- (1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL NOTES, DETAILS, AND PLANS WITHIN THE SHEET 33 SERIES.

ECOLOGY

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.
- (2) THE CONTRACTOR SHALL USE EXTREME MEASURES TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF WATER QUALITY FEATURES.
- (3) IF PROPOSED CONSTRUCTION OCCURS NEAR OR WITHIN THE IMPACT AREA OF ANY ENVIRONMENTAL OR DRAINAGE FEATURE, THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO INITIATING CONSTRUCTION TO ENSURE THAT ENVIRONMENTAL OR DRAINAGE FEATURES ARE NOT STREAMS OR WETLANDS. IF THE CONTRACTOR OR TDOT INSPECTOR ARE UNSURE OF THE PRESENCE OF STREAMS OR WETLANDS, THE TDOT ENVIRONMENTAL DIVISION ECOLOGY AND PERMITS SECTIONS MUST BE CONTACTED.
- (4) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING STRUCTURES ALONG THE ROADWAY AND MEDIAN PRIOR TO INITIATING CONSTRUCTION.
- (5) ALL WATER QUALITY FEATURES WILL BE CROSSED BY EITHER ATTACHING CONDUIT TO BRIDGES OR INSTALLING CONDUIT OVER OR UNDER EXISTING CULVERTS.
- (6) NO OPEN CUTTING OR DISTURBANCE OF STREAMS OR OTHER WATER QUALITY FEATURES SHALL OCCUR.
- (7) NO CLEARING OF VEGETATION ALONG WATER QUALITY FEATURES SHALL OCCUR.
- (8) NO DETAILED ECOLOGY REVIEW HAS BEEN CONDUCTED FOR THIS PROJECT. THEREFORE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE NO IMPACTS OR DISTURBANCE OF WATER QUALITY FEATURES. IF THE CONTRACTOR OR TDOT INSPECTOR ARE UNSURE OF THE PRESENCE OF WATER QUALITY FEATURES, THE TDOT ENVIRONMENTAL DIVISION ECOLOGY AND PERMITS SECTIONS MUST BE CONTACTED.
- (9) REMOVAL OF EXISTING VEGETATION MAY BE REQUIRED DURING CONSTRUCTION ACTIVITIES (E.G. CONSTRUCTION OF EARTH PADS FOR TYPE 38 TERMINALS). IN CONSIDERATION OF THE INDIANA BAT, NO TREES WITH A DIAMETER AT BREST HEIGHT (DBH) OF 5 INCHES OR GREATER SHOULD BE REMOVED WITHOUT CLEARANCE FROM THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION.

GUARDRAIL

- (1) THE CONTRACTOR SHALL MAINTAIN A FOUR (4) FOOT MINIMUM DISTANCE BETWEEN THE BACK OF GUARDRAIL AND THE ROADWAY SIDE EDGE OF ALL DEVICE FOOTINGS AND POLES, UNLESS OTHERWISE NOTED ON THE PLANS.

UTILITIES

- (1) FOR DEMARCATION POINTS WHERE NEW UTILITY POLES ARE PROPOSED WITHIN STATE RIGHT-OF-WAY, THE LOCATIONS OF THESE POLES HAVE NOT BEEN STATIONED ON THE PLANS. RATHER, THEY HAVE BEEN POSITIONED IN THE SPOT DEEMED MOST APPROPRIATE DURING THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR AND THE UTILITY PROVIDER SHALL COORDINATE WITH ONE ANOTHER TO IDENTIFY THE OPTIMAL LOCATION. NO UTILITY POLE SHALL BE SET WITHIN THE CLEAR ZONE OF ANY ROADWAY TRAVEL LANES, RAMPS, OR LOOPS. THE FIELD DETERMINED LOCATION SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

- (2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMMUNICATIONS INFRASTRUCTURE BETWEEN THE DEMARCATION POLE AND THE FIELD DEVICES. THE COMMUNICATIONS UTILITY PROVIDER SHALL BE RESPONSIBLE FOR THE COMMUNICATION SERVICE CONNECTIONS FOR ALL DEMARCATION SITES. CONTACT TDOT IT FOR SERVICE CONNECTION.

MISCELLANEOUS

- (1) THE BASE MAPPING DEPICTED ON ALL ITS LAYOUT SHEETS IS GEOGRAPHIC INFORMATION SYSTEMS (GIS) MAPPING PROVIDED BY TDOT. THEREFORE, THE ACCURACY OF THE BASE MAPPING IS NOT THAT OF SURVEYED MAPPING TYPICALLY USED DURING ROADWAY CONSTRUCTION PROJECTS AND SHOULD ONLY BE RELIED UPON FOR ESTABLISHING GENERAL LOCATIONS FOR EXISTING FEATURES.
- (2) THE LOCATION OF ALL PROPOSED EQUIPMENT TO BE INSTALLED SHALL BE CONSIDERED TO BE APPROXIMATE. ADJUSTMENTS MAY BECOME NECESSARY. VARIATIONS FROM PROPOSED LOCATIONS MUST BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO INSTALLATION OR CONSTRUCTION.
- (3) THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH OTHER CONTRACTORS IN THE WORK AREA. CONFLICTS WILL BE HANDLED AT THE DISCRETION OF THE ENGINEER.
- (4) THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF LAYOUT/SHOP DRAWINGS OF ALL COMPONENTS (INCLUDING THE PLAN OF ATTACHMENT) TO THE ENGINEER FOR REVIEW AND APPROVAL.
- (5) THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF ALL EQUIPMENT PLACED AS PART OF THIS CONTRACT.
- (6) ALL REMOVED EQUIPMENT OR MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR. THE COST OF DISPOSAL SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (7) IT SHOULD BE NOTED THAT NO SOIL BORING INFORMATION IS PROVIDED. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL BORINGS TAKEN FOR FOUNDATIONS DESIGNS. THE COST FOR SOIL BORINGS SHALL BE INCLUDED IN THE COST OF THE POLES AND STRUCTURES. ALL FOUNDATIONS FOR CCTV POLES AND DMS SIGN STRUCTURES REQUIRE SOIL BORINGS FOR FOUNDATION DESIGN.
- (8) NO GROUT SHALL BE PLACED AT THE BASE OF STEEL POLES (LIGHT STANDARDS FOR CCTV POLES) BETWEEN THE POLE BASE AND FOUNDATION. THE BASE OF THE POLE SHALL REMAIN OPEN TO PERMIT DRAINAGE AND AIR CIRCULATION.
- (9) WHERE SELECTIVE TREE AND VEGETATION TRIMMING, REMOVAL AND CLEAN-UP IS NOTED ON THE PLANS, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF TREES AND/OR VEGETATION THAT BLOCKS VIEWS FROM CCTV CAMERA SITES. FOR ESTIMATING PURPOSES, A TEN (10) FOOT WIDE LINEAR AREA ALONG THE ROADWAY IS ASSUMED FOR THIS EFFORT. THE TEN (10) FOOT AREA IS MEASURED FROM THE EDGE OF PAVED SHOULDER OR THE BACK OF GUARDRAIL TOWARDS THE RIGHT-OF-WAY LINE. ALL AREAS UNDERGOING SELECTIVE TREE AND VEGETATION TRIMMING, REMOVAL AND CLEAN-UP SHALL BE MARKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ANY ACTIVITY. THE FINISHED APPEARANCE OF SELECTIVE TREE AND VEGETATION, REMOVAL, AND CLEAN-UP SHALL NOT RESEMBLE A "TREE WALL" OR HAVE A VERTICAL PLANE OF REMAINING VEGETATION. THE CONTRACTOR SHALL PERFORM SELECTIVE PRUNING AND BRANCH REMOVAL OUTSIDE OF THE TEN (10) FOOT AREA TO ACHIEVE HEALTHY, BALANCED VEGETATION. CLEAN-UP OF ALL CUTTINGS SHALL BE COMPLETED BY THE CONTRACTOR WITHIN FIVE (5) DAYS OF THE TREE AND VEGETATION TRIMMING AND REMOVAL WORK.

SIGNING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH DESIGN AND SPECIFICATIONS OF ALL DUAL-POST SIGN STRUCTURES, OVERHEAD SIGN STRUCTURES, OVERHEAD SIGNS AND DYNAMIC MESSAGE SIGNS WHICH SHALL CONFORM TO TDOT SPECIFICATIONS AND STANDARD DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT SIX (6) COPIES TO THE PROJECT ENGINEER WHO WILL IN TURN SUBMIT ONE (1) COPY TO TDOT'S SIGNING AND MARKING SECTION AND FOUR (4) COPIES TO TDOT'S STRUCTURES DIVISION FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PROVIDE A MINIMUM LEAD TIME OF THIRTY (30) DAYS FOR THE REVIEW AND APPROVAL PROCESS.

- (2) ALL DMS STRUCTURE LOCATIONS REPRESENT THE ROADWAY SIDE EDGE OF THE FOOTING. ANY FIELD ADJUSTMENTS SHALL NOT PLACE THE FOOTING ANY CLOSER TO THE ROADWAY.

CONDUIT / TRENCHING

- (1) WHEN/IF HAND DIGGING (OR OTHER CAREFUL TRENCHING METHOD) OF A NEW TRENCH IS REQUIRED DUE TO CONSTRAINTS IN THE FIELD, SUCH AS CROSSING UNDER PAVED DRAINAGE FLUMES OR AVOIDING EXISTING UTILITIES, SUCH EFFORTS SHALL BE CONDUCTED BY THE CONTRACTOR AS NEEDED AND/OR DIRECTED BY THE ENGINEER. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR HAND DIGGING OR REPAIR OF PAVEMENT DAMAGED BY THE CONTRACTOR.
- (2) CONDUITS SHALL BE INSTALLED A MINIMUM OF FOUR (4) FEET BEHIND EXISTING AND PROPOSED GUARDRAIL POSTS. WHEN NO GUARDRAIL IS INSTALLED, CONDUITS SHALL BE INSTALLED A MINIMUM OF EIGHT (8) FEET CLEAR OF THE EDGE OF PAVED SHOULDER. HOWEVER, THERE MAY BE AREAS, AS IDENTIFIED IN THE ITS LAYOUT SHEETS VIA CONSTRUCTION NOTES, THAT WILL REQUIRE THESE OFFSETS TO BE VIOLATED. THESE INSTALLATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- (3) CONDUITS SHALL BE INSTALLED ONE (1) FOOT IN FRONT OF CONCRETE BARRIERS, SOUND WALLS, OR RETAINING WALLS UNDER THE SHOULDER WHERE THE SHOULDER PAVEMENT IS AGAINST THE BARRIER WALLS.
- (4) CONDUCTORS IN PULL BOXES AND EQUIPMENT ENCLOSURES SHALL BE NEATLY ARRANGED AND LACED WITH APPROVED CABLE TIES, IN ACCORDANCE WITH INDUSTRY STANDARD PRACTICE AND AS NOTED ON THE PLANS.
- (5) THE CONTRACTOR SHALL COIL ADDITIONAL CABLE IN THE BOTTOMS OF CABINETS AND WITHIN PULL BOXES AS SPECIFIED ON DETAIL SHEET 3S.
- (6) CONDUIT AND PULL BOXES SHOWN ON THESE PLANS ARE DIAGRAMMATIC. ACTUAL ROUTING OR CONDUIT RUNS SHALL CONFORM TO FIELD CONDITIONS. HOWEVER, GUIDANCE HAS BEEN PROVIDED VIA CONSTRUCTION NOTES ON THE ITS LAYOUT SHEETS. THE CONTRACTOR SHALL MARK CONDUIT ROUTES FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION.
- (7) THE CONTRACTOR SHALL INSTALL A DETECTOR METALIZED "BURIED CABLE" WARNING TAPE CONTINUOUSLY RUN THE TRENCH TWELVE (12) INCHES ABOVE THE CONDUIT. THE COST OF THE TAPE IS TO BE INCLUDED IN OTHER CONDUIT-RELATED ITEM NUMBERS AND WILL NOT BE PAID FOR SEPARATELY.
- (8) MULTIPLE RUNS OF CONDUIT / INNERDUCT SHALL BE PLACED IN THE SAME TRENCH AS SHOWN ON DETAIL SHEET 3J-3M.
- (9) CONDUITS PROVIDING ELECTRICAL SERVICE CONDUCTORS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE "NATIONAL ELECTRIC CODE", THE "NATIONAL ELECTRIC SAFETY CODE", LOCAL BUILDING CODES, AND TO THE REQUIREMENTS OF TDOT AND ALL UTILITIES INVOLVED.
- (10) ALL CONDUIT ROUTES UNDERNEATH ASPHALT AND/OR CONCRETE ROADWAYS SHALL BE BORED, DIRECTIONALLY DRILLED, OR VIA OTHER METHODS NOT REQUIRING OPEN TRENCHING. NO OPEN TRENCHING WILL BE ALLOWED IN ASPHALT OR CONCRETE UNLESS SPECIFICALLY STATED AS SO ON THE PLANS. BORES / DIRECTIONAL DRILLS SHOULD BE AS CLOSE AS PRACTICAL TO PERPENDICULAR TO THE ROADWAY CENTERLINE.
- (11) WHEN/IF REMOVAL AND REPLACEMENT OF FENCING IS NECESSARY FOR TRENCHING OR BORING OPERATIONS, SUCH EFFORTS SHALL BE CONDUCTED BY THE CONTRACTOR AS NEEDED AND/OR DIRECTED BY THE ENGINEER. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
- (12) FOR INSTANCES WHEN THE CONDUIT BANK MUST CROSS UNDERNEATH EXISTING GUARDRAIL PRIOR TO CONSTRUCTION IN AN ASPHALT OR CONCRETE SHOULDER, THE TRENCH BACKFILL MATERIAL SHALL CONSIST ENTIRELY OF FLOWABLE FILL AS IT CROSSES UNDERNEATH THE GUARDRAIL.

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DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

UTILITY CONTACTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	2E

COFFEE COUNTY

ELECTRIC:
DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION
1141 MADISON STREET
PO BOX 89
SHELBYVILLE, TN 37160
CONTACT:
MR. BLAKE BUTLER
931-684-4621 PHONE
931-685-0013 FAX

TENNESSEE VALLEY AUTHORITY
1101 MARKET ST MR3F
CHATTANOOGA, TN 37402
CONTACT:
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JHNELSON@TVA.GOV
423-751-8275 PHONE
423-751-4621 FAX

TULLAHOMA UTILITIES BOARD
901 SOUTH JACKSON STREET
PO BOX 788
TULLAHOMA, TN 37388
CONTACT:
MR. BRIAN SKELTON
931-455-4515 PHONE
931-393-4148 FAX

TELEPHONE:
BELLSOUTH DBA AT&T
116 SOUTH CANNON AVENUE
MURFREESBORO, TN 37129
CONTACT:
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KK4096@ATT.COM
615-848-2082 PHONE
615-214-8805 FAX

BEN LOMAND CONNECT
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931-668-7653 FAX

SPRINT
411 HUGER STREET
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CONTACT:
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678-852-2726 PHONE
800-215-4252 FAX

UNITED TELEPHONE COMPANY
120 TAYLOR STREET
PO BOX 38
CHAPEL HILL, TN 37034
CONTACT:
MR. DOUG PRUITT
DOUGPRUITT@UTCOFFICE.NET
931-364-4350 PHONE
931-364-7202 FAX

GRUNDY COUNTY

ELECTRIC:
CANEEY FORK ELECTRIC CO-OP
920 SMITHVILLE HIGHWAY
PO BOX 272
MCMINNVILLE, TN 37110
CONTACT:
MR. WILLIAMS ROGERS
931-473-3116 PHONE
931-473-4939 FAX
MR. WEBBER CANTRELL
931-808-0579 CELL

SEQUACHEE VALLEY ELECTRIC COOPERATIVE
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423-752-4339 PHONE 2

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MARION COUNTY

ELECTRIC:
ELECTRIC BOARD OF CHATTANOOGA
110 N GREENWOOD AVE
PO BOX 182255
CHATTANOOGA, TN 37422
CONTACT:
MR. DAVID HENDERSON
HENDERSONDC@EPB.NET
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423-648-3261 FAX
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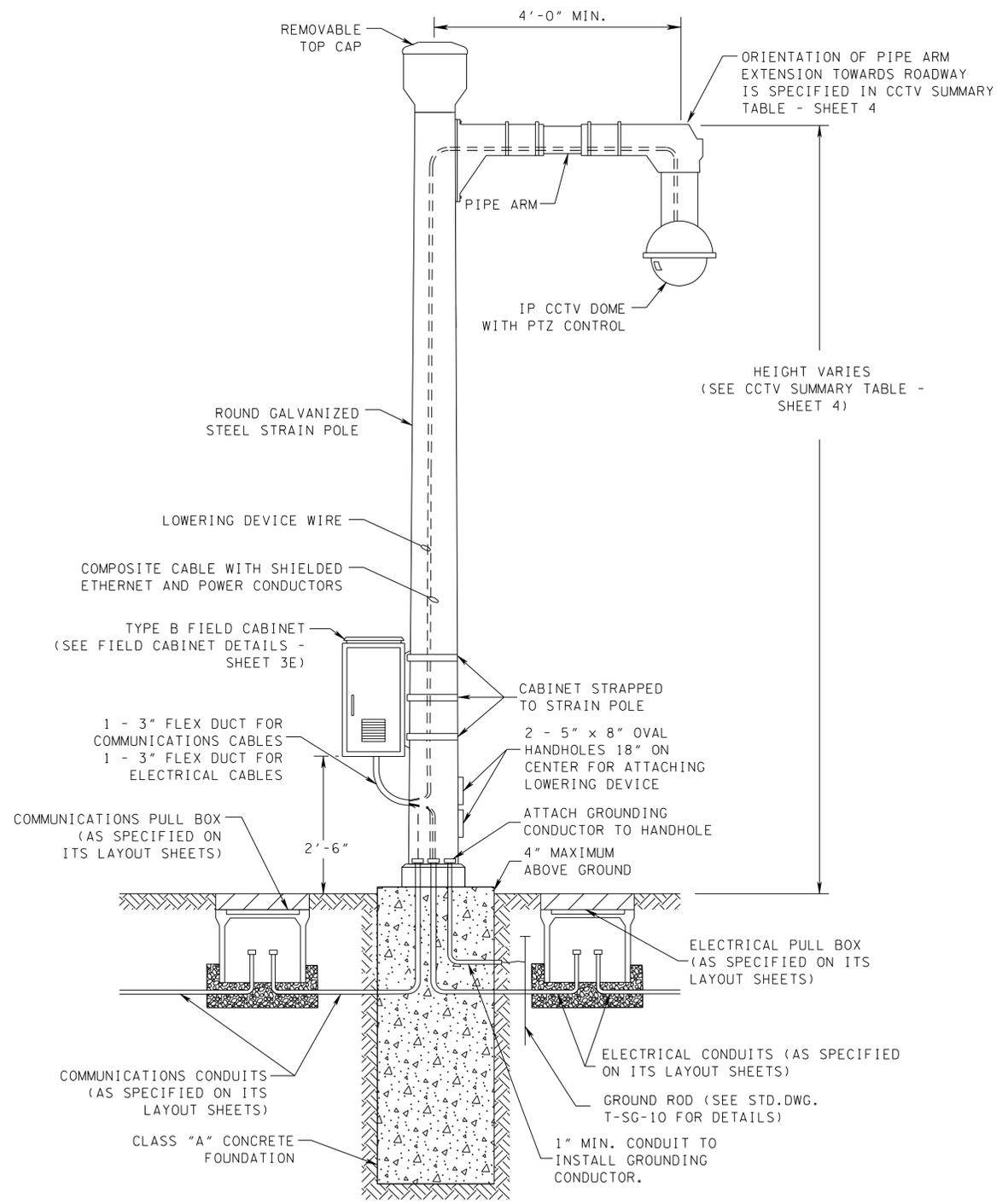
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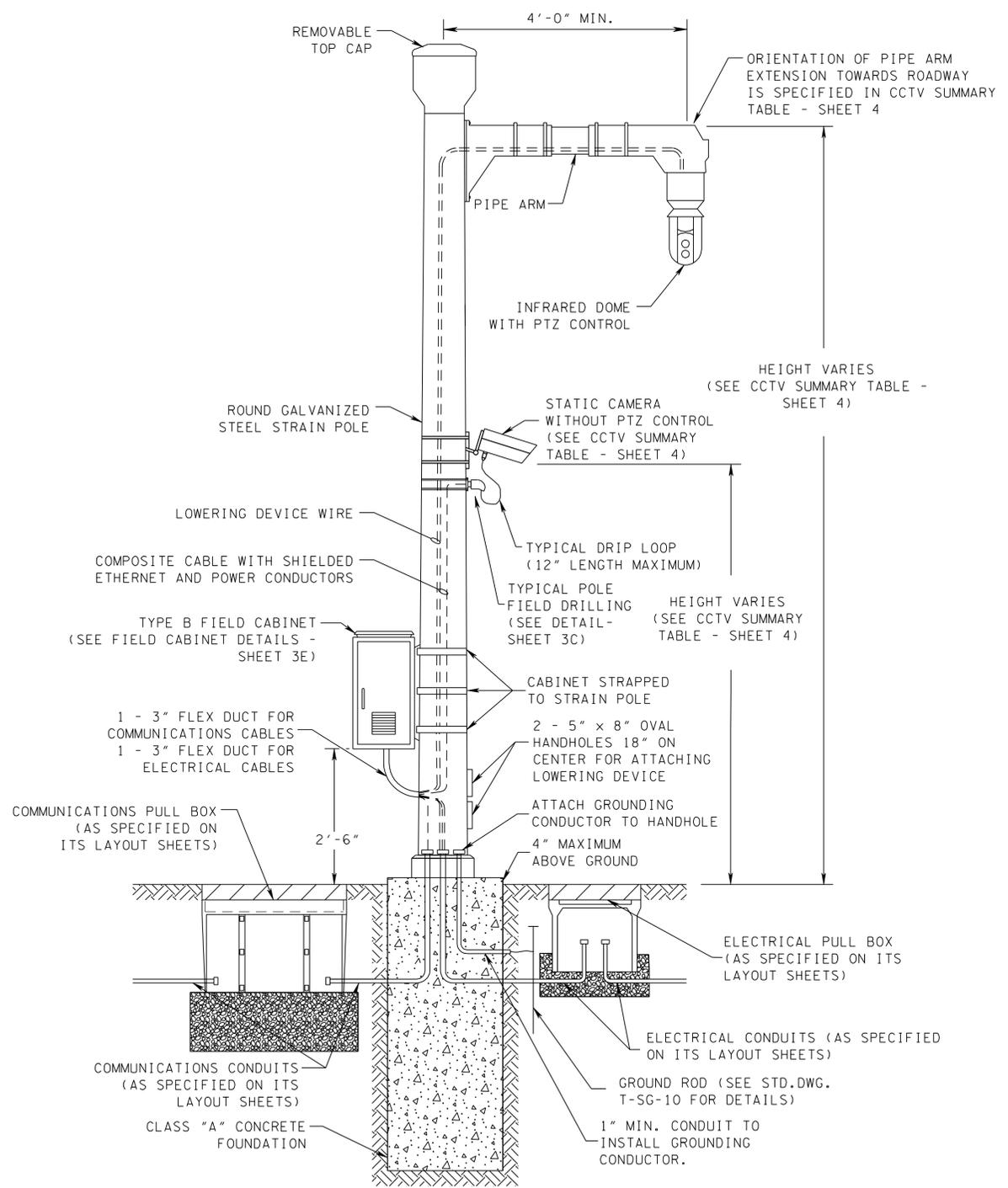
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY
CONTACTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3



**TYPICAL CCTV INSTALLATION
WITH CAMERA LOWERING DEVICE**
N.T.S.



**INFRARED CAMERA INSTALLATION
WITH CAMERA LOWERING DEVICE**
N.T.S.

NOTES:

1. THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF LAYOUT/SHOP DRAWINGS OF ALL COMPONENTS, INCLUDING THE PLAN OF ATTACHMENT, TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
3. SUPPORTS AND FOUNDATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FOUNDATIONS AND ATTACHMENTS SHALL BE DESIGNED BY THE CONTRACTOR.
4. CABINET MOUNTING HEIGHT OF 2'-6" MAY BE REDUCED BASED UPON SHOULDER SLOPE CONDITIONS FOUND IN THE FIELD. COORDINATE WITH THE ENGINEER TO DETERMINE AREAS OF NEED.
5. CONSTRUCTION OF MAINTENANCE WORK PADS WILL BE REQUIRED AT EACH LOCATION (SEE DETAIL SHEET 3G).
6. COMMUNICATIONS CONDUITS ENTER FIELD CABINETS IN A GRADUAL SWEEP AND SHALL NOT USE CONDULETS.

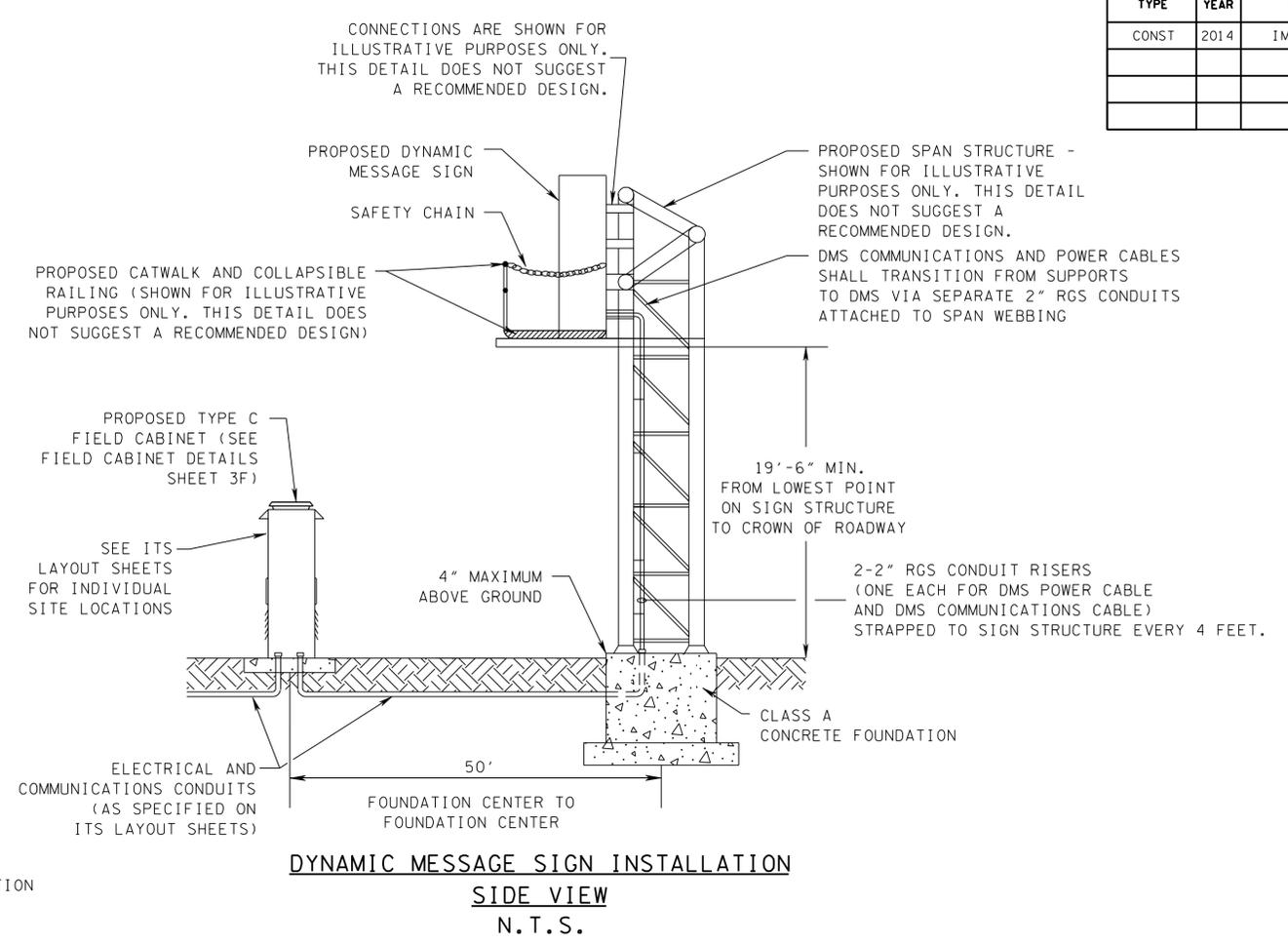
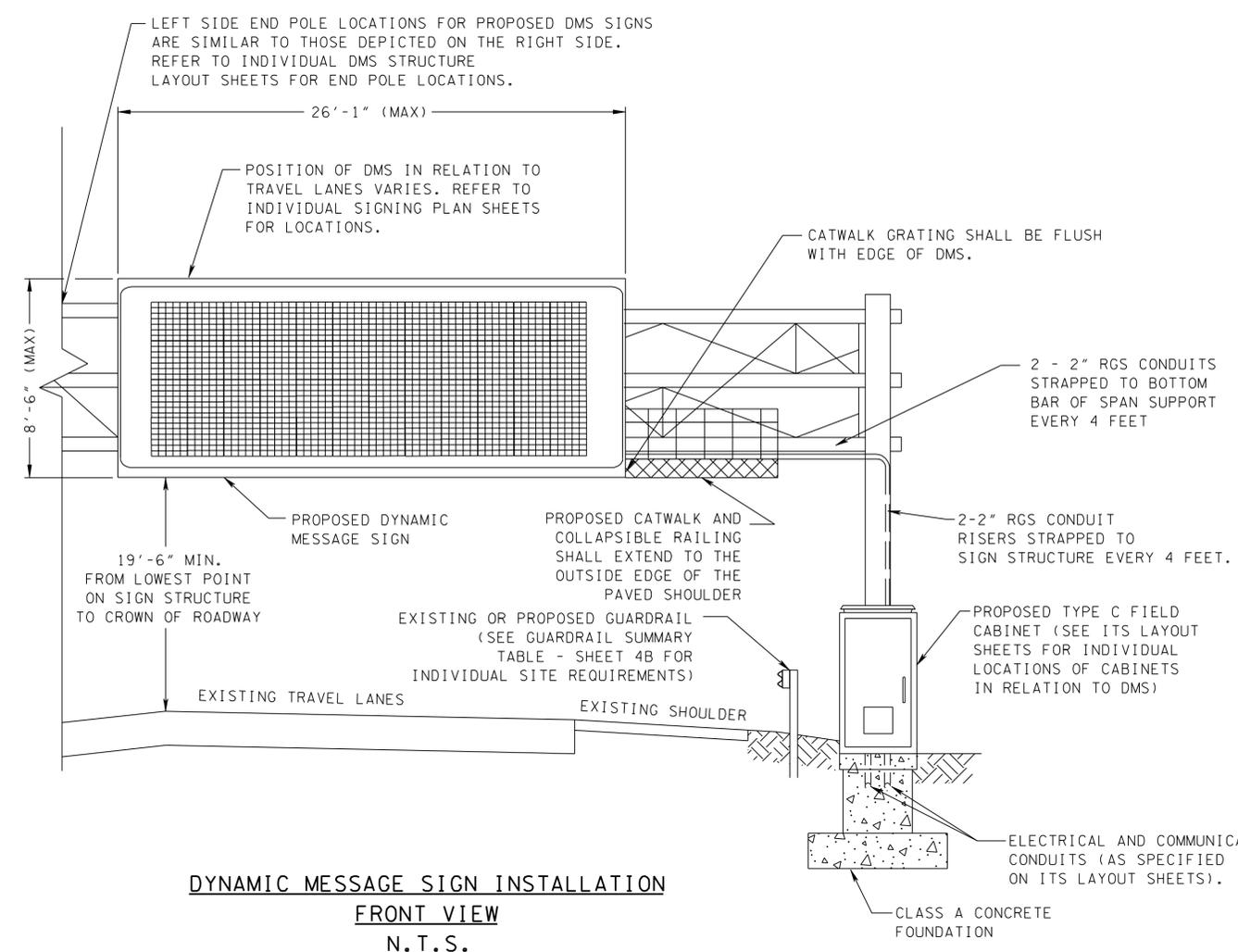
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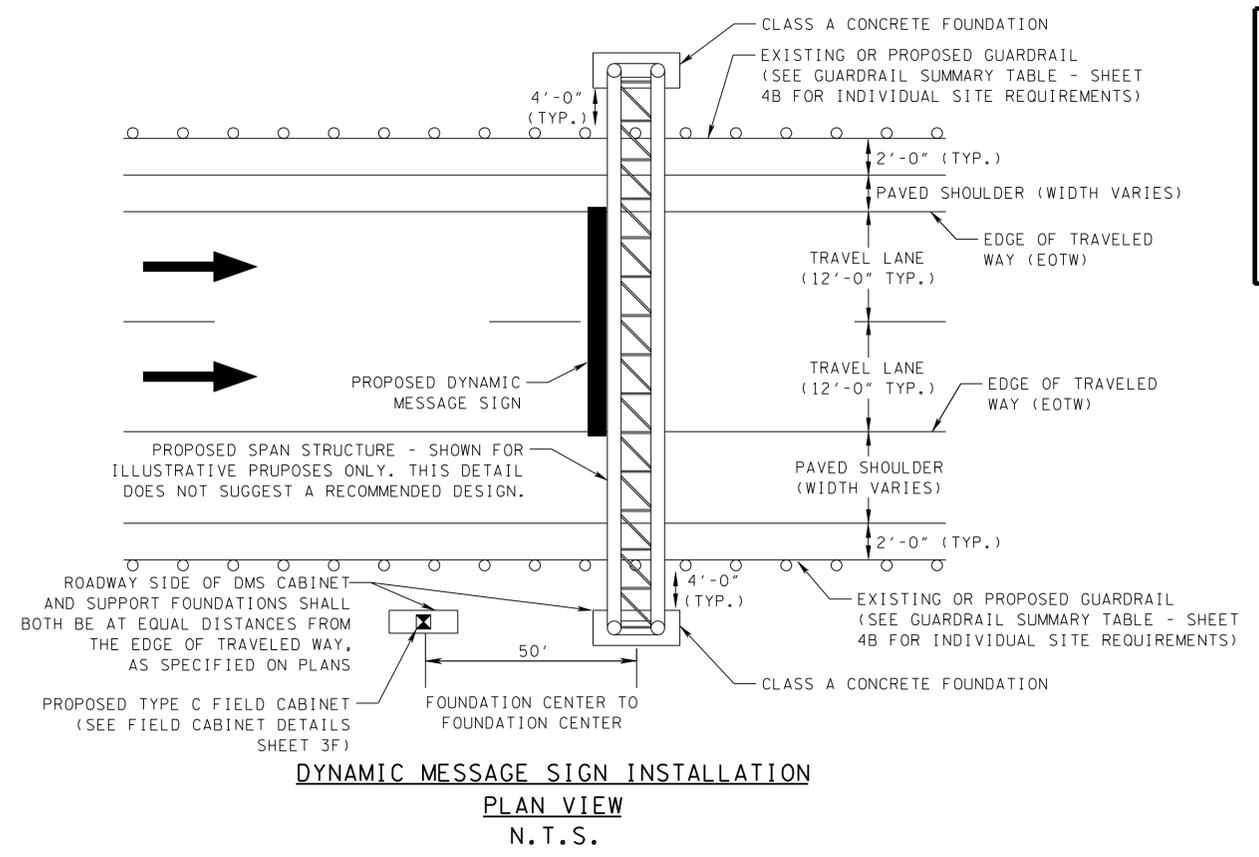
TYPICAL
CCTV
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3A



DMS STRUCTURE NOTES:

- CONTRACTOR SHALL PROVIDE STRUCTURES COMPLETE WITH FOUNDATIONS, ATTACHMENTS TO DMS AND STATIC SIGNS, CATWALKS, AND CATWALK RAILING.
- THE CONTRACTOR SHALL DESIGN THE OVERHEAD SIGN STRUCTURE, ITS FOUNDATION, AND THE CATWALK FROM THE OUTSIDE EDGE OF THE PAVED SHOULDER TO THE DMS SIGN.
- MATERIAL USED MAY BE ALUMINUM OR STEEL, BUT MUST BE FULLY COMPATIBLE WITH DMS BODY.
- THE DESIGN SHALL BE IN ACCORDANCE WITH "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" INCLUDING THE MAXIMUM DEAD LOAD DEFLECTION CRITERIA. THE DESIGN WIND SPEED SHALL BE 90 MPH.
- THE STRUCTURE SHALL BE DESIGNED, FABRICATED AND CONSTRUCTED EXPRESSLY TO SUPPORT, AND BE COMPATIBLE WITH THE DYNAMIC MESSAGE SIGN DESCRIBED IN THE DESIGN SPECIAL PROVISIONS AND OTHER STATIC SIGNS AS DEPICTED ON THE INDIVIDUAL SIGNING PLANS.
- THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS ASSOCIATED WITH THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF THE STRUCTURE, ATTACHMENTS AND FOUNDATION. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF TENNESSEE.
- THE CONTRACTOR SHALL DETERMINE THE ACTUAL LENGTH OF THE SUPPORT COLUMNS ON THE BASIS OF THE EXISTING FIELD CONDITIONS.
- MATERIAL CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 30 DAYS PRIOR TO THE STRUCTURE ERECTION.
- THE PROPOSED RAILING DEPICTED FOR THE CATWALK SHALL BE A COLLAPSIBLE RAILING THAT CAN BE FASTENED TO THE CATWALK WHEN NOT IN USE SO THAT THE RAILING DOES NOT LIMIT THE VISIBILITY OF OTHER STATIC SIGNS THAT MAY BE LOCATED ON THE SAME SIGN STRUCTURE. FURTHERMORE, A SAFETY CHAIN SHALL BE PROVIDED ON THE OPEN END OF THE CATWALK OPPOSITE OF DMS ENTRANCE PER DETAILS ABOVE.
- SEE GENERAL NOTES, SHEET 35 - GENERAL NOTES FOR SIGN SUPPORTS, AND SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.
- REFER TO INDIVIDUAL DMS STRUCTURE LAYOUT SHEETS (SERIES 35 SHEETS) FOR SIGN LAYOUTS.
- PROVISIONS FOR WIRING AS WELL AS GROUNDING SHALL BE PROVIDED (SEE TDOT STD DWG. T-S-15).



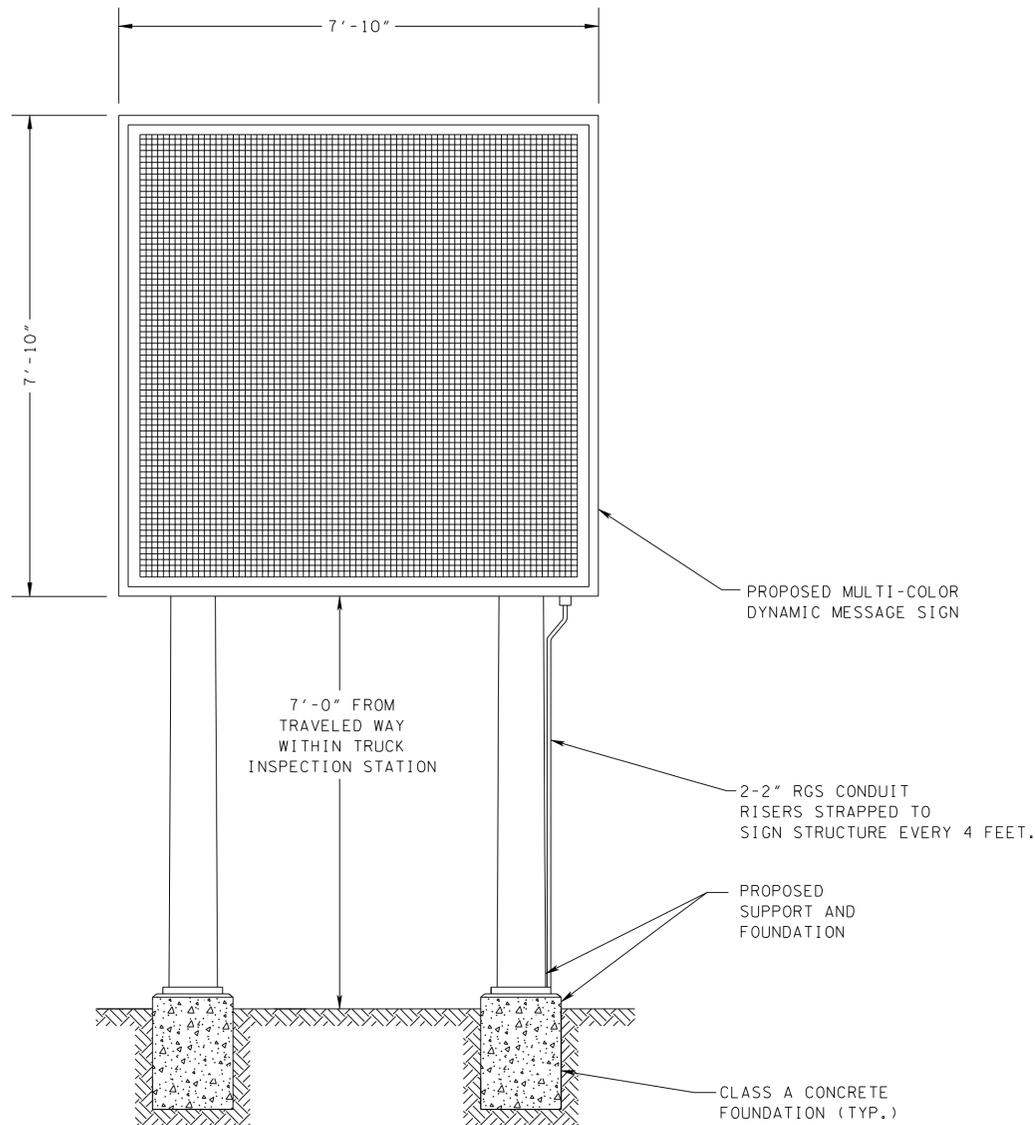
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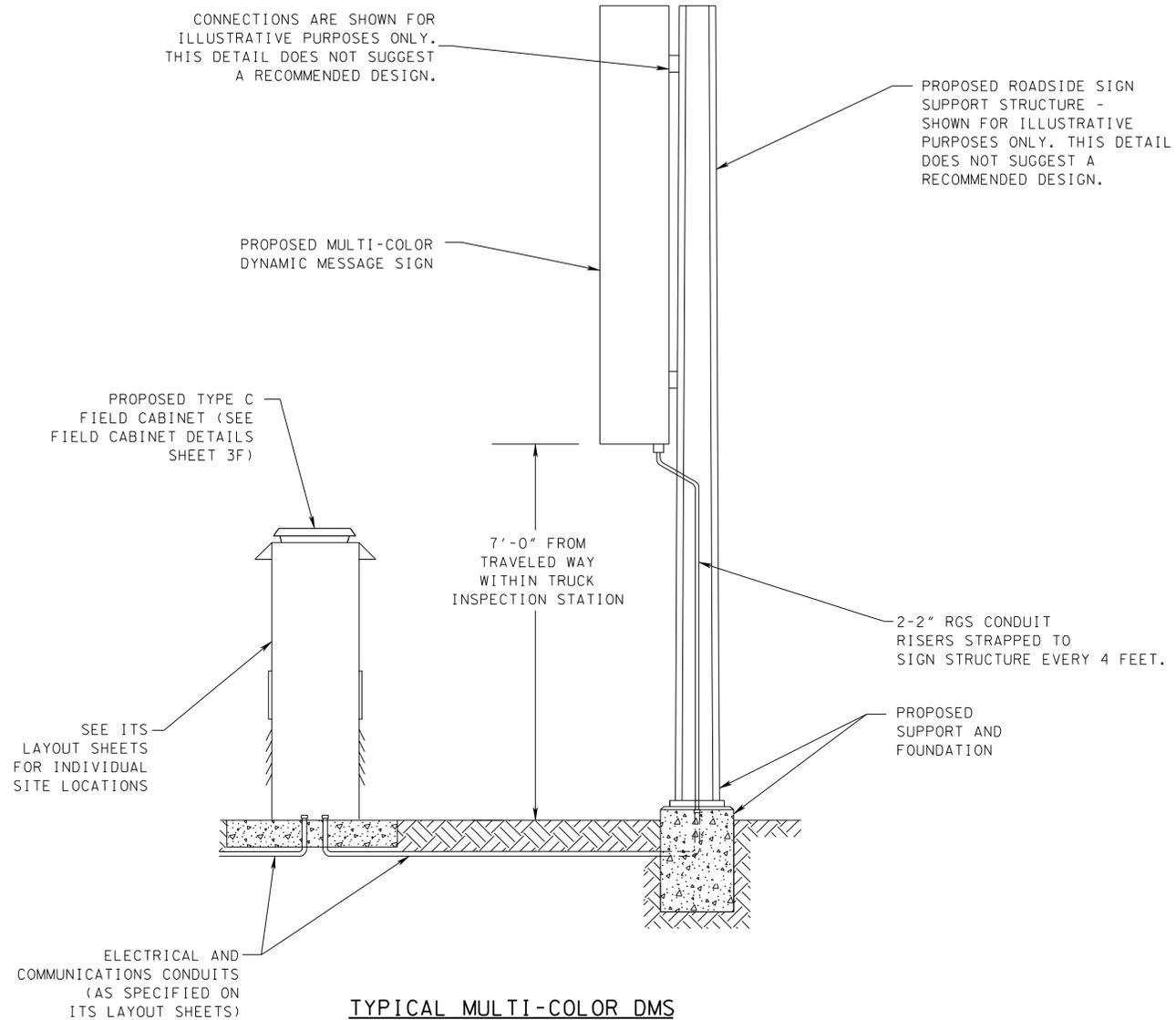
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
DMS
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3B



TYPICAL MULTI-COLOR DMS
ON ROADSIDE SIGN SUPPORT
(FRONT VIEW)
N.T.S.



TYPICAL MULTI-COLOR DMS
ON ROADSIDE SIGN SUPPORT
(SIDE VIEW)
N.T.S.

MULTI-COLOR DMS STRUCTURE NOTES:

- CONTRACTOR SHALL PROVIDE STRUCTURES COMPLETE WITH FOUNDATIONS AND ATTACHMENTS TO MULTI-COLOR DMS.
- THE DESIGN SHALL BE IN ACCORDANCE WITH "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" INCLUDING THE MAXIMUM DEAD LOAD DEFLECTION CRITERIA. THE DESIGN WIND SPEED SHALL BE 90 MPH.
- THE STRUCTURE SHALL BE DESIGNED, FABRICATED AND CONSTRUCTED EXPRESSLY TO SUPPORT, AND BE COMPATIBLE WITH THE MULTI-COLOR DYNAMIC MESSAGE SIGN DESCRIBED IN THE DESIGN SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS ASSOCIATED WITH THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF THE STRUCTURE, ATTACHMENTS AND FOUNDATION. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF TENNESSEE.
- MATERIAL CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 30 DAYS PRIOR TO THE STRUCTURE ERECTION.
- SEE GENERAL NOTES, SHEET 35 - GENERAL NOTES FOR SIGN SUPPORTS, AND SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.
- REFER TO INDIVIDUAL DMS STRUCTURE LAYOUT SHEETS (SERIES 35 SHEETS) FOR SIGN LAYOUTS.
- PROVISIONS FOR WIRING AS WELL AS GROUNDING SHALL BE PROVIDED (SEE TDOT STD DWG. T-S-15).

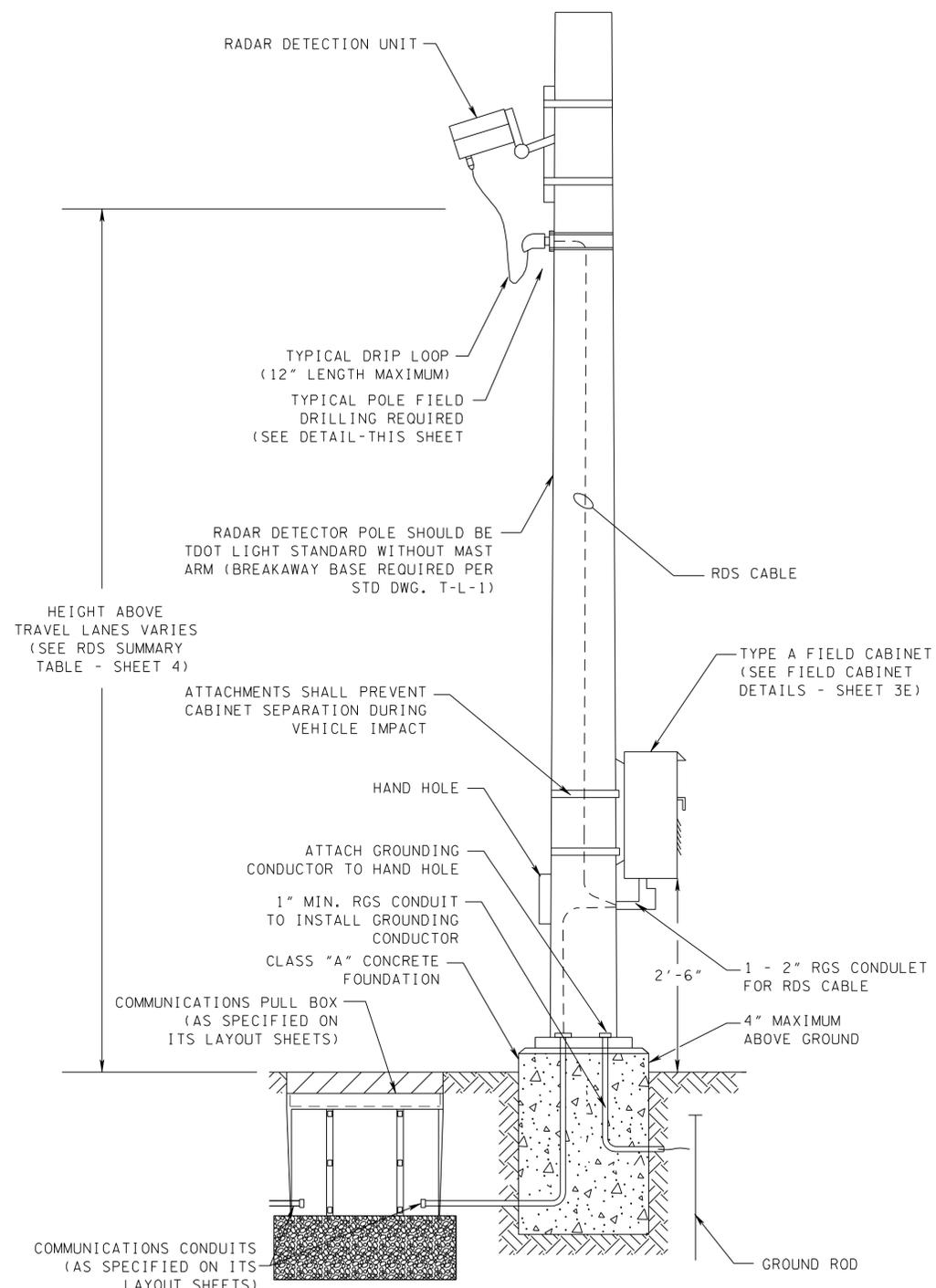
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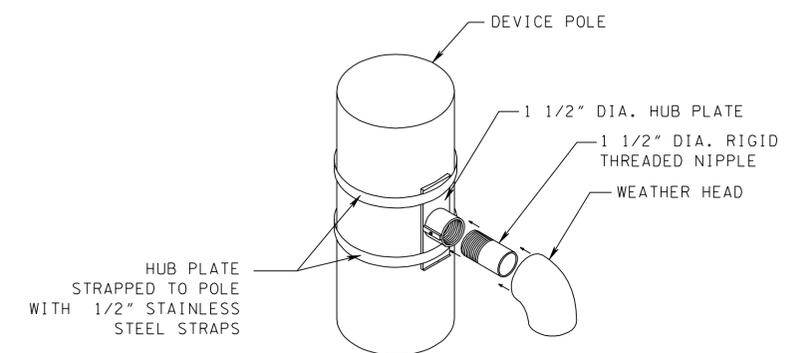
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DEPARTMENT OF TRANSPORTATION

TYPICAL
MULTI-COLOR DMS
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3C



**TYPICAL RADAR DETECTION SYSTEM
INSTALLED ON BREAKAWAY POLE**
N.T.S.



NOTE: 1/2" HOLE TO BE DRILLED BEHIND HUB PLATE. ALL FIELD DRILLED HOLES SHALL BE LOCATED AFTER EQUIPMENT POSITION HAS BEEN DETERMINED SO THAT A MAXIMUM 12" DRIP LOOP IS MAINTAINED. COST OF FIELD DRILLED HOLES TO BE INCLUDED IN THE COST OF THE DEVICE OR POLE.

TYPICAL POLE FIELD DRILLING
N.T.S.

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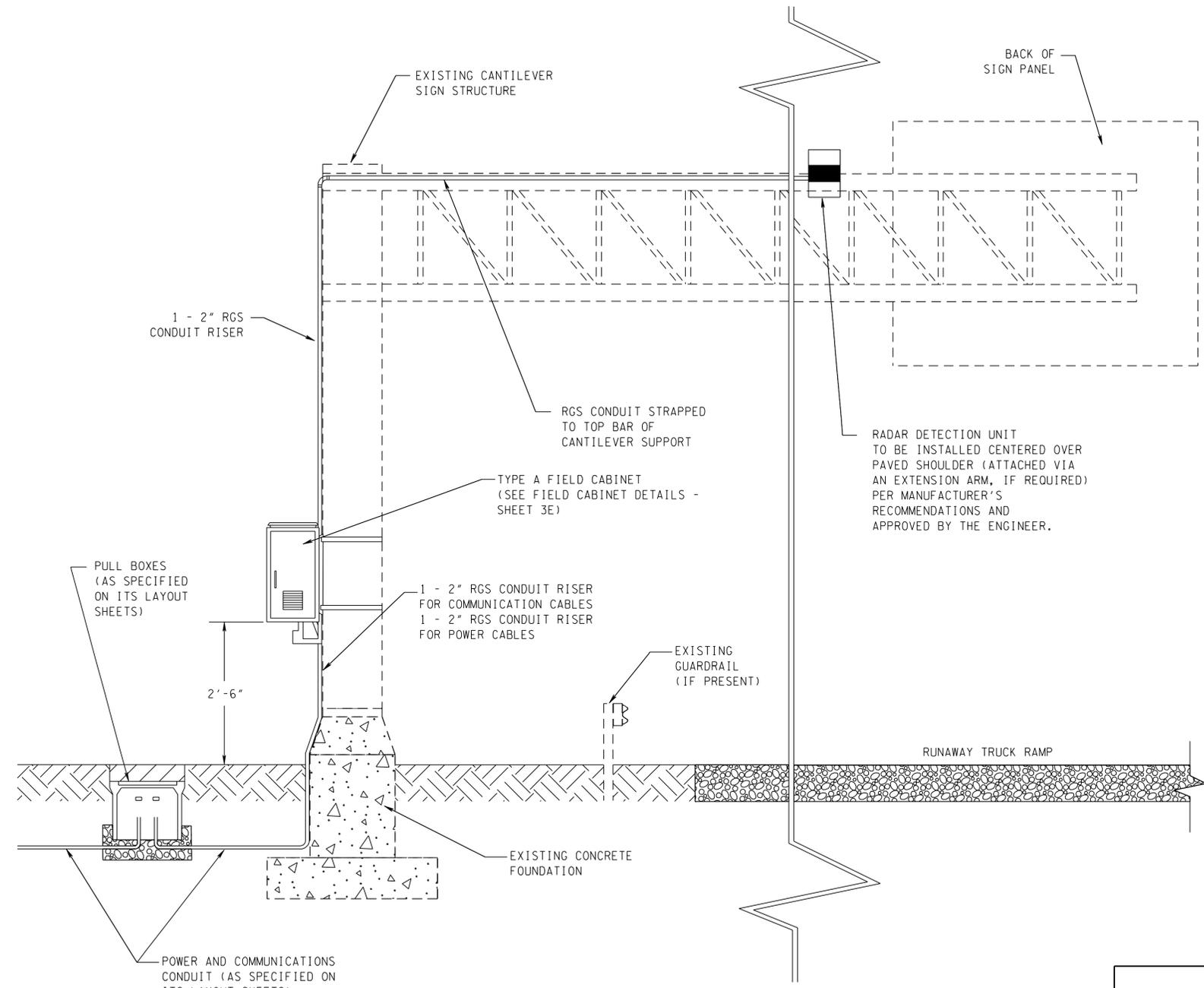
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
RDS
DETAILS

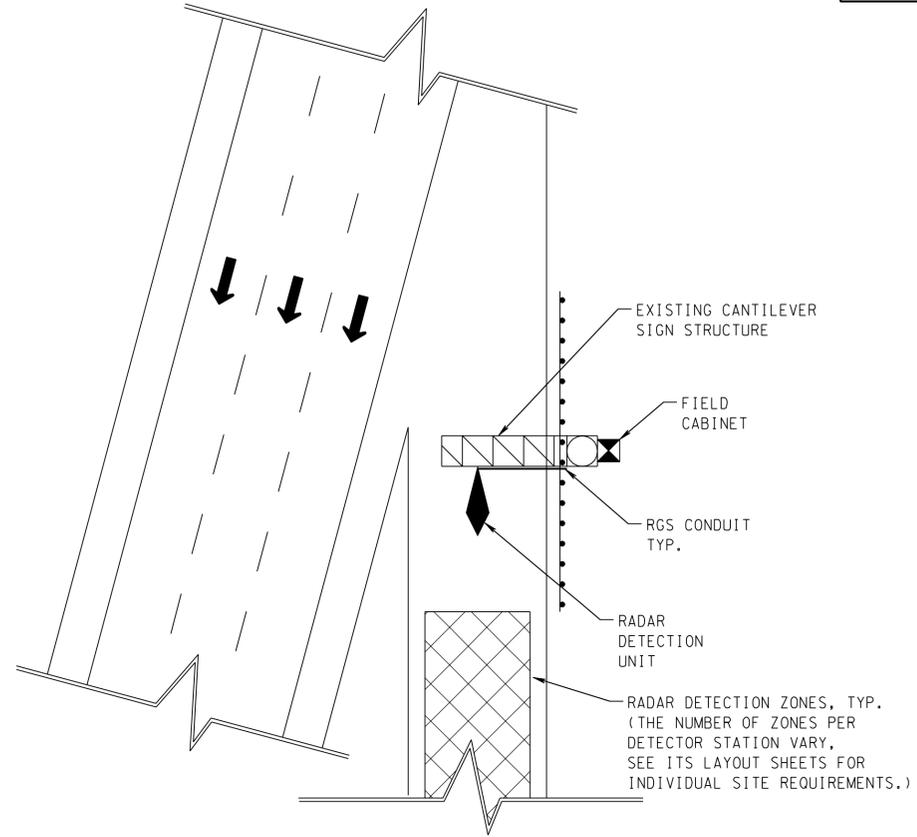
NOTES:

- THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF LAYOUT/SHOP DRAWINGS OF ALL COMPONENTS INCLUDING THE PLAN OF ATTACHMENT TO THE ENGINEER FOR REVIEW AND APPROVAL.
- ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOUNDATION DESIGN AND SHALL SUBMIT SIX (6) COPIES OF THE DESIGN CALCULATIONS TO THE ENGINEER FOR REVIEW AND APPROVAL. THE TOP OF THE FOUNDATION SHALL NOT PROJECT OVER 4" MAX. ABOVE THE GROUND LINE.
- SUPPORTS AND FOUNDATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FOUNDATIONS AND ATTACHMENTS SHALL BE DESIGNED BY THE CONTRACTOR.
- CABINET MOUNTING HEIGHT OF 2'-6" MAY BE REDUCED BASED UPON SHOULDER SLOPE CONDITIONS FOUND IN THE FIELD. COORDINATE WITH THE ENGINEER TO DETERMINE AREAS OF NEED.
- CONSTRUCTION OF MAINTENANCE WORK PADS WILL BE REQUIRED AT EACH LOCATION (SEE SHEET 3G).
- COMMUNICATIONS CONDUITS ENTER FIELD CABINETS IN A GRADUAL SWEEP AND SHALL NOT USE CONDULETS.
- THE ELEVATION OF PROPOSED WEATHERHEADS SHALL BE PLACED WITHIN 1 FT. OF THE PROPOSED DEVICE TO MINIMIZE THE LENGTH OF EXPOSED CABLING.
- DRIP LOOPS SHALL BE APPLIED TO ALL CABLING ENTERING A WEATHERHEAD.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3D



**TYPICAL RADAR DETECTION SYSTEM
ON EXISTING CANTILEVER SIGN STRUCTURE
REAR VIEW
N.T.S.**



**TYPICAL RADAR DETECTION SYSTEM
ON EXISTING CANTILEVER SIGN STRUCTURE
PLAN VIEW
N.T.S.**

THIS DETAIL PREPARED SPECIFICALLY FOR THE RADAR DETECTION SYSTEM SHOWN ON PLAN SHEETS 26 AND 29.

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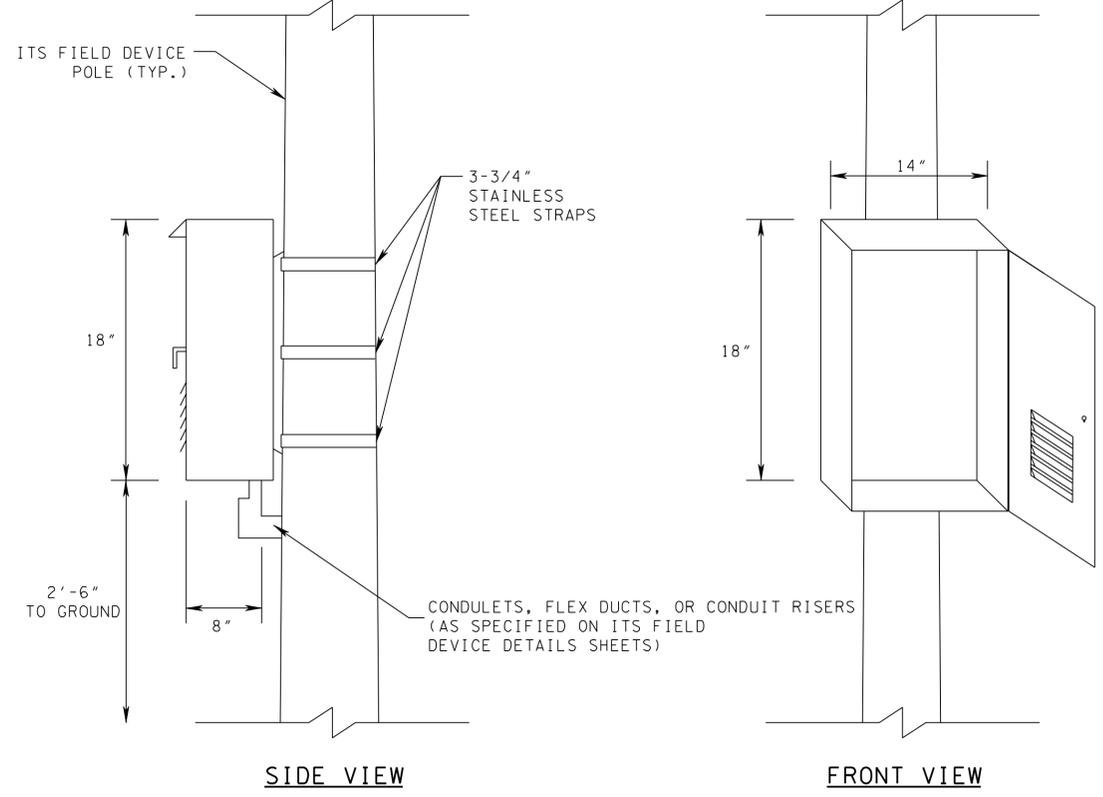
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TYPICAL
RDS
DETAILS

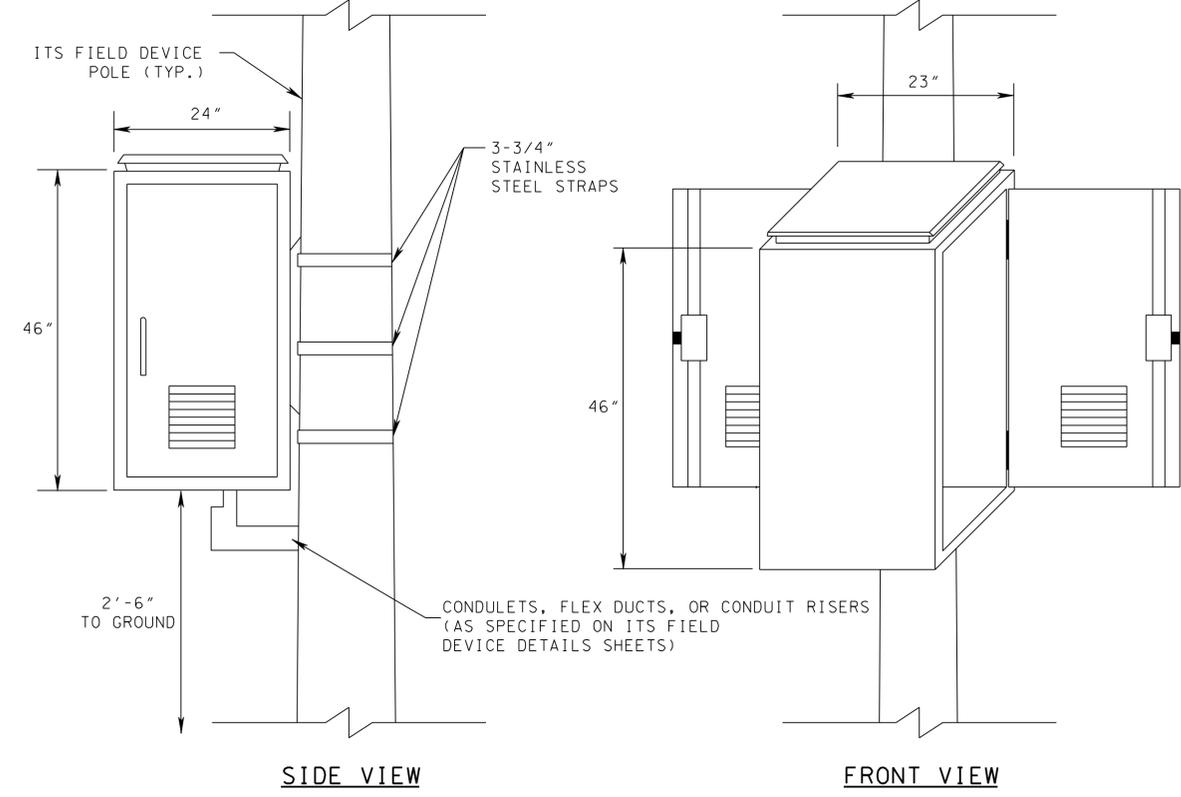
NOTES:

1. THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF LAYOUT/SHOP DRAWINGS OF ALL COMPONENTS, INCLUDING THE PLAN OF ATTACHMENT, TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
3. SUPPORTS AND FOUNDATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FOUNDATIONS AND ATTACHMENTS SHALL BE DESIGNED BY THE CONTRACTOR.
4. CABINET MOUNTING HEIGHT OF 2'-6" MAY BE REDUCED BASED UPON SHOULDER SLOPE CONDITIONS FOUND IN THE FIELD. COORDINATE WITH THE ENGINEER TO DETERMINE AREAS OF NEED.
5. CONSTRUCTION OF MAINTENANCE WORK PADS WILL BE REQUIRED AT EACH LOCATION (SEE DETAIL SHEET 3G).
6. COMMUNICATIONS CONDUITS ENTER FIELD CABINETS IN A GRADUAL SWEEP AND SHALL NOT USE CONDULETS.

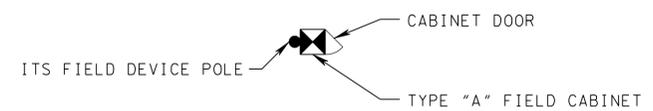
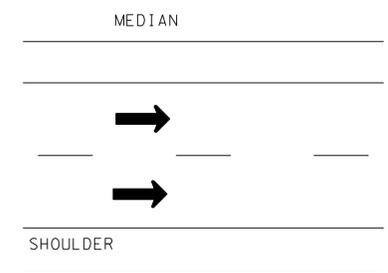
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3E



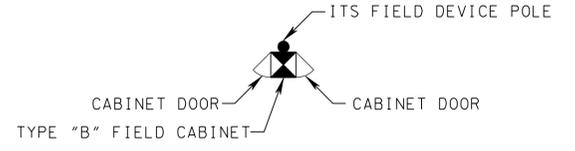
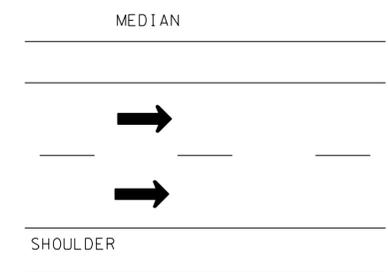
TYPE "A" FIELD CABINET (18"x14"x8")
N.T.S.



TYPE "B" FIELD CABINET (46"x24"x23")
N.T.S.



DETAIL: PLAN VIEW OF TYPE "A" FIELD CABINET ORIENTATION
N.T.S.



DETAIL: PLAN VIEW OF TYPE "B" FIELD CABINET CONFIGURATION
N.T.S.

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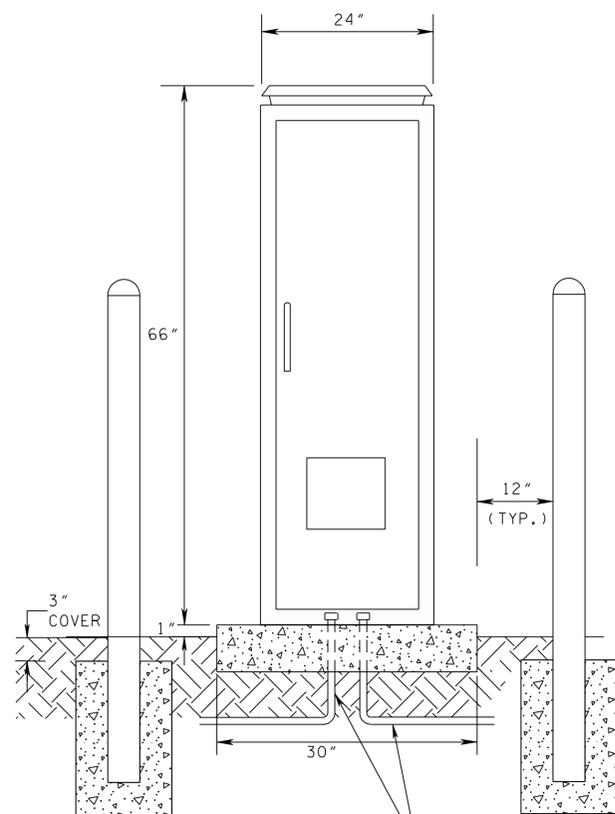
TYPICAL
FIELD CABINET
DETAILS

NOTES:

- SUNSHIELDS SHALL BE REQUIRED FOR ALL FIELD CABINETS. SUNSHIELDS SHALL BE PROVIDED FOR THE TOP PANEL AND FOR EACH FACE OF THE CABINET EXCLUDING THE SIDE THAT IS STRAPPED TO THE ITS FIELD DEVICE POLE.
- SEE SERIES 7 SHEETS FOR VARIOUS FIELD CABINET CONFIGURATIONS, AND SHEET 4A FOR SPECIFIC FIELD CABINET CONTENTS.
- FIELD CABINETS ARE ATTACHED TO A NUMBER OF DIFFERENT DEVICES (PROPOSED STRAIN POLES, PROPOSED UTILITY POLES, PROPOSED SPAN SIGN SUPPORTS, OR EXISTING LIGHT POLES). REFER TO THE ITS LAYOUT SHEETS FOR INDIVIDUAL SITE REQUIREMENTS.
- ATTACHMENTS TO BREAKAWAY POLES SHALL PREVENT CABINET SEPARATION IN THE EVENT OF VEHICLE IMPACT.

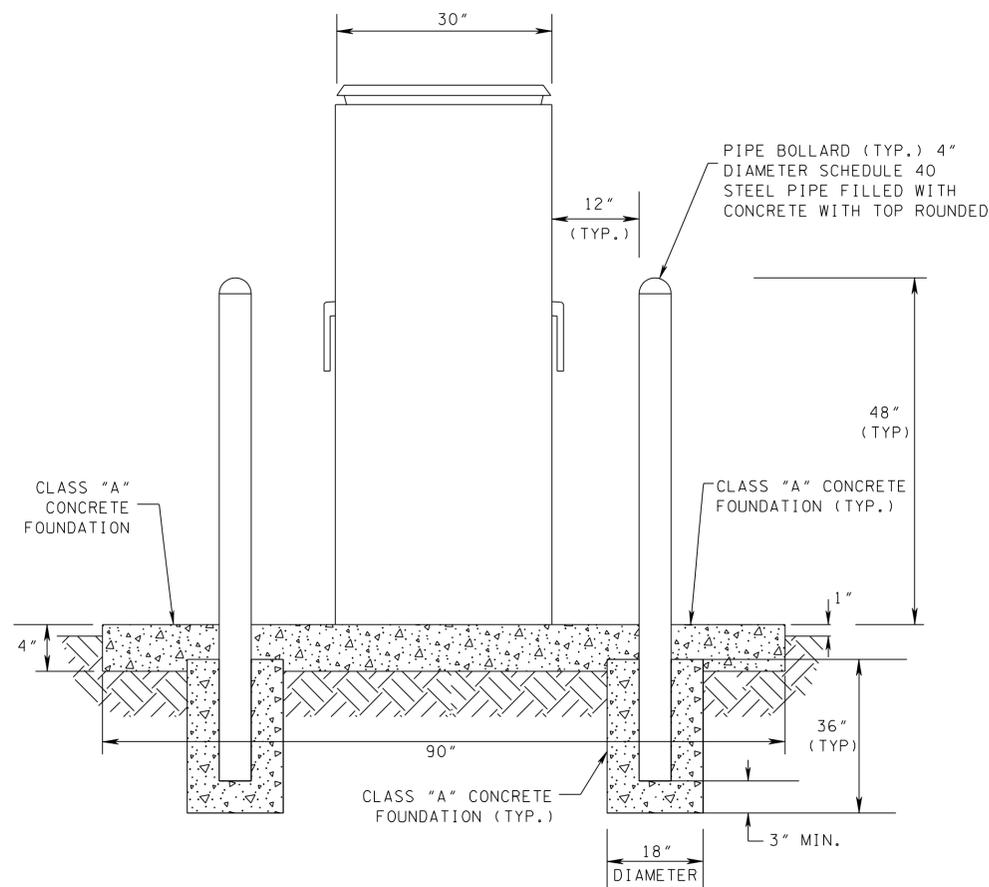
- CABINETS SHALL BE LABELED "TDOT ITS" WITH DEVICE NAME, TYPE, AND NUMBER.
- CABINET DIMENSIONS ARE NOMINAL MINIMUMS. SEE TECHNICAL SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- CABINETS SHALL BE MOUNTED 2'-6" (30") ABOVE FINISHED GRADE AT THE LOCATION WHERE THE TECHNICIAN WOULD STAND TO ACCESS THE CABINET. ADJUSTMENTS MAY BE APPROVED BY THE ENGINEER AT SLOPED LOCATIONS.
- CONSTRUCTION OF MAINTENANCE WORK PADS WILL BE REQUIRED AT EACH CCTV AND RDS LOCATION (SEE DETAIL SHEET 3G).
- CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS FOR EACH CABINET TYPE TO THE ENGINEER FOR APPROVAL.

TYPE	YEAR	PROJECT NO.	SHEET NO.
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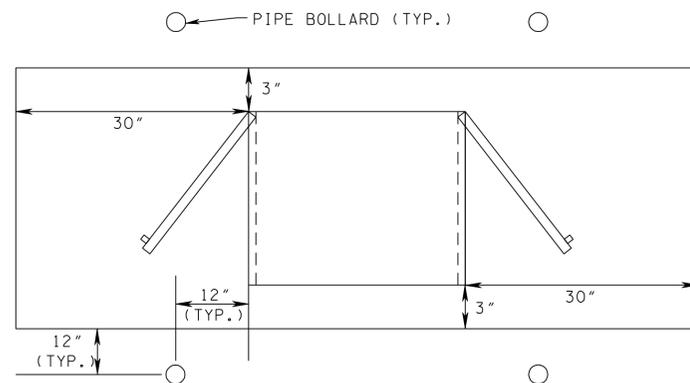


SIDE VIEW

ELECTRICAL AND COMMUNICATIONS CONDUITS (AS SPECIFIED ON ITS LAYOUT SHEETS)

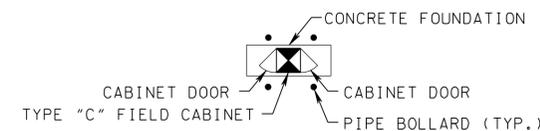
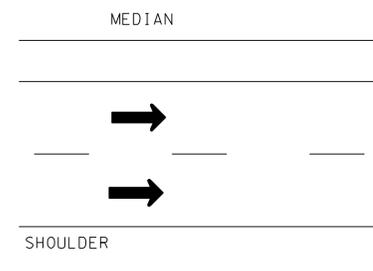


FRONT VIEW



TOP VIEW

**TYPE "C" FIELD CABINET (66"x24"x30")
N.T.S.**



**DETAIL: PLAN VIEW OF TYPE "C"
FIELD CABINET CONFIGURATION
N.T.S.**

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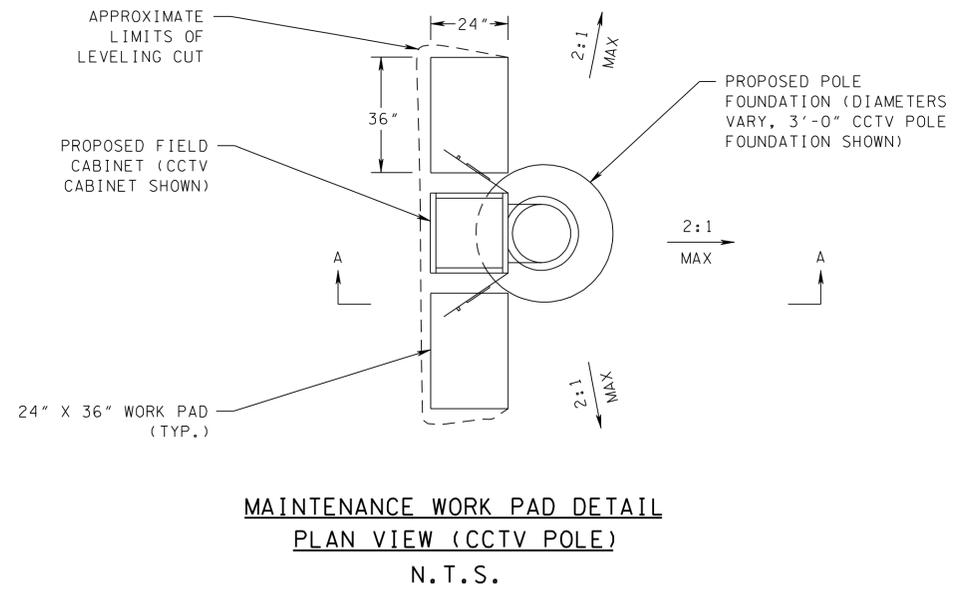
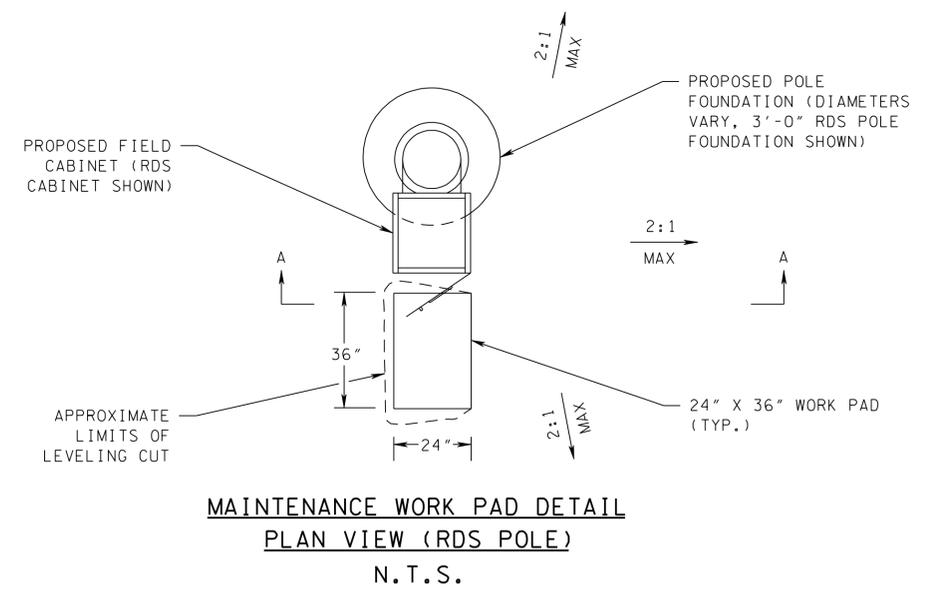
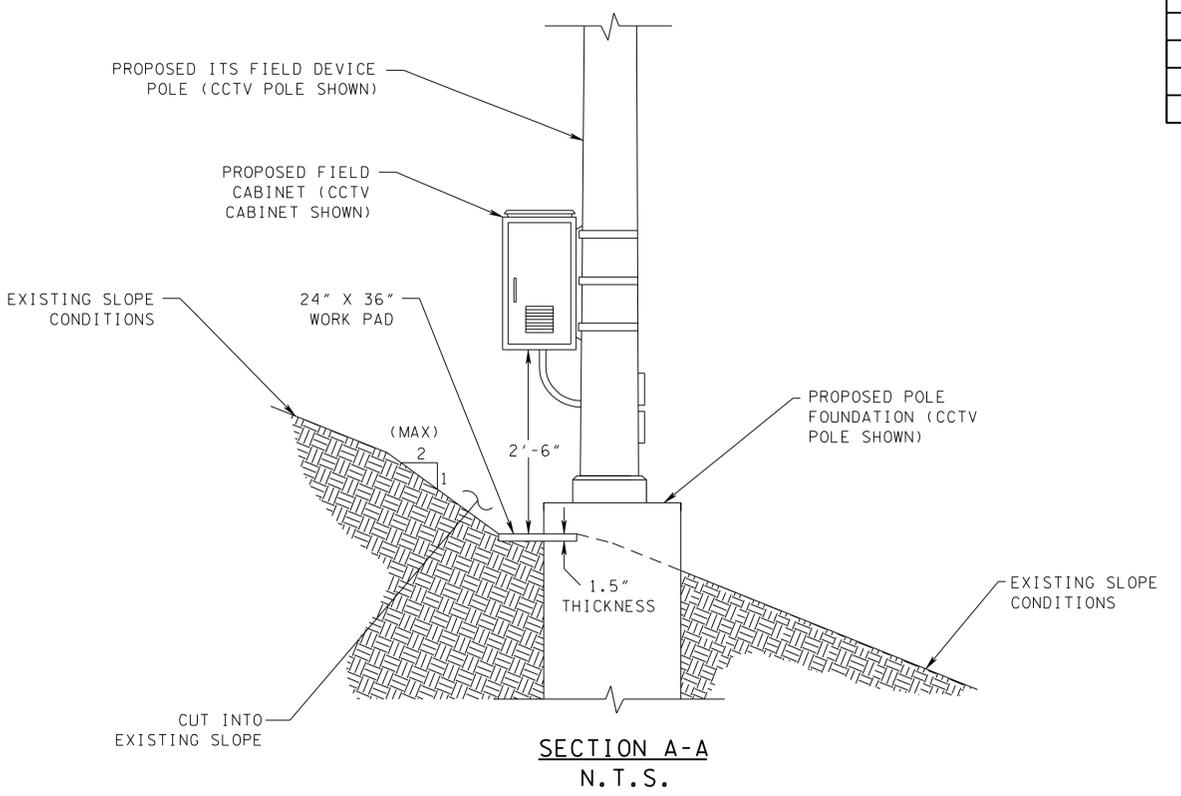
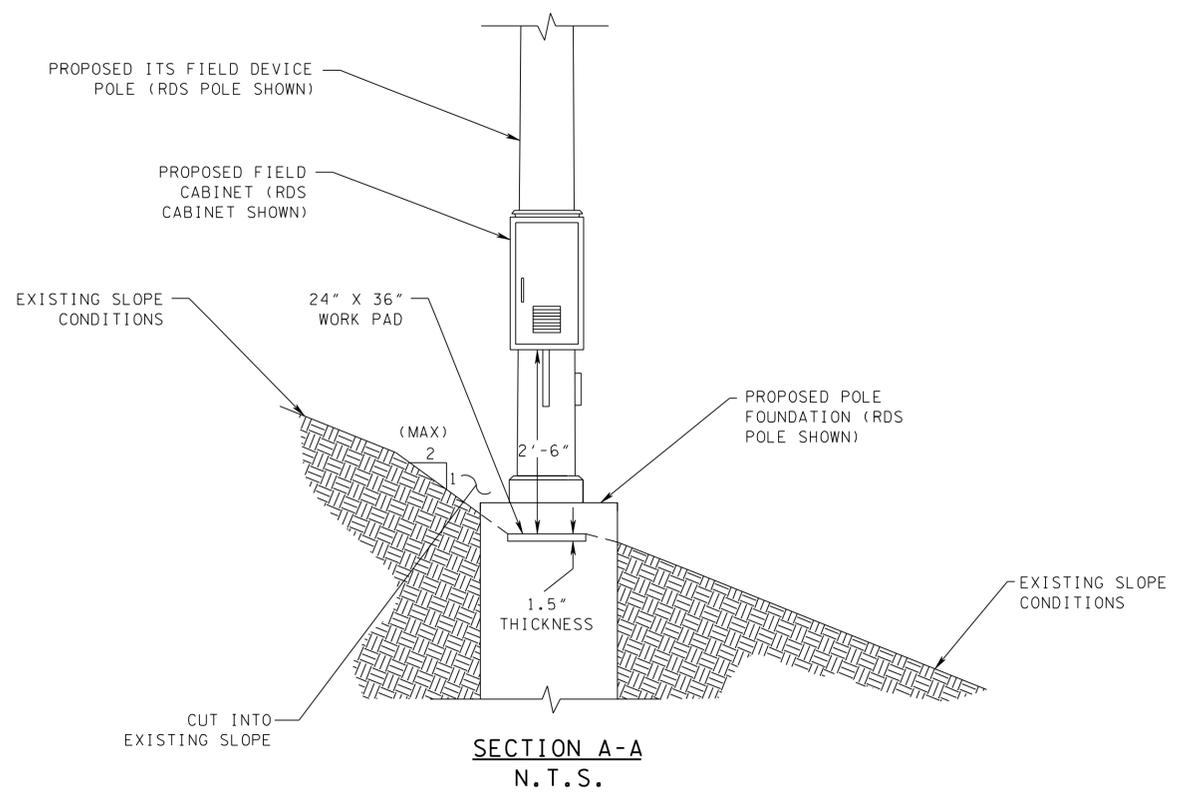
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TYPICAL
FIELD CABINET
DETAILS

NOTES:

- SUNSHIELDS SHALL BE REQUIRED FOR ALL FIELD CABINETS. SUNSHIELDS SHALL BE PROVIDED FOR THE TOP PANEL AND FOR EACH FACE OF THE CABINET.
- SEE SHEET 4A FOR SPECIFIC FIELD CABINET CONTENTS.
- CABINETS SHALL BE LABELED "TDOT ITS" WITH DEVICE NAME, TYPE, AND NUMBER.
- CABINET DIMENSIONS ARE NOMINAL MINIMUMS. SEE TECHNICAL SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS FOR EACH CABINET TYPE TO THE ENGINEER FOR APPROVAL.
- PREFABRICATED CONCRETE OR POLYMER CONCRETE FOUNDATIONS MAY BE SUBSTITUTED FOR APPROVAL BY THE ENGINEER IN LIEU OF CAST IN PLACE CONCRETE FOUNDATIONS.
- CONCRETE NEEDED TO FORM PAD MAY VARY BASED UPON SLOPE CONDITIONS ENCOUNTERED IN THE FIELD FOR THE TYPE "C" CABINET.
- BOLLARDS FOR TYPE "C" CABINET INSTALLATIONS SHALL BE 4" DIAMETER SCHEDULE 40 STEEL PIPES FILLED WITH CONCRETE WITH THE TOP ROUNDED. FOUNDATION SHALL BE 18" IN DIAMETER, 36" DEEP, AND HAVE 3" OF COVER ABOVE THE FOOTING.
- AT LOCATIONS WHERE TYPE "C" CABINETS ARE PLACED BEHIND GUARDRAIL, PIPE BOLLARDS WILL ONLY BE REQUIRED ON THE OUTSIDE EDGE OF THE CABINET (I.E. THE SIDE NOT PROTECTED BY THE GUARDRAIL).

TYPE	YEAR	PROJECT NO.	SHEET NO.
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NOTES:

1. WORK PADS SHALL BE PRECAST POLYMER CONCRETE REINFORCED WITH WOVEN FIBERGLASS. TOP SURFACE SHALL HAVE A 0.5 COEFFICIENT OF FRICTION SKID RESISTANT SURFACE. WORK PAD SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. WORK PAD SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONTRACTOR ORDERING MATERIAL.
2. WORK PADS WILL BE REQUIRED AT EACH POLE-MOUNTED CABINET.
3. COMPACTED BACKFILL WILL BE CONSIDERED AT THE DISCRETION OF THE ENGINEER FOR SLOPE CONDITIONS OF 3:1 (H:V) OR STEEPER.
4. SLOPE CONDITIONS CONSTRUCTED FOR EITHER THE LEVELING CUT OR THE COMPACTED BACKFILL SHALL NOT EXCEED A 2:1 (H:V) SLOPE.
5. SOURCE OF THE COMPACTED BACKFILL SHALL BE A COMBINATION OF EXCAVATED MATERIAL FROM WORK PADS, IF SATISFACTORY, AND BORROW MATERIAL. IF NECESSARY, THIS BORROW MATERIAL SHALL BE INCLUDED IN THE PAY ITEM NUMBER FOR "MINERAL AGGREGATE, TYPE A BASE, GRADING D", PAY ITEM 303-01.
6. ALL DISTURBED AREAS ADJACENT TO THE WORK PAD SHALL HAVE SEED APPLIED AND EROSION CONTROL BLANKET (TYPE 11) INSTALLED.

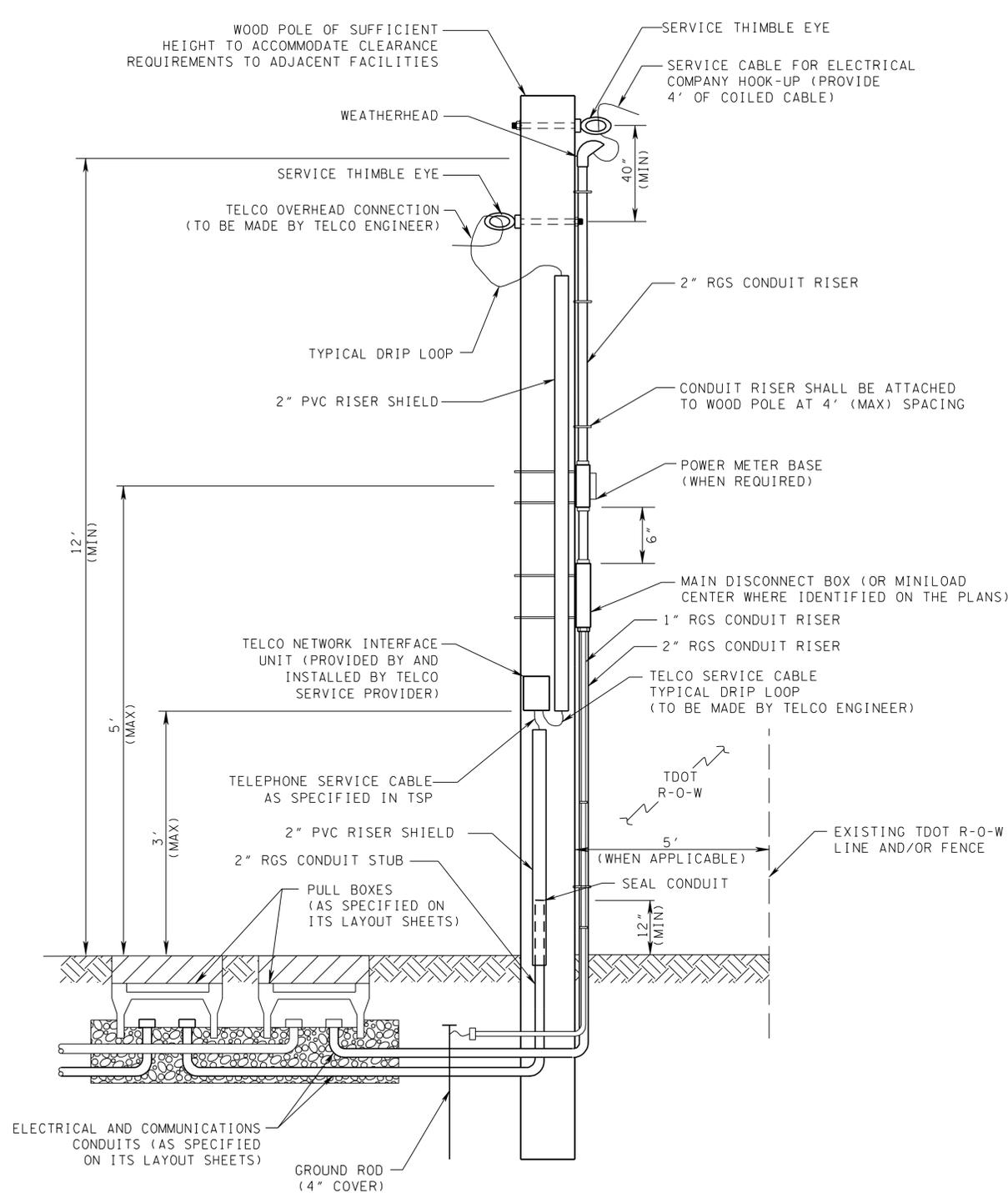
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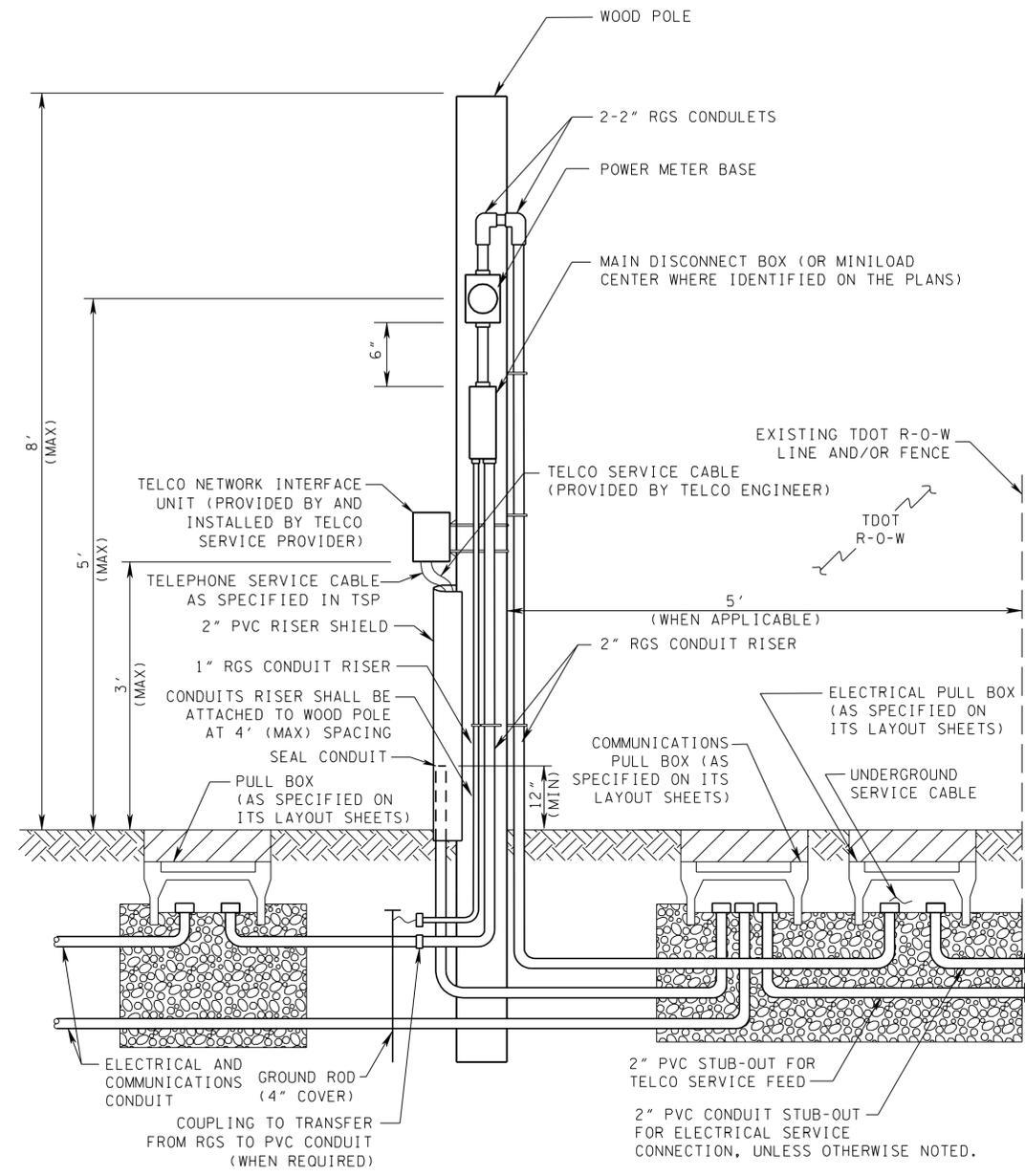
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TYPICAL
 MAINTENANCE
 WORK PAD
 DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3H



DEMARCATION SITE - TYPE 1
OVERHEAD SERVICE FEEDS
N.T.S.



DEMARCATION SITE - TYPE 2
UNDERGROUND SERVICE FEEDS
N.T.S.

NOTES:

1. ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
2. COORDINATE ELECTRICAL SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANIES AS NOTED ON THE PLANS. SEE SPECIAL NOTES FOR FURTHER GUIDANCE.
3. COORDINATE COMMUNICATIONS SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANIES AS NOTED ON THE PLANS. SEE SPECIAL NOTES FOR FURTHER GUIDANCE.
4. THERE SHALL BE A MINIMUM 40-INCH SEPARATION BETWEEN POWER AND COMMUNICATION WEATHERHEADS.
5. ENTIRE INSTALLATION MUST MEET OR EXCEED ALL LOCAL AND NATIONAL ELECTRICAL CODES.

6. LOCATIONS OF PULL BOXES SHOWN IN ABOVE DETAILS ARE GENERIC. REFER TO INDIVIDUAL ITS LAYOUT SHEETS FOR RECOMMENDED LOCATIONS.
7. METER BASES ARE REQUIRED FOR ALL ELECTRICAL DEMARCATION SITES AND SHALL BE PROVIDED BY THE CONTRACTOR.
8. SEPARATE PULL BOXES ARE REQUIRED FOR ELECTRICAL AND COMMUNICATIONS CONDUITS.
9. THE ELECTRICAL AND COMMUNICATIONS CABLES THAT RUN TO THE INDIVIDUAL ITS FIELD CABINETS ARE SUMMARIZED IN THE CONDUIT AND CABLE SCHEDULES ON THE INDIVIDUAL ITS LAYOUT SHEETS.
10. THE TYPE OF SERVICE (ELECTRICAL, COMMUNICATION) REQUIRED AT EACH SITE IS LABELED ON THE INDIVIDUAL ITS LAYOUT SHEETS. NOT ALL DEMARCATIONS SITES REQUIRE BOTH ELECTRICAL AND COMMUNICATIONS FEEDS.
11. A DRIP LOOP SHALL BE APPLIED TO ALL CABLING ENTERING A WEATHERHEAD.
12. WOOD POLE CLASS, HEIGHT, BURIAL DEPTH, AND GUYING REQUIREMENTS SHALL BE DETERMINED BASED UPON LENGTH OF AERIAL FEED AND MEET LOCAL AND NATIONAL ELECTRICAL CODES.
13. CONTRACTOR TO COORDINATE THE SIZE AND TYPE OF ELECTRICAL SERVICE CABLES WITH THE APPROPRIATE UTILITY COMPANIES.

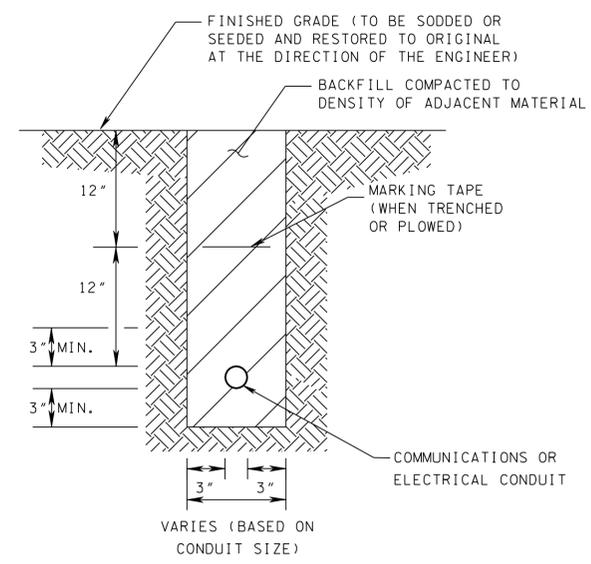
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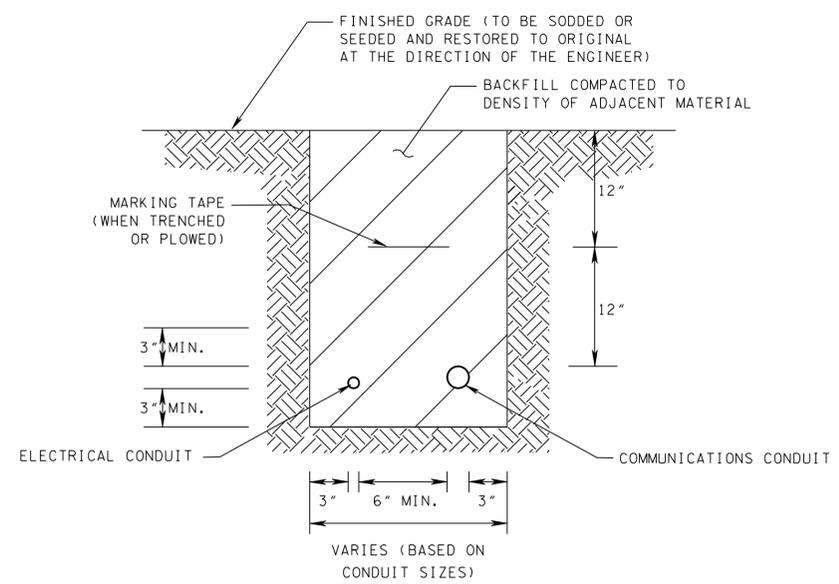
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TYPICAL
DEMARCATION SITE
DETAILS

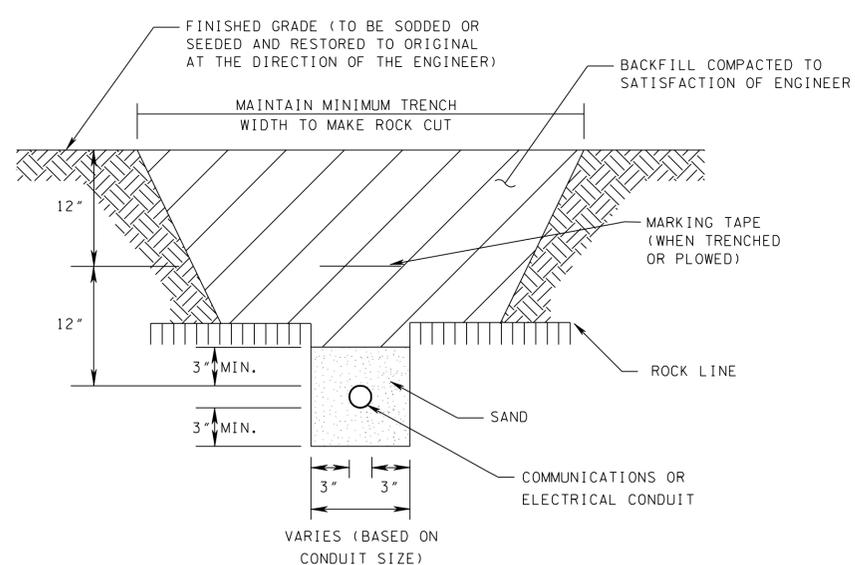
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3J



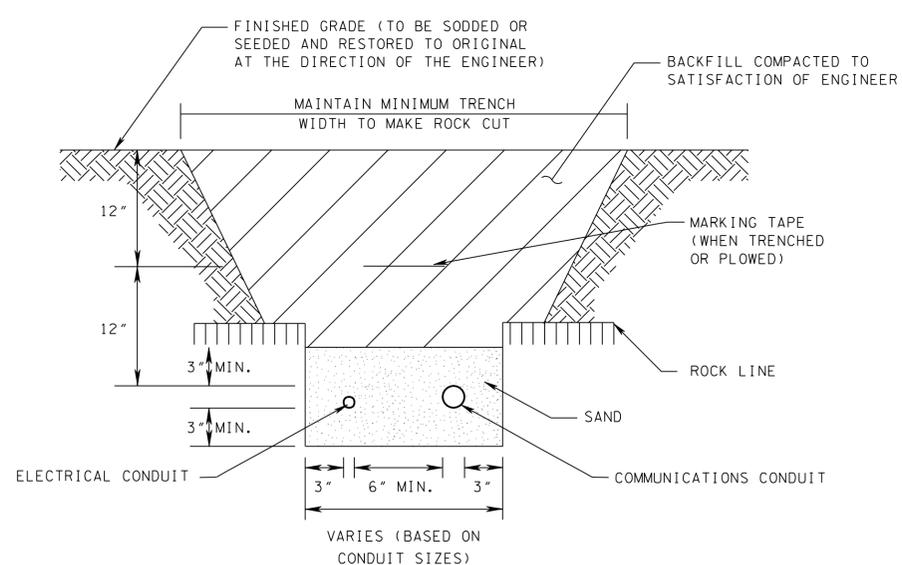
**TYPICAL TRENCH CONFIGURATION
FOR A SINGLE CONDUIT
(COMMUNICATIONS OR ELECTRICAL) IN EARTH**
N.T.S.



**TYPICAL TRENCH CONFIGURATION
FOR COMMUNICATIONS AND ELECTRICAL
CONDUITS IN EARTH**
N.T.S.



**TYPICAL TRENCH CONFIGURATION
FOR A SINGLE CONDUIT
(COMMUNICATIONS OR ELECTRICAL) IN ROCK**
N.T.S.



**TYPICAL TRENCH CONFIGURATION
FOR COMMUNICATIONS AND ELECTRICAL
CONDUITS IN ROCK**
N.T.S.

NOTES:

- ELECTRICAL AND COMMUNICATIONS CONDUIT SIZES VARY THROUGHOUT THE PROJECT. REFER TO THE CONDUIT AND CABLE SCHEDULES SHOWN ON EACH ITS LAYOUT SHEET FOR INDIVIDUAL CONDUIT SIZES.
- WHEN ELECTRICAL AND COMMUNICATIONS CONDUITS SHARE A COMMON TRENCH THERE SHALL BE NO LESS THAN 6 INCHES OF SEPARATION BETWEEN THE CONDUIT SYSTEMS. WHERE THE SAME TYPES OF CONDUIT SYSTEMS SHARE A COMMON TRENCH (E.G. 2 ELECTRICAL OR 2 COMMUNICATIONS CONDUITS) THERE SHALL BE NO LESS THAN 3 INCHES OF SEPARATION BETWEEN THE CONDUIT SYSTEMS.
- WARNING TAPE SHALL BE LABELED "WARNING - ELECTRICAL/COMMUNICATIONS CABLE BELOW."
- IF A DRAINAGE OR UTILITY CONFLICT ARISES THE CONTRACTOR SHALL SUBMIT A PLAN FOR RESOLVING THE CONFLICT TO THE ENGINEER FOR REVIEW AND APPROVAL.

- ALL CONDUIT ROUTES UNDERNEATH ASPHALT OR CONCRETE ROADWAYS SHALL BE BORED OR DIRECTIONAL DRILLED. NO OPEN TRENCHING WILL BE ALLOWED IN ASPHALT OR CONCRETE.
- TRENCH MUST CONTAIN MINIMUM 3" SAND COVER OVER CONDUIT THEN 10" BACK FILL WITH SOIL FREE OF ROCKS OR OTHER FOREIGN MATTER. THE REMAINDER OF THE TRENCH MAY BE BACK-FILLED WITH EXISTING MATERIAL REMOVED FROM THE TRENCH PROVIDED NO STONES ARE GREATER THAN #2 STONE. WHERE CONDITIONS REQUIRE BORROW MATERIAL TO MEET BACKFILL REQUIREMENTS, THIS QUANTITY WILL BE PAID FOR UNDER ITEM NUMBER 303-01 (MINERAL AGGREGATE, TY A BASE, GRADING D). ALL BACKFILL MATERIAL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

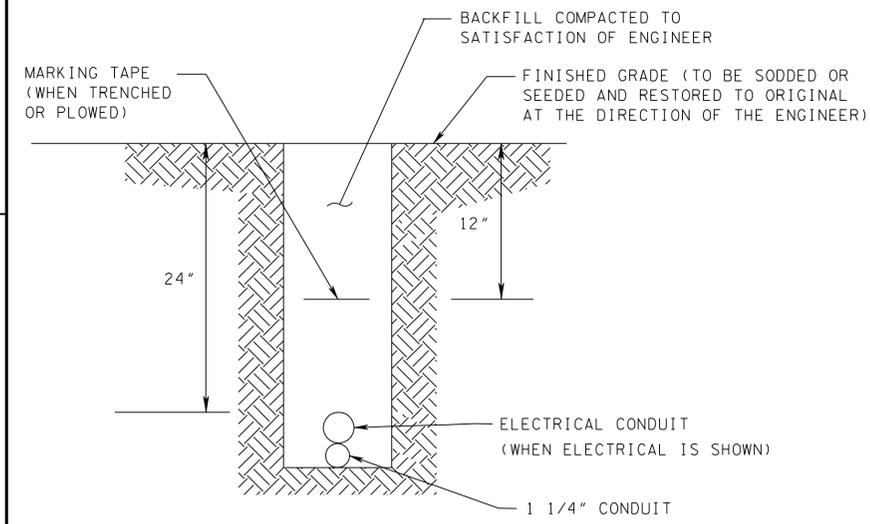
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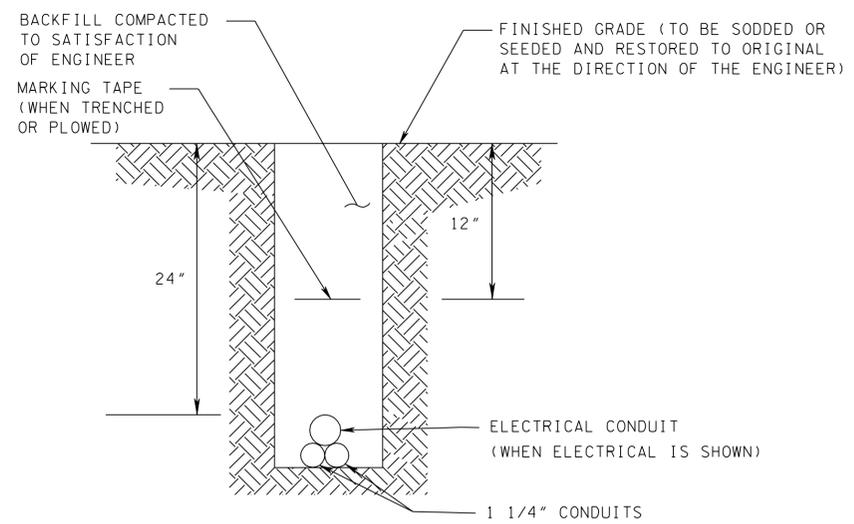
TYPICAL CONDUIT
AND TRENCHING
DETAILS
COPPER COMMUNICATIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3K



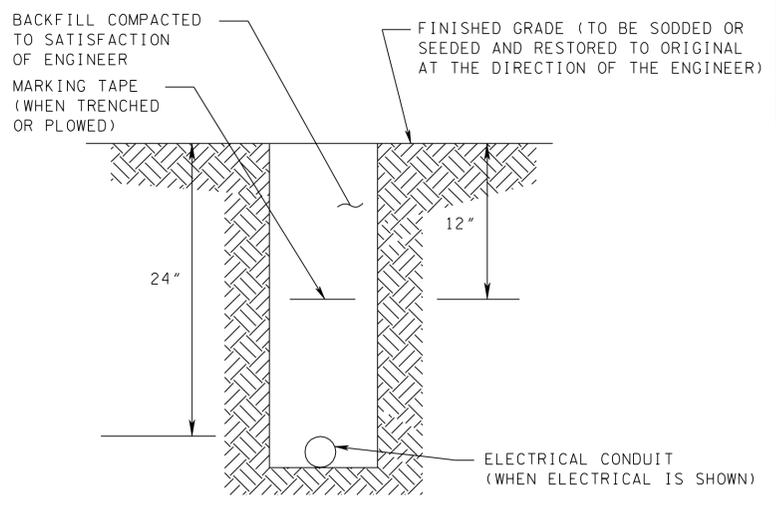
CONDUIT BANK TYPE 1
N.T.S.

ONE 1 1/4" COMMUNICATIONS CONDUIT WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



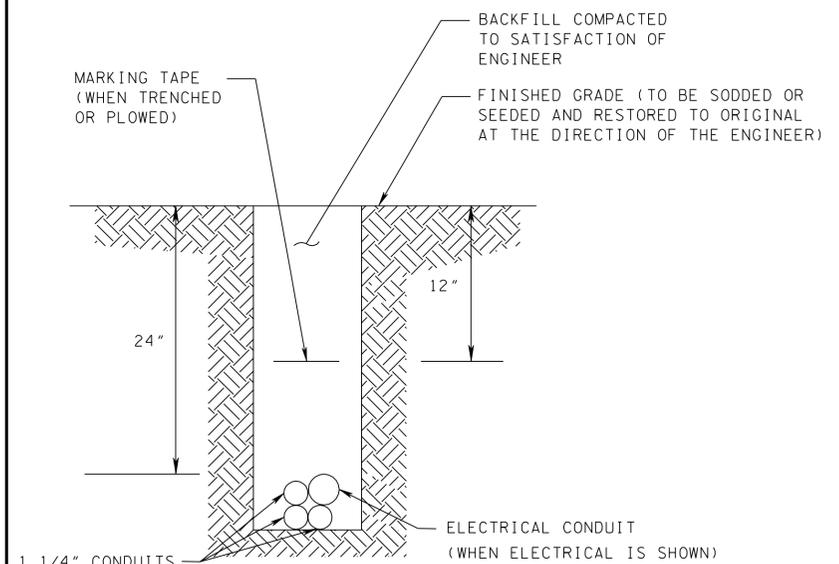
CONDUIT BANK TYPE 2
N.T.S.

TWO 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



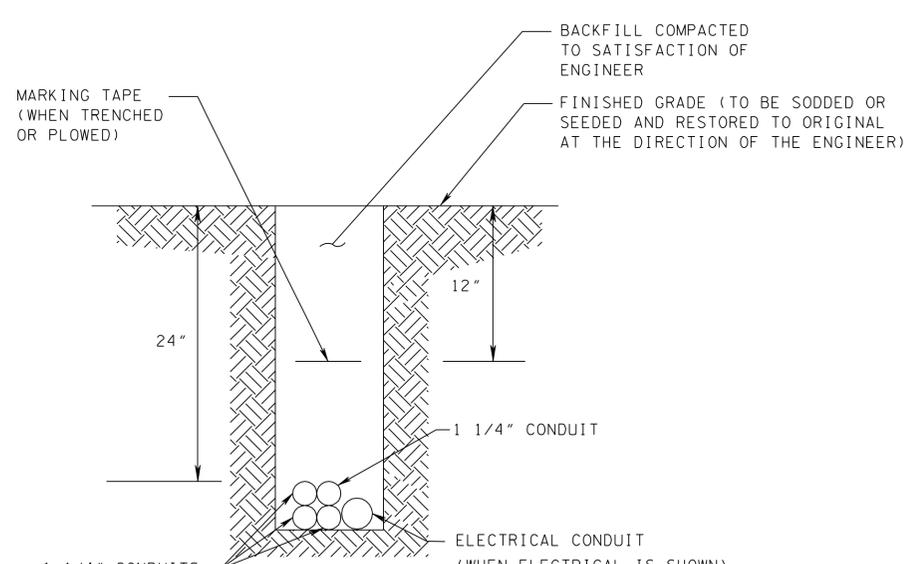
ELECTRICAL CONDUIT
N.T.S.

ONE ELECTRICAL CONDUIT



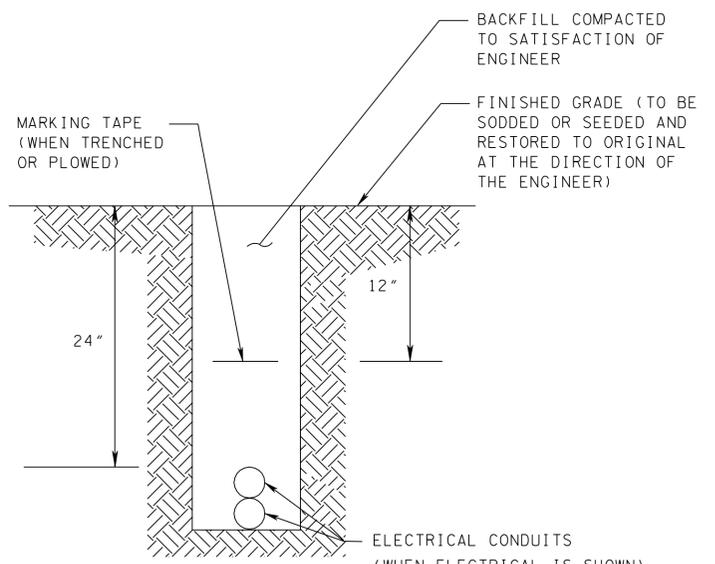
CONDUIT BANK TYPE 3
N.T.S.

THREE 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 4
N.T.S.

FOUR 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



MULTIPLE ELECTRICAL CONDUITS
N.T.S.

TWO ELECTRICAL CONDUITS

CONDUIT COLORS

ALL CONDUIT USED ON THIS PROJECT SHALL CONFORM TO THE COLOR SCHEME AND USE DESCRIBED BELOW:

CONDUIT BANK TYPE 1: GREEN

CONDUIT BANK TYPE 2: GREEN
WHITE

CONDUIT BANK TYPE 3: GREEN
BLUE
WHITE

CONDUIT BANK TYPE 4: ORANGE
BLUE
WHITE
BROWN

ELECTRICAL CONDUIT: GREY (ELECTRICAL WIRE)

NOTES:

1. DETAILS FOR CONDUIT BANKS APPEAR AS TRENCHED INSTALLATION FOR GRAPHICAL PURPOSES ONLY. AS DESCRIBED IN TSP 725, CONDUIT BANKS IN EARTH MAY BE TRENCHED, PLOWED, BORED, OR DRILLED.
2. ELECTRICAL AND COMMUNICATIONS CONDUIT SIZES VARY THROUGHOUT THE PROJECT. REFER TO THE CONDUIT AND CABLE SCHEDULES SHOWN ON EACH ITS LAYOUT SHEET FOR INDIVIDUAL CONDUIT SIZES.
3. WARNING TAPE SHALL BE LABELED "WARNING - ELECTRICAL/FIBER OPTIC CABLE BELOW."
4. IF A DRAINAGE OR UTILITY CONFLICT ARISES THE CONTRACTOR SHALL SUBMIT A PLAN FOR RESOLVING THE CONFLICT TO THE ENGINEER FOR REVIEW AND APPROVAL.

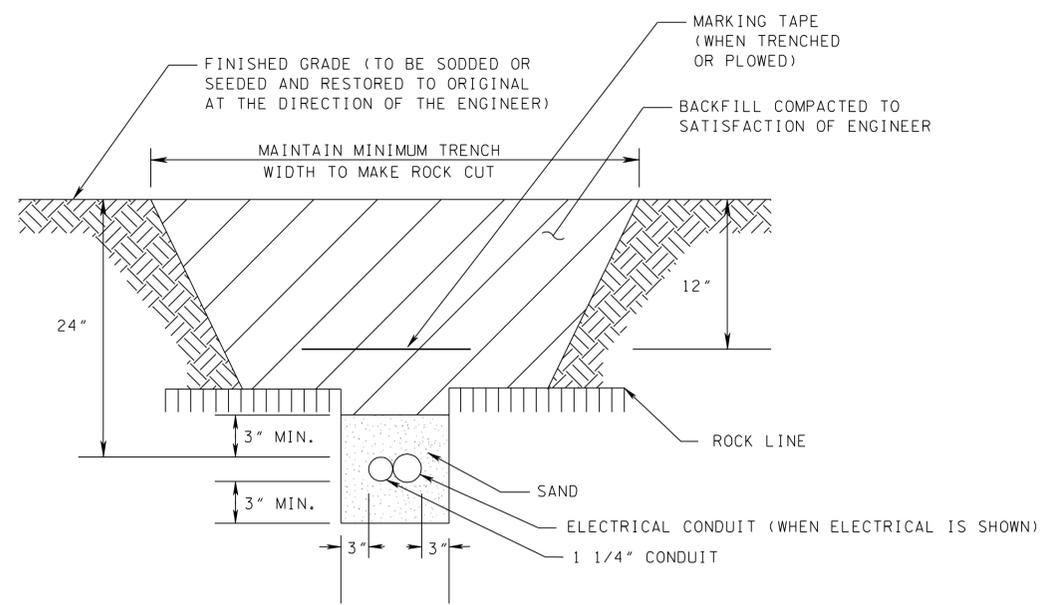
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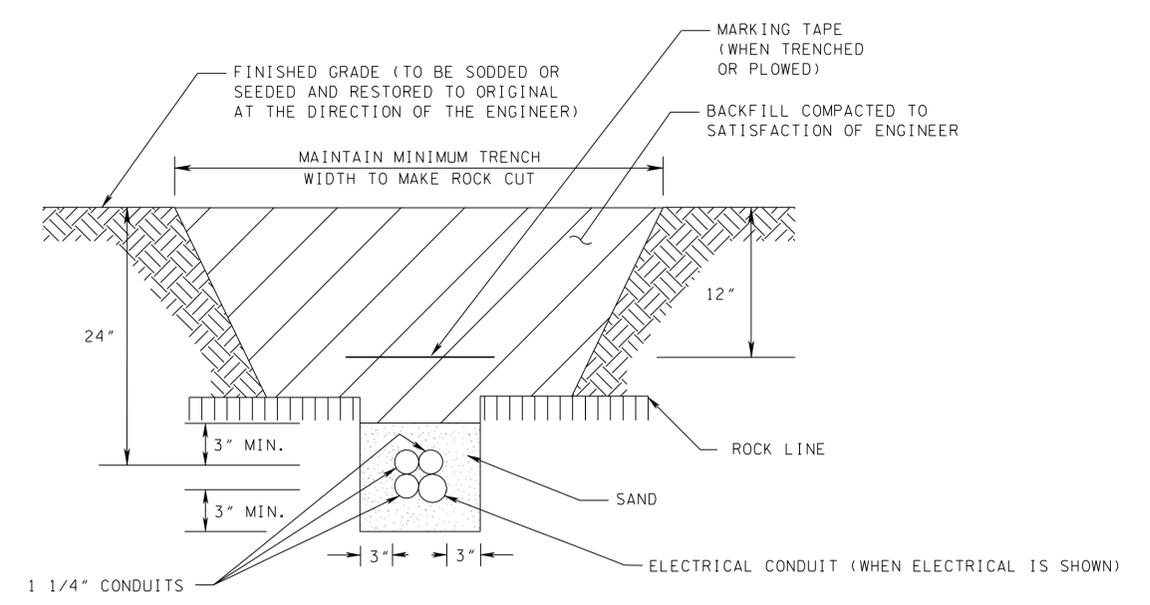
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TYPICAL CONDUIT
AND TRENCHING
DETAILS
FIBER COMMUNICATIONS

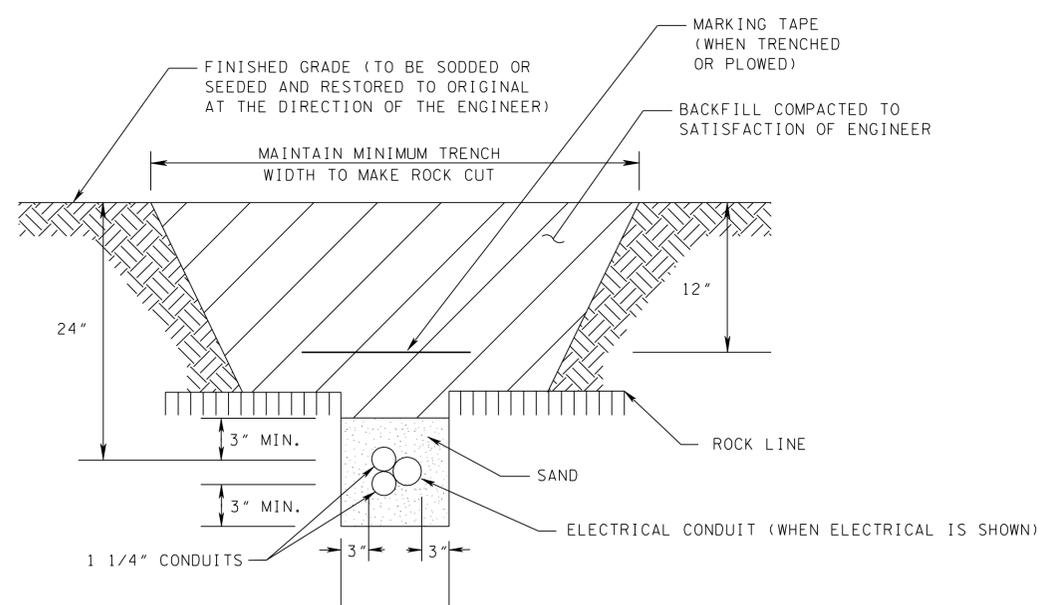
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CONST	2014	IM/NH-24-2(143)	3L



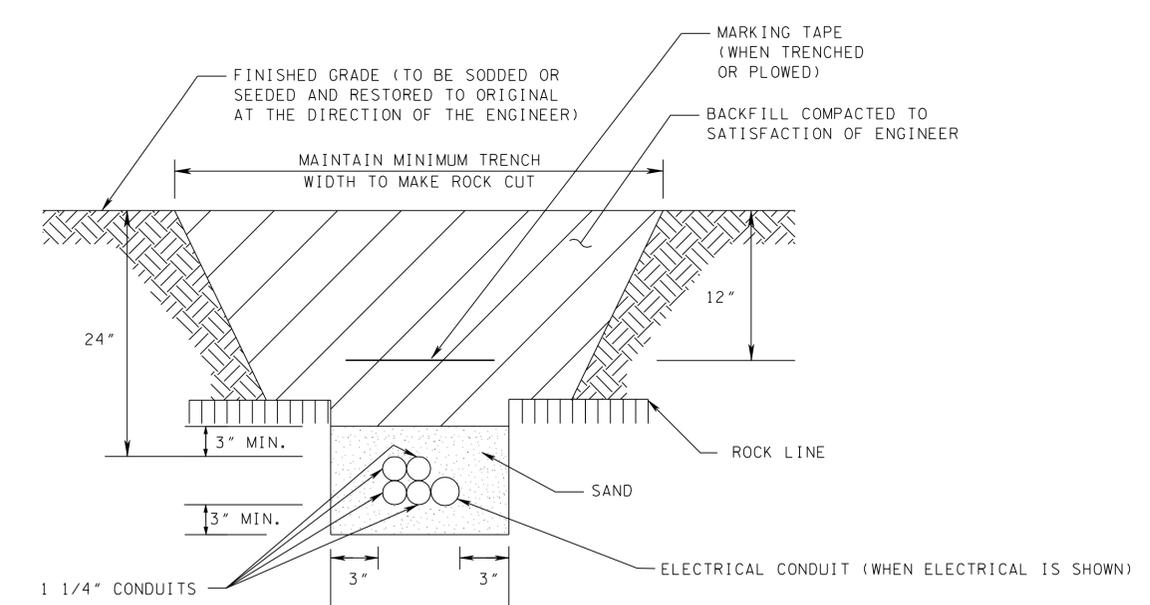
CONDUIT BANK TYPE 1 IN ROCK
N.T.S.
ONE 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 3 IN ROCK
N.T.S.
THREE 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 2 IN ROCK
N.T.S.
TWO 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY



CONDUIT BANK TYPE 4 IN ROCK
N.T.S.
FOUR 1 1/4" COMMUNICATIONS CONDUITS WITH OR WITHOUT ONE ELECTRICAL CONDUIT WHICH IS PAID SEPARATELY

CONDUIT COLORS

ALL CONDUIT USED ON THIS PROJECT SHALL CONFORM TO THE COLOR SCHEME AND USE DESCRIBED BELOW:

CONDUIT BANK TYPE 1: GREEN
CONDUIT BANK TYPE 2: GREEN
WHITE
CONDUIT BANK TYPE 3: GREEN
BLUE
WHITE
CONDUIT BANK TYPE 4: ORANGE
BLUE
WHITE
BROWN
ELECTRICAL CONDUIT: GREY (ELECTRICAL WIRE)

NOTES:

- ROCK LINE WILL VARY. ROCK EXCAVATION TO BE INCLUDED IN CONDUIT BANK.
- WHERE ROCK IS FOUND TRENCH MUST CONTAIN MINIMUM 3" SAND COVER OVER CONDUIT THEN 9" BACK FILL WITH SOIL FREE OF ROCKS OR OTHER FOREIGN MATTER. THE REMAINDER OF THE TRENCH MAY BE BACK-FILLED WITH EXISTING MATERIAL REMOVED FROM THE TRENCH PROVIDED NO STONES ARE GREATER THAN #2 STONE.
- ELECTRICAL AND COMMUNICATIONS CONDUIT SIZES VARY THROUGHOUT THE PROJECT. REFER TO THE CONDUIT AND CABLE SCHEDULES SHOWN ON EACH ITS LAYOUT SHEET FOR INDIVIDUAL CONDUIT SIZES.
- WARNING TAPE SHALL BE LABELED "WARNING - ELECTRICAL/FIBER OPTIC CABLE BELOW."
- IF A DRAINAGE OR UTILITY CONFLICT ARISES THE CONTRACTOR SHALL SUBMIT A PLAN FOR RESOLVING THE CONFLICT TO THE ENGINEER FOR REVIEW AND APPROVAL.

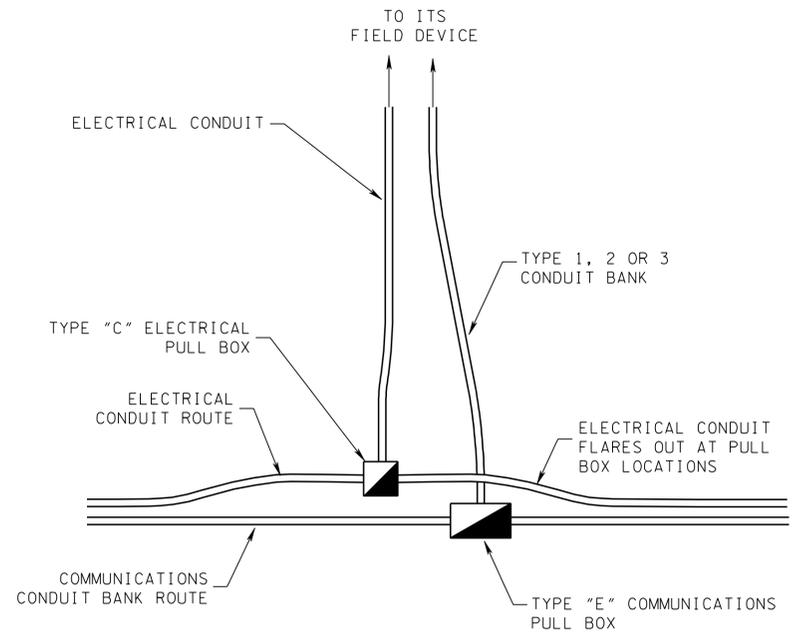
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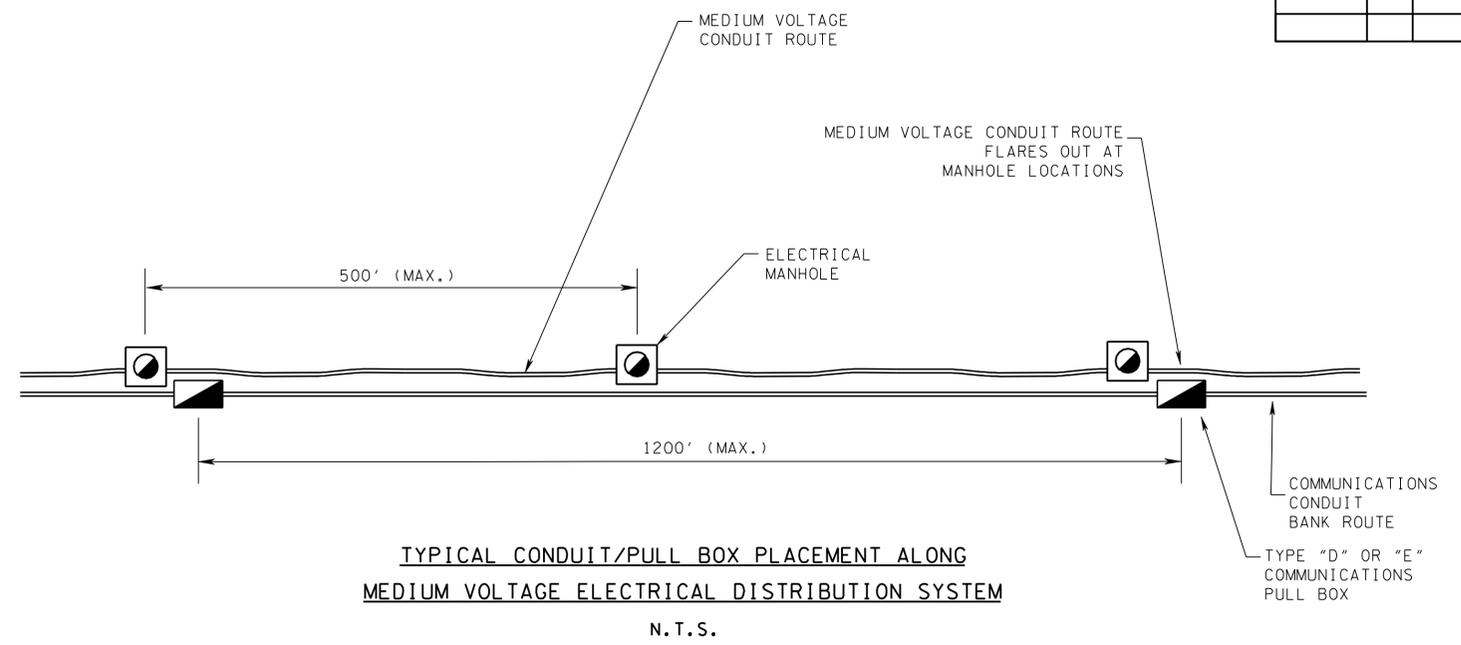
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TYPICAL CONDUIT
AND TRENCHING
DETAILS
FIBER COMMUNICATIONS

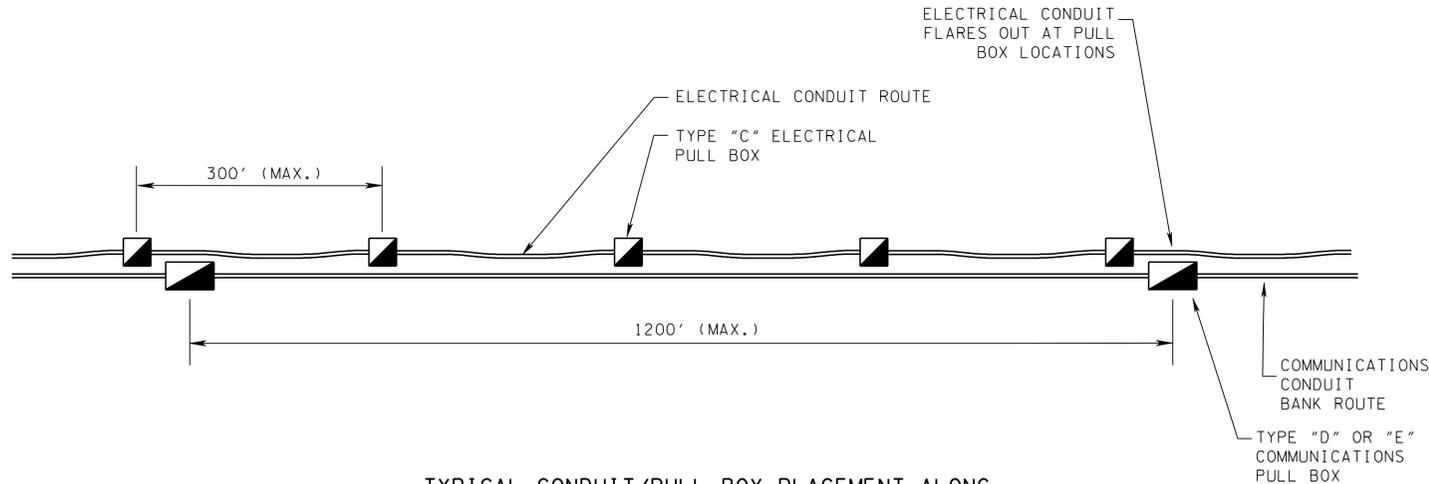
TYPE	YEAR	PROJECT NO.	SHEET NO.
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TYPICAL CONDUIT/PULL BOX PLACEMENT AT ITS FIELD DEVICE
N.T.S.



TYPICAL CONDUIT/PULL BOX PLACEMENT ALONG MEDIUM VOLTAGE ELECTRICAL DISTRIBUTION SYSTEM
N.T.S.



TYPICAL CONDUIT/PULL BOX PLACEMENT ALONG FIBER OPTIC COMMUNICATIONS TRUNKLINE
N.T.S.

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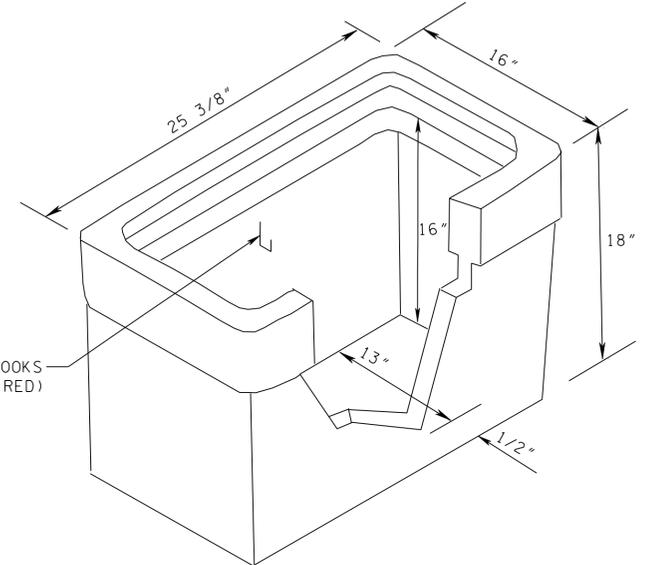
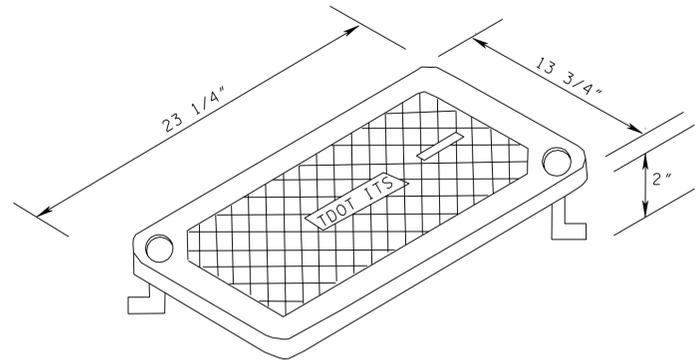
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TYPICAL CONDUIT
AND TRENCHING
DETAILS

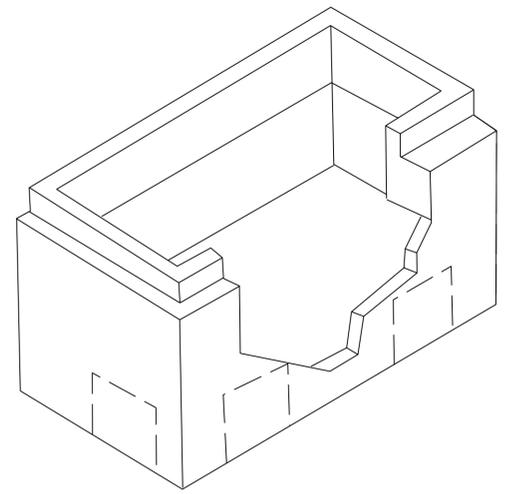
CONDUIT ROUTING NOTES:

1. COMMUNICATIONS AND ELECTRICAL CONDUIT MAY SHARE THE SAME TRENCH. HOWEVER THEY SHALL NEVER SHARE THE SAME PULL BOXES. SEPARATE PULL BOXES ARE REQUIRED FOR EACH CONDUIT SYSTEM.
2. COMMUNICATIONS AND ELECTRICAL CONDUIT ROUTES MUST FLARE OUT AS SHOWN IN DETAILS ABOVE AT LOCATIONS WHERE PULL BOXES ARE TO BE INSTALLED TO PROVIDE SUFFICIENT ROOM FOR PULL BOX CONSTRUCTION.
3. THE SPACING BETWEEN PULL BOXES SHALL BE 300 FT MAXIMUM FOR ELECTRICAL CONDUIT ROUTES AND 1200' MAXIMUM FOR THE COMMUNICATIONS TRUNKLINE (AS DEPICTED ON THE ITS LAYOUT SHEETS).
4. THE SPACING BETWEEN ELECTRICAL MANHOLES SHALL BE 500 FEET MAXIMUM FOR THE 25 KV ELECTRICAL CONDUIT ROUTES (AS DEPICTED ON THE ITS LAYOUT SHEETS).

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3N

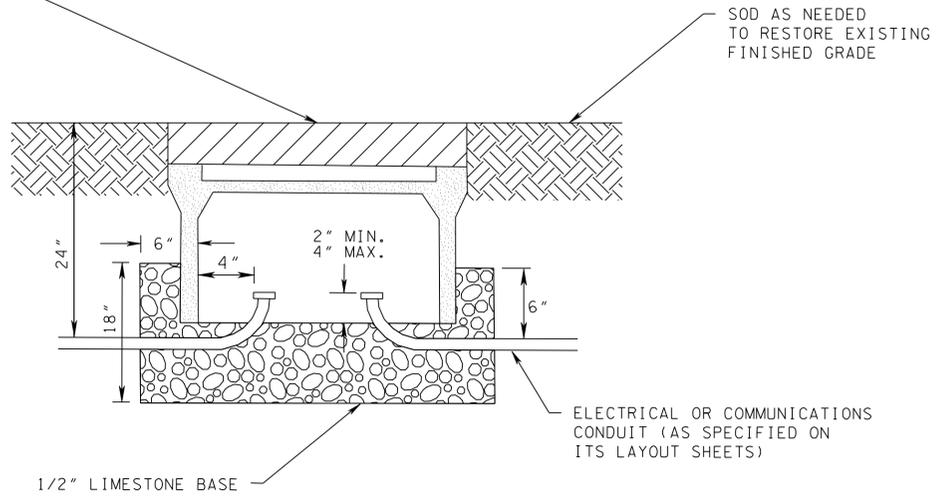


CABLE RACK HOOKS
(4 REQUIRED)



TYPICAL TYPE "C" PULL BOX ASSEMBLY
N.T.S.

PULL BOXES SHALL BE BURIED WITH 6 INCHES OF COVER (MINIMUM)



TYPICAL TYPE "C" PULL BOX INSTALLATION
N.T.S.

NOTES:

1. EACH PULL BOX WALL SHALL HAVE A MINIMUM OF ONE CONDUIT STUB.
2. UNUSED CONDUIT SHALL BE STUBBED OUT AND CAPPED ADEQUATELY TO PRESERVE CONDUIT PORT FOR FUTURE USE.
3. DIMENSIONS ARE NOMINAL AND MAY VARY BASED ON MANUFACTURER, AND ARE DESIGNED FOR HEAVY VEHICULAR TRAFFIC BASED ON 30,000 LBS. SINGLE AXLE LOAD OVER ANY 10" x 20" AREA.
4. PULL BOX LIDS SHALL HAVE A ROUGHENED SURFACE AND BE LABELED (TDOT ITS).
5. TYPE "C" PULL BOXES SHALL BE PRECAST PULL BOXES COMPOSED OF REINFORCED PLASTIC MORTAR OR STRUCTURAL FOAM.
6. CABLE RACK HOOKS ARE REQUIRED ON ALL 4 WALLS (ON CENTER) OF THE PULL BOXES.
7. WHERE BENDS ARE NEEDED TO INSTALL RIGID METALLIC CONDUIT, STANDARD BENDING TOOLS SHALL BE USED.
8. CONDUIT SWEEPS INTO THE PULLBOX SHALL BE EQUAL TO OR GREATER THAN 45 DEGREES.
9. TYPE "C" PULL BOXES SHALL HAVE A MAXIMUM SPACING OF 300 FEET BETWEEN PULL BOXES.
10. THE PULL BOXES SHALL BE BURIED AND A MINIMUM OF 6 INCHES OF COVER SHALL BE PROVIDED.
11. EACH PULL BOX SHALL INCLUDE ONE ELECTRONIC MARKER SYSTEM.

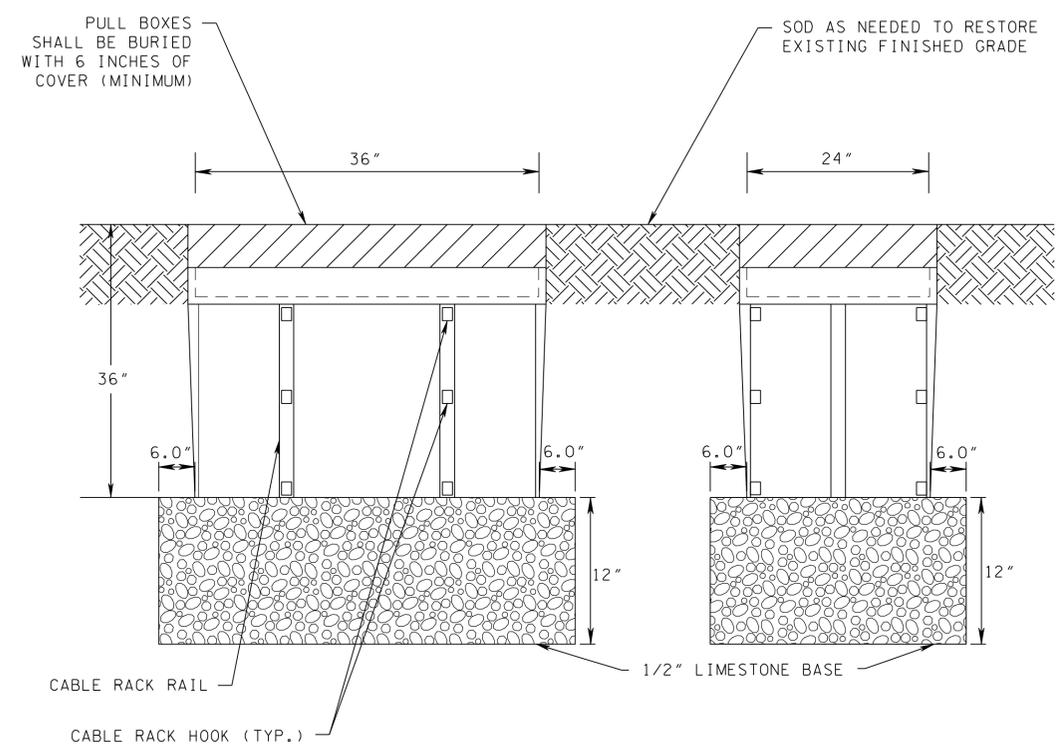
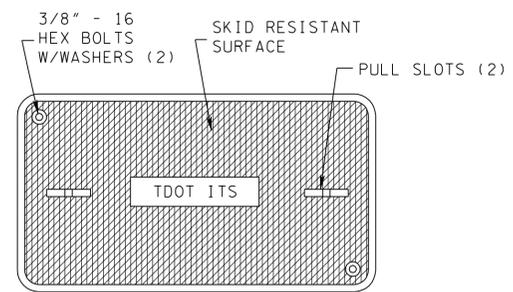
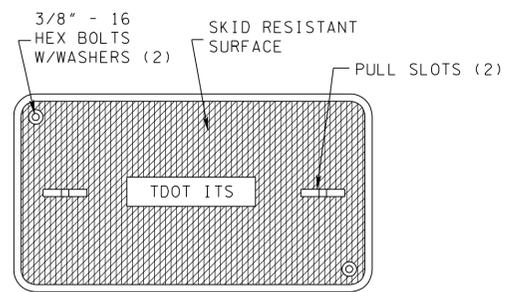
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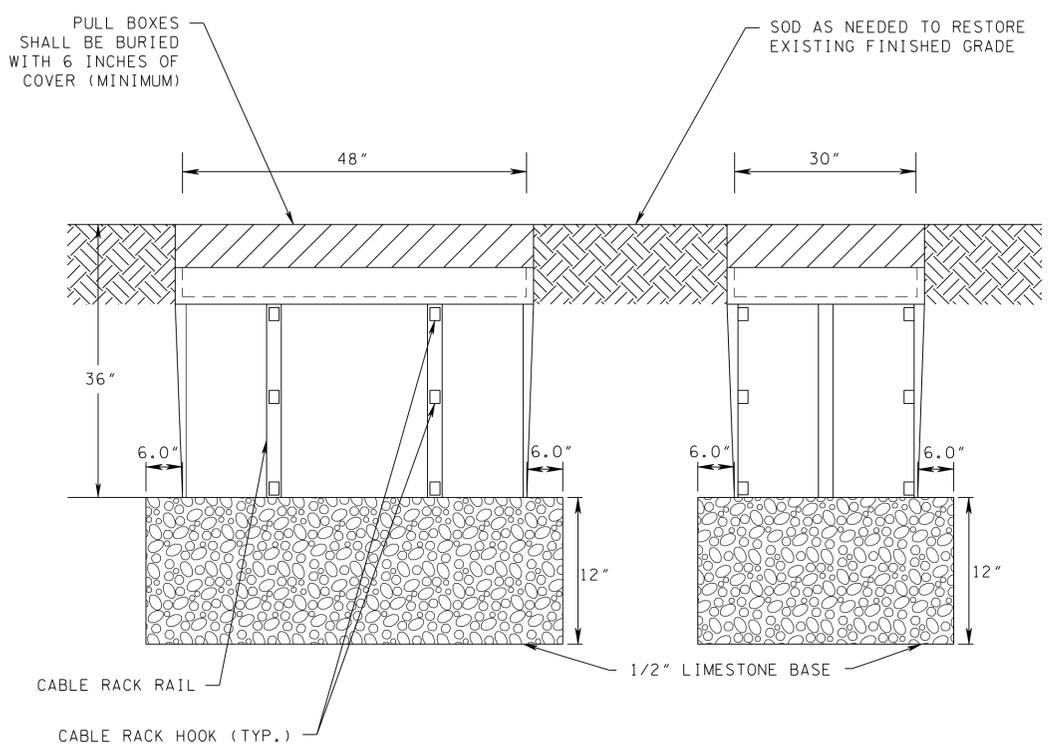
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
PULL BOX
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3P



TYPE "D" PULL BOX ASSEMBLY
N.T.S.



TYPE "E" PULL BOX ASSEMBLY
N.T.S.

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DEPARTMENT OF TRANSPORTATION

TYPICAL
PULL BOX
DETAILS

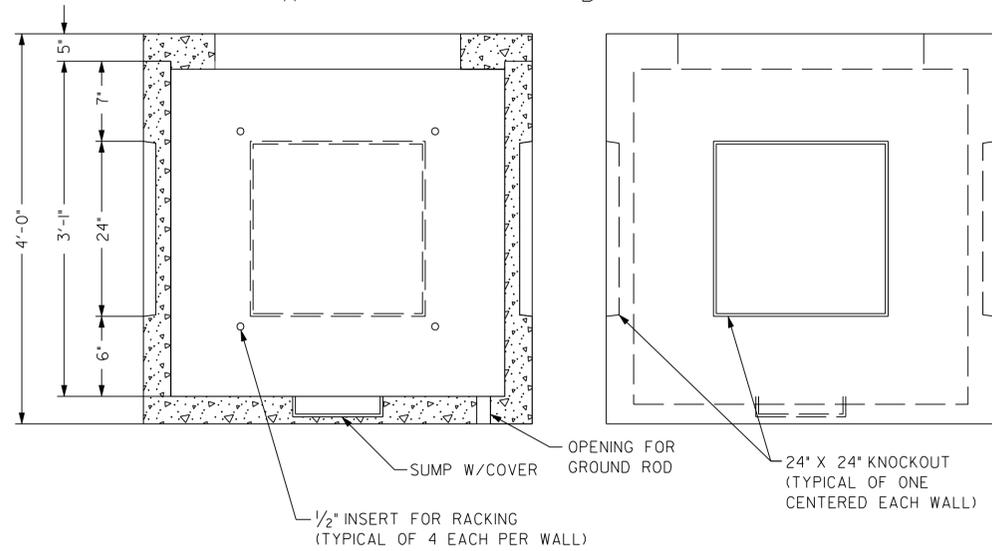
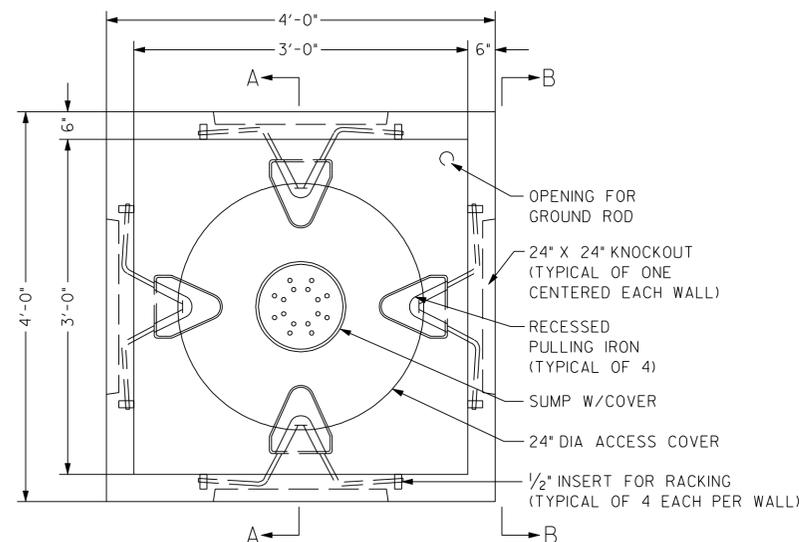
NOTES:

- DIMENSIONS ARE NOMINAL AND MAY VARY BASED ON MANUFACTURER, AND ARE DESIGNED FOR HEAVY VEHICULAR TRAFFIC BASED ON 30,000 LBS. SINGLE AXLE LOAD OVER ANY 10" x 20" AREA.
- PULL BOX LIDS SHALL HAVE A ROUGHENED SURFACE AND BE LABELED (TDOT ITS).
- TYPE "D" AND "E" PULL BOXES MAY BE COMPOSED OF EITHER POLYMER CONCRETE AND FIBER REINFORCED POLYMER, OR REINFORCED PLASTIC MORTAR, OR STRUCTURAL FOAM.
- CABLE RACK HOOKS ARE REQUIRED ON ALL 4 WALLS OF THE PULL BOXES AS SHOWN ABOVE.
- UNUSED CONDUIT SHALL BE STUBBED OUT AND CAPPED ADEQUATELY TO PRESERVE CONDUIT PORT FOR FUTURE USE.
- CONDUITS SHALL ENTER TYPE "D" AND "E" PULL BOXES THROUGH THE SIDEWALLS OF THE PULL BOX. HOLES ALONG THE SIDEWALLS SHALL BE CUT BY THE CONTRACTOR.
- WHERE BENDS ARE NEEDED TO INSTALL RIGID METALLIC CONDUIT, STANDARD BENDING TOOLS SHALL BE USED.
- CONDUIT SWEEPS INTO THE PULLBOX SHALL BE EQUAL TO OR GREATER THAN 45 DEGREES.
- TYPE "D" AND "E" PULL BOXES SHALL HAVE A MAXIMUM SPACING OF 600 FEET FOR ELECTRICAL CONDUIT AND A MAXIMUM SPACING OF 1200 FEET FOR COMMUNICATIONS CONDUIT.
- THE PULL BOXES SHALL BE BURIED AND A MINIMUM OF 6 INCHES OF COVER SHALL BE PROVIDED.
- EACH PULL BOX SHALL INCLUDE ONE ELECTRONIC MARKER SYSTEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	30

NOTES:

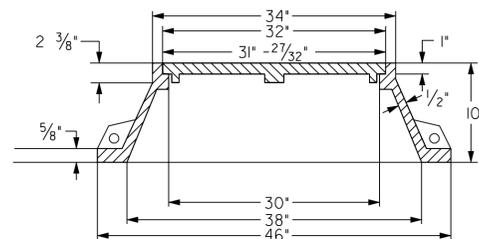
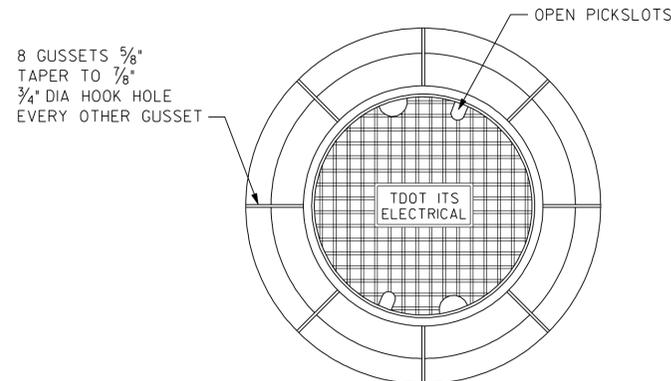
1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH $f'c = 4500$ PSI
2. REINFORCING: ASTM A-615, GRADE 60.
3. JOINT SEALANT: BUTYL RUBBER SS-5-00210.
4. DESIGNED FOR MAXIMUM SOIL COVER OF 5'-0" ABOVE BOX.
5. SUPPORTS AN H2O LOADING AS INDICATED BY AASHTO
6. CONTRACTOR SHALL GROUND AND BOND MANHOLE ASSEMBLY, CABLE RACK, FRAME, AND COVER IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. CONTRACTOR SHALL SPLICE AND BOND THE ALUMINUM EGC TO THE GROUND ROD USING A BIMETALLIC CONNECTOR. CONTRACTOR SHALL PROVIDE A GROUND ROD (0.75 INCHES X 10 FEET) IN EACH MANHOLE.
7. PROVIDE 20 FEET OF COIL IN EACH MANHOLE.
8. SEE STANDARD TECHNICAL PROVISIONS (TSP) 725.



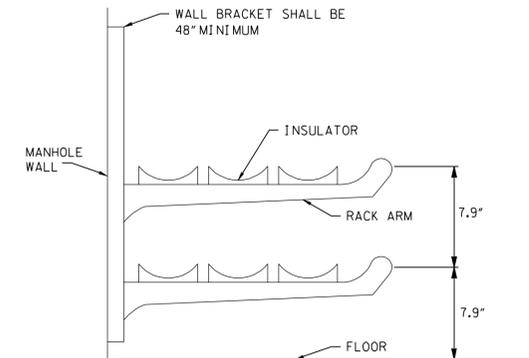
SECTION A-A

SECTION B-B

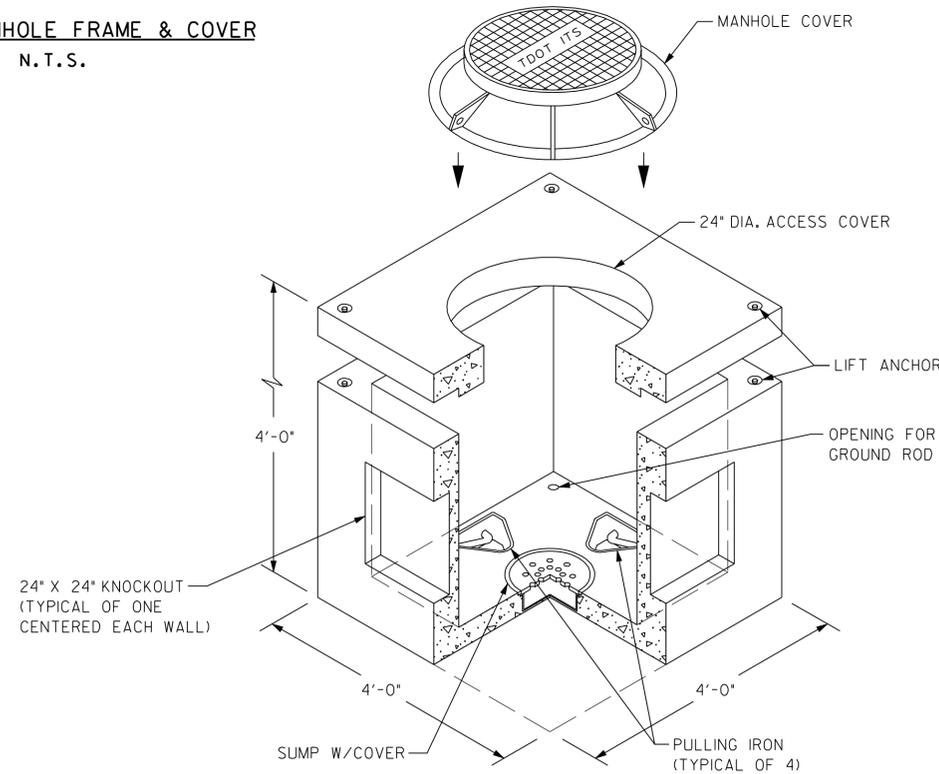
TYPICAL MANHOLE ASSEMBLY
N.T.S.



TYPICAL MANHOLE FRAME & COVER
N.T.S.



CABLE RACK DETAIL
N.T.S.



TYPICAL MANHOLE ASSEMBLY
N.T.S.

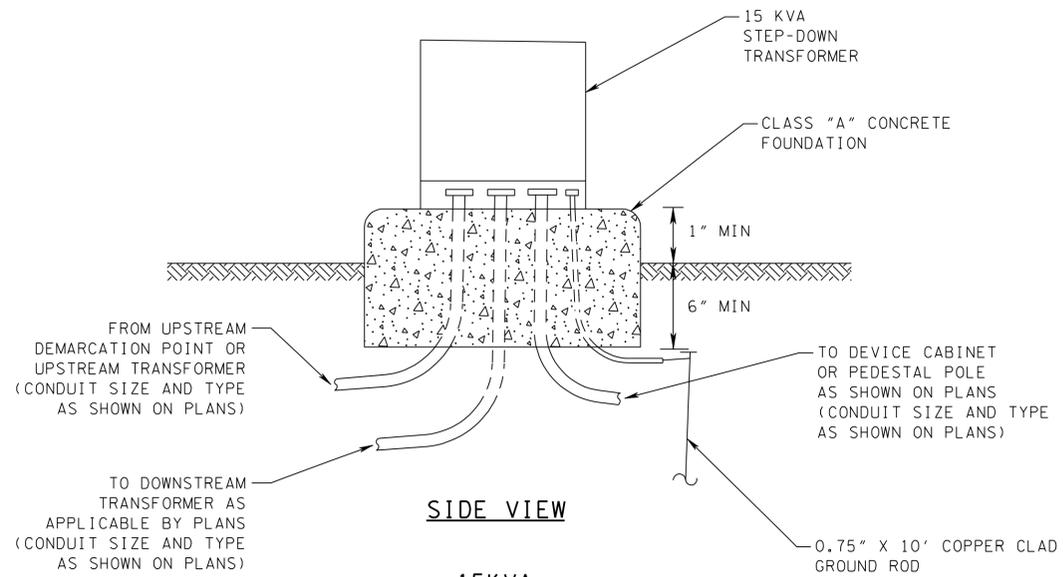
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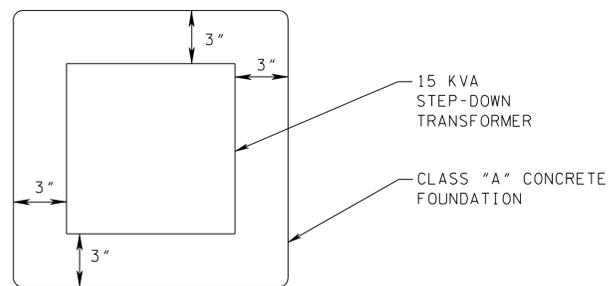
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
ELECTRICAL
MANHOLE
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3R



15KVA
14.4KV X 7.2KV - 120V/240V
DUAL VOLTAGE STEP-DOWN
PAD MOUNTED TRANSFORMER
N.T.S.

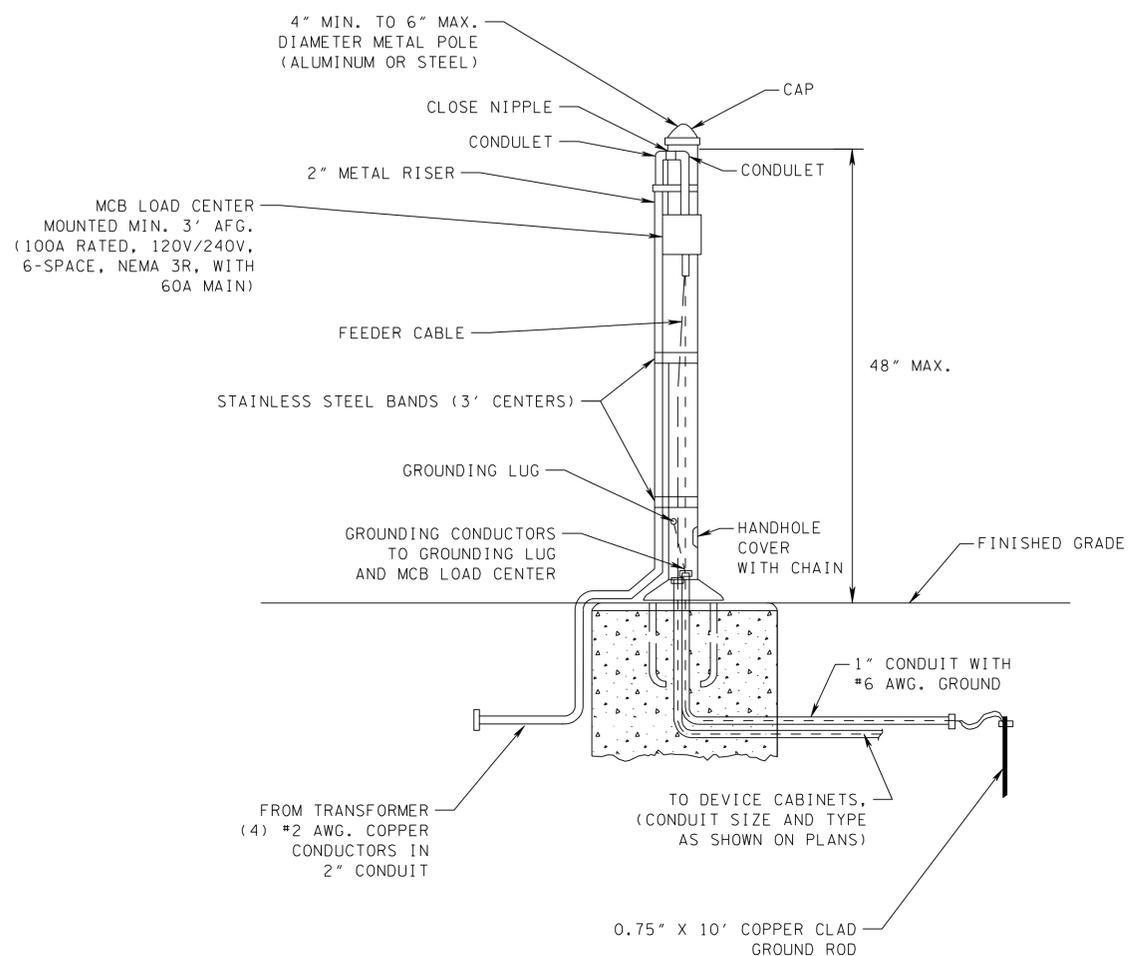


TOP VIEW

15KVA
14.4KV X 7.2KV - 120V/240V
DUAL VOLTAGE STEP-DOWN
PAD MOUNTED TRANSFORMER
N.T.S.

TRANSFORMER NOTES:

- CONTRACTOR SHALL WIRE ALL DUAL VOLTAGE TRANSFORMERS IN PARALLEL, FOR PRIMARY DISTRIBUTION CONNECTION, BY CONNECTING INCOMING AND OUTGOING CABLES TO THE SAME BUSHING TERMINAL.
- CONTRACTOR SHALL GROUND AND BOND TRANSFORMER IN ACCORDANCE WITH THE NEC.
- CONTRACTOR SHALL GENERATE NEUTRAL ON SECONDARY SIDE OF TRANSFORMER.



PEDESTAL MOUNTED MCB LOAD CENTER
N.T.S.

PEDESTAL POLE NOTES:

- FOUNDATION SHALL BE CLASS A3 CONCRETE, 18" DIAMETER BY 18" DEPTH.
- ANCHOR BOLTS AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
- GROUNDING BUSHINGS SHALL BE INSTALLED ON EACH END OF METAL CONDUITS.
- EMPTY CONDUITS SHALL BE PLUGGED TO PREVENT MOISTURE AND RODENT ENTRY.
- OPEN ENDS OF CONDUITS WITH CONDUCTORS INSTALLED SHALL BE SEALED WITH AN APPROVED SOFT, PLIABLE, AND EASILY REMOVABLE WATERPROOF SEALANT. THE SEALANT SHALL NOT HAVE A DELETERIOUS EFFECT ON CABLE COVERINGS.
- BELL ENDS SHALL BE INSTALLED ON EACH END OF PVC CONDUITS.
- STAINLESS STEEL BANDS REQUIRED FOR METER BASE AND SAFETY SWITCH/BREAKER BOX.

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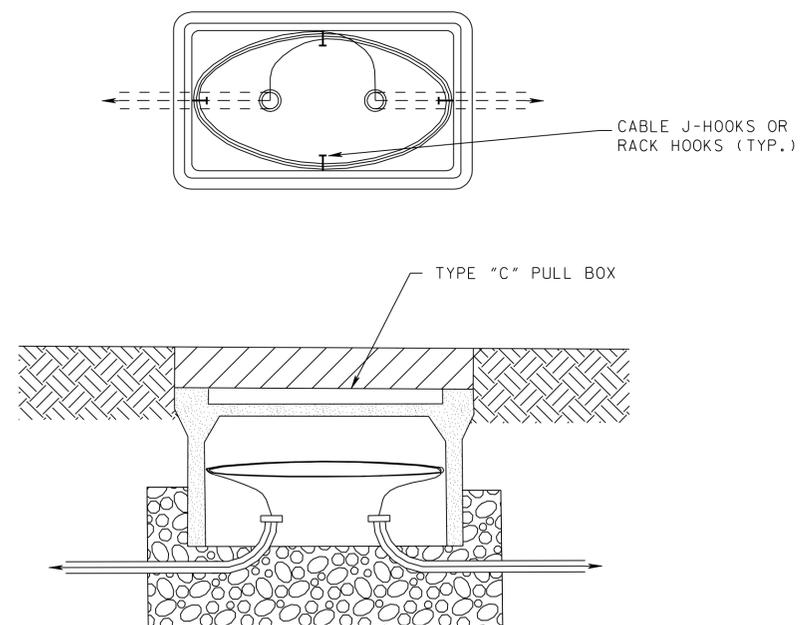
STATE OF TENNESSEE
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TYPICAL
TRANSFORMER
DETAILS

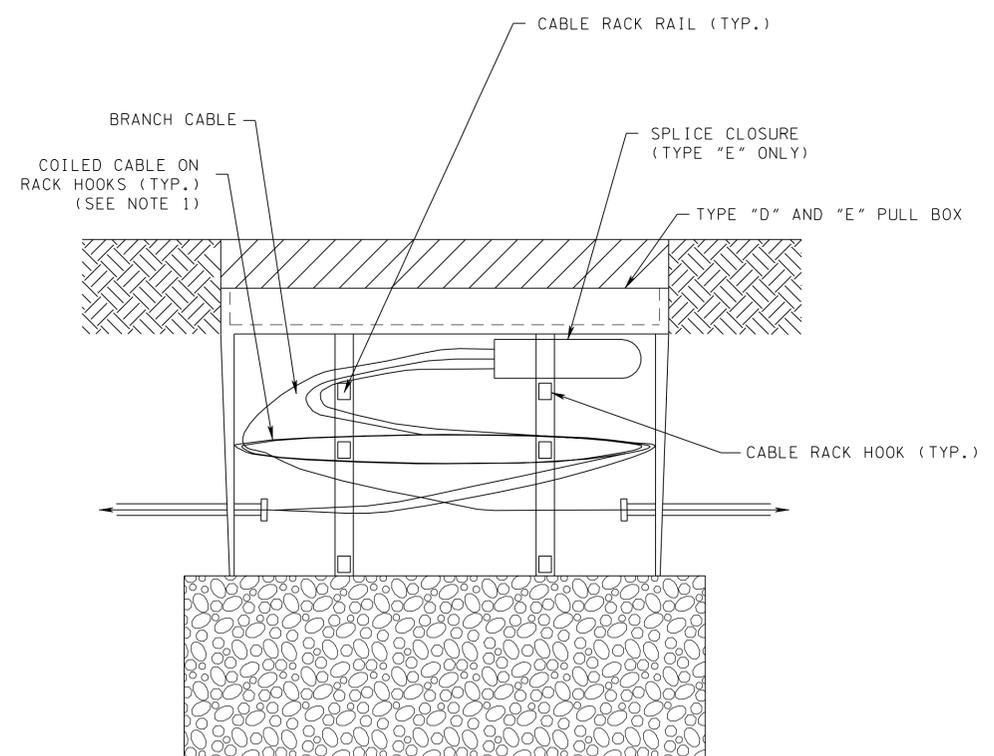
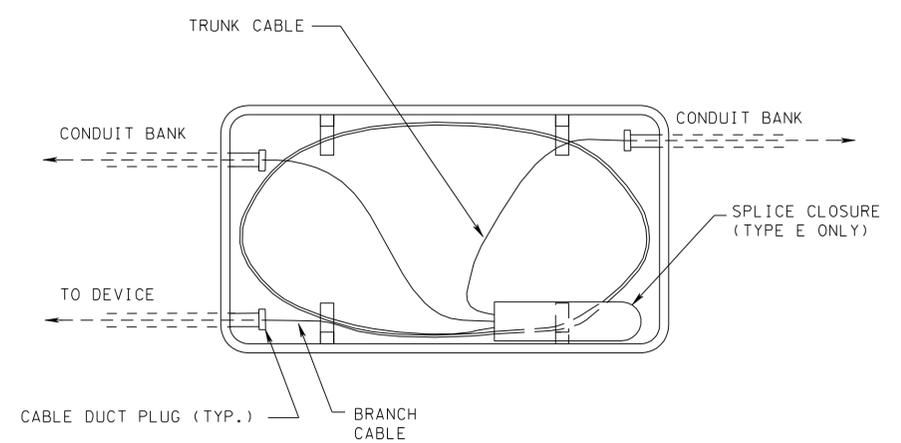
CABLE TYPE	ELECTRICAL MANHOLE	TYPE "C" PULL BOX	TYPE "D" PULL BOX	TYPE "E" PULL BOX	PAD-MOUNTED CABINET BASE
FIBER OPTIC CABLES (TRUNK)	- -	- -	25	200	25
FIBER OPTIC CABLES (BRANCH)	- -	- -	25	100	25
RDS CABLE	- -	20	20	20	- -
CAT 6 CABLE	- -	25	- -	- -	- -
ELECTRICAL SERVICE CONDUCTORS	10	10	- -	- -	- -
DMS COMM CABLE	- -	10	- -	- -	10
DMS PWR CABLE	- -	10	- -	- -	10

NOTE: SEE TSP 725 FOR ADDITIONAL INFORMATION

TYPICAL CABLE COIL INSTALLATION GUIDE
(FEET OF COIL LENGTH PER ENTERING CABLE)



CABLE MANAGEMENT IN TYPE "C" PULL BOX
N.T.S.



CABLE MANAGEMENT IN TYPE "D" AND "E" PULL BOX
N.T.S.

- NOTES:
- FIBER TRUNK AND BRANCH CABLES SHALL BE COILED TOGETHER. OTHER DEVICE CABLES SHALL BE COILED SEPARATELY AND SUPPORTED ON J-HOOKS OR RACK HOOKS.
 - CONDUIT MAY ENTER THE LONG SIDE OF THE PULL BOX WHEN FIELD CONDITIONS WARRANT.

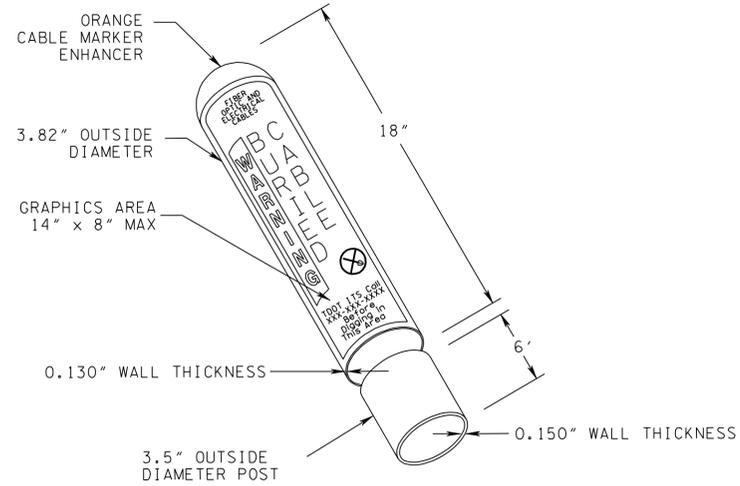
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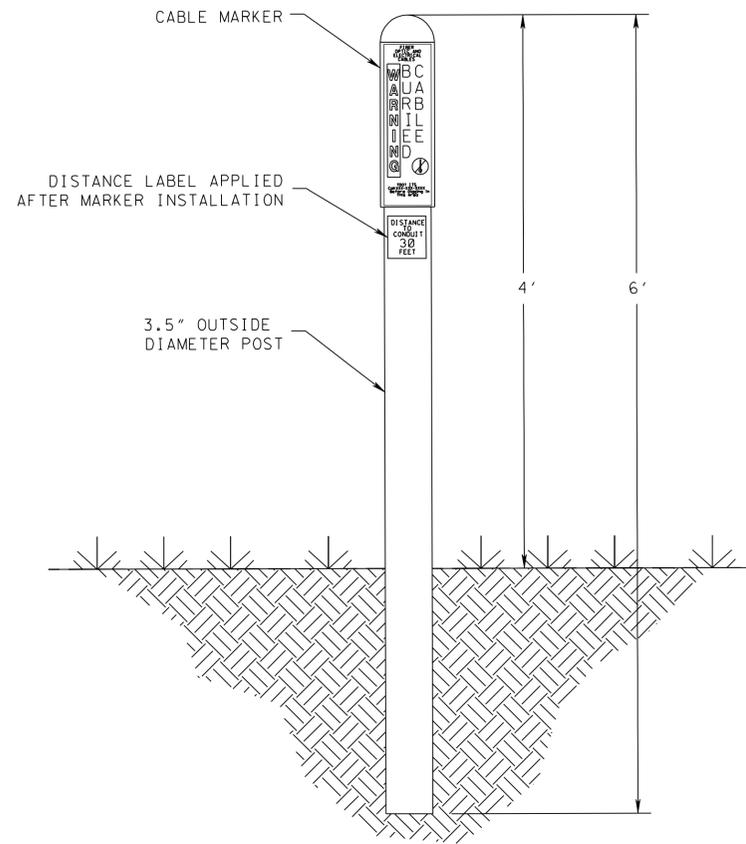
STATE OF TENNESSEE
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TYPICAL CABLE
MANAGEMENT
DETAILS

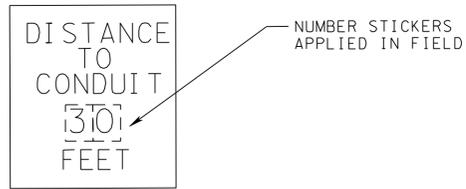
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3T



DETAIL VIEW OF CABLE MARKER
N.T.S.



TYPICAL INSTALLATION OF CABLE MARKER
N.T.S.



PREPRINTED DISTANCE LABEL
N.T.S.

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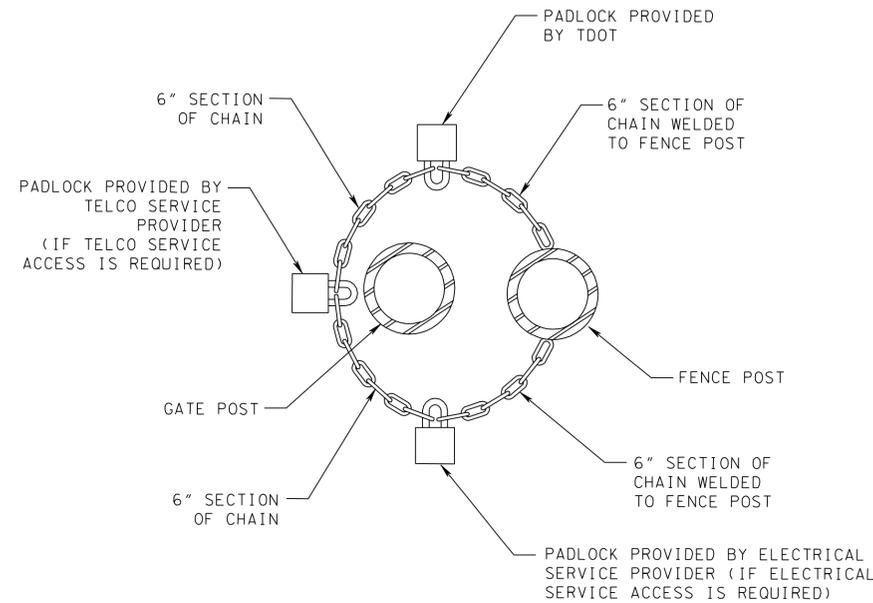
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
CABLE MARKER
DETAILS

NOTES:

1. THE CONTRACTOR SHALL REQUEST FROM TDOT THE APPROPRIATE TELEPHONE NUMBER TO INCLUDE ON THE CABLE MARKER LABEL PRIOR TO FABRICATION.
2. ALL CABLE MARKER LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE PROPOSED SCHEDULE FOR INSTALLING THE CABLE MARKERS SHALL ALSO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. AFTER THE CABLE MARKERS ARE INSTALLED, THE DISTANCE TO CONDUIT LABELS SHALL BE APPLIED.
4. INSTALL CABLE MARKERS AT THE FOLLOWING LOCATIONS:
 - A. WITHIN 30 FEET LATERALLY EVEN WITH EACH PULL BOX, OR ADJACENT PULL BOXES, ON CONDUIT RUNS PARALLEL TO THE ROADWAY. IF DISTANCE BETWEEN PULL BOXES IS GREATER THAN 650 FEET, ONE ADDITIONAL CABLE MARKER SHALL BE PLACED AT THE MIDPOINT BETWEEN THE ADJACENT PULL BOXES, WITHIN 30 FEET LATERALLY OF THE CONDUIT ROUTE. ADDITIONAL CABLE MARKERS SHALL BE PLACED SUCH THAT NO DISTANCE BETWEEN CABLE MARKERS SHALL BE GREATER THAN 650 FEET.
 - B. DIRECTLY BESIDE ANY PULL BOX THAT IS ON THE INTERIOR OF AN INTERCHANGE.
 - C. AT EACH END OF ANY BORE UNDER A ROADWAY, DIRECTLY BESIDE THE PULL BOXES.
 - D. ANY ADDITIONAL LOCATIONS DIRECTED BY THE ENGINEER.

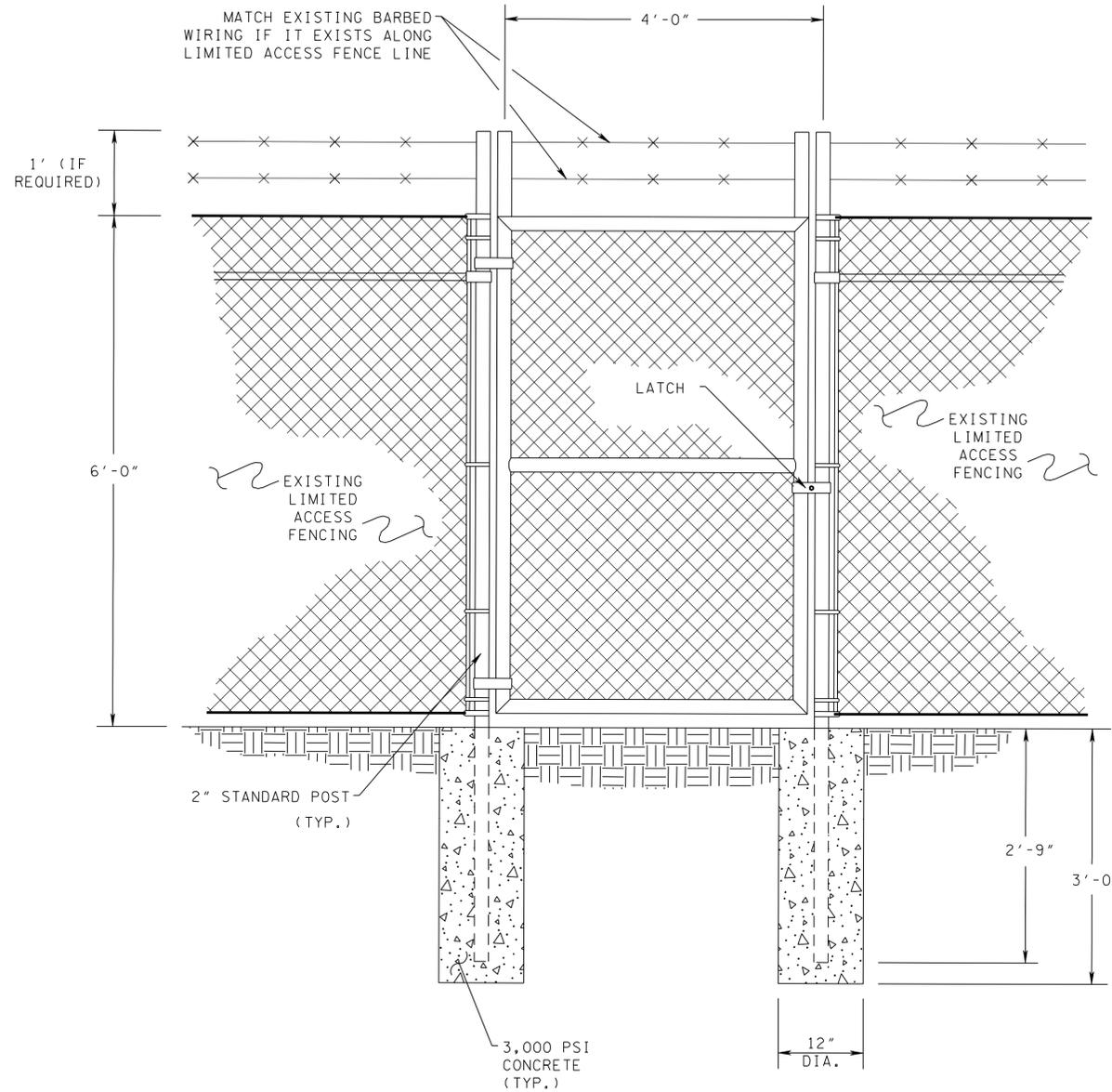
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	3U



CHAIN AND POST DETAIL
N.T.S.

NOTES:

1. FENCE WALK GATE SHALL BE A TUBULAR STEEL FRAME 6 FEET HIGH AND 4 FEET LONG WITH CHAIN LINK FILLER WITHIN THE GATE FRAME.
2. THE WALK GATE SHALL CONSIST OF MATERIALS USED IN TDOT STANDARD RIGHT-OF-WAY CHAIN LINK FENCE WITH THE GATE POSTS BEING THE STANDARD 2" POST. SEE TDOT STANDARD DRAWINGS, S-F-10 AND S-F-10B.
3. THE WALK GATES SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE ITS LAYOUT SHEETS OR AS DIRECTED BY THE ENGINEER. THE GATE SHALL BE INSTALLED BETWEEN AND FASTENED TO PROPERLY SPACED GATE POSTS, WHICH SHALL BE SET IN THE GROUND 2'-9". THE POSTS AND BRACES SHALL BE SET IN 3,000 PSI 12" DIAMETER CONCRETE BASES 3'-0" IN DEPTH. SEE TDOT STANDARD DRAWING S-F-10B FOR FURTHER REQUIREMENTS.
4. THE EXISTING LIMITED ACCESS/RIGHT-OF-WAY FENCING THROUGHOUT THE PROJECT LIMITS MAY VARY IN TYPE (i.e. SOME MAY BE STOCK FENCE WHEREAS SOME MAY BE CHAIN LINK). FURTHERMORE, SOME LOCATIONS MAY INCLUDE BARBED WIRING. NONETHELESS, ALL CHAIN LINK FENCE WALK GATES SHALL BE COMPRISED OF CHAIN LINK FILLER WITHIN THE GATE FRAME. HOWEVER, IF THE EXISTING FENCE LINE INCLUDES BARBED WIRING, THE FENCE GATE SHALL INCLUDE BARBED WIRING TO MATCH THAT ON THE EXISTING FENCE LINE.
5. THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEK'S NOTICE PRIOR TO CUTTING FENCES.
6. CHAIN SHALL BE 500 LB TENSILE STRENGTH GALVANIZED STEEL.



CHAIN LINK FENCE WALK GATE
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TYPICAL
CHAIN LINK FENCE
WALK GATE
DETAIL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	4

DMS SUMMARY TABLE

SMARTWAY SYSTEM LABEL	PLAN SHEET LABEL	PLAN SHEET NUMBER	SPAN LENGTH (FT)	SIGNING PLAN SHEET NUMBER	NOTES
	D-FDMS-024E-109.1	9	58	35B	
	D-FDMS-024W-120.2	12	87	35C	
	D-FDMS-024E-125.6	13	58	35D	
	D-FDMS-024E-136.6	22	---	35F	MULTI-COLOR LEFT
	D-FDMS-024E-136.6	22	---	35F	MULTI-COLOR RIGHT
	D-FDMS-024E-141.8	31	57	35G	
	D-FDMS-024W-156.9	32	57	35H	

NOTES: 1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE SPAN LENGTH DISTANCE.

CCTV SUMMARY TABLE

SMARTWAY SYSTEM LABEL	PLAN SHEET LABEL	PLAN SHEET NUMBER	STANDARD CCTV CAMERA WITH PTZ	INFRARED CAMERA WITH PTZ	STATIC CAMERA WITHOUT PTZ	MAST ARM ORIENTATION (DEGREES)	POLE HEIGHT (FT)	NOTES
	D-CCTV-024W-111.2	10	1			90	50	
	D-CCTV-024W-113.8	11	1			90	50	
	D-CCTV-024W-127.5	14	1			90	50	
	D-INFR-024E-132.4	15		1	1	90	50	INSTALL STATIC CAMERA 15 FT ABOVE CABINET
	D-CCTV-024E-132.9	17	1			90	50	
	D-INFR-024W-133.5	18		1	1	90	50	INSTALL STATIC CAMERA 15 FT ABOVE CABINET
	D-CCTV-024E-134.3	19	1			90	50	
	D-CCTV-024E-135.7	20	1			90	50	
	D-CCTV-024E-136.4	22	1			90	50	
	D-INFR-024E-138.0	26		1	1	90	50	INSTALL STATIC CAMERA 15 FT ABOVE CABINET
	D-INFR-024E-139.2	29		1	1	90	50	INSTALL STATIC CAMERA 15 FT ABOVE CABINET
	D-CCTV-024E-140.5	30	1			90	80	

NOTES: 1. THE MAST ARM ORIENTATION IS DEFINED AS: DEGREES MEASURED CLOCKWISE FROM UPSTREAM OF THE INTERSTATE CONTAINED IN THE DEVICE LABEL (UPSTREAM = 0 DEGREES).

RDS SUMMARY TABLE

SMARTWAY SYSTEM LABEL	PLAN SHEET LABEL	PLAN SHEET NUMBER	POLE HEIGHT (FT)	MOUNTING HEIGHT ABOVE ROADWAY (FT)	TRANSMITTER	NOTES
	D-RDS4-024W-132.7	16	25	20		
	D-RDS4-024E-136.4	22	25	20		
	D-RDS4-024E-136.6	22	EXISTING	20		ATTACH TO SIGNAL SUPPORT
	D-RDS4-024E-136.6	22	EXISTING	20		ATTACH TO SIGNAL SUPPORT
	D-RDS4-024E-138.2	26	EXISTING	20		ATTACH TO CANTILEVER SIGN
	D-RDS4-024E-139.4	29	EXISTING	20		ATTACH TO CANTILEVER SIGN

NOTES: 1. CONTRACTOR TO VERIFY THE ELEVATION DIFFERENCE BETWEEN THE OUTSIDE EDGE OF THE TRAVEL LANE AND THE POLE BASE FOR DETECTOR MOUNTING HEIGHT. FIELD ADJUSTMENT MAY BE REQUIRED BY CONTRACTOR.

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DEPARTMENT OF TRANSPORTATION

DMS/CCTV/RDS
SUMMARY
TABLES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	4A

FIELD CABINET SUMMARY TABLE

CABINET PLAN SHEET LABEL	PLAN SHEET	SERVED DEVICE LABELS	CABINET TYPE					NETWORK SWITCH (TYPE A)	ETHERNET BRIDGE	POTS MODEM	TRAFFIC SIGNAL CONTROLLER	FLASHING BEACON CONTROLLER	PROGRAMMABLE LOGIC CONTROLLER	DMS CONTROLLER	MULTI-COLOR DMS CONTROLLER	NOTES
			CC#	A	B	C	S									
C-FDMS-024E-109.1	9	D-FDMS-024E-109.1	5			1				1						
C-CCTV-024W-111.2	10	D-CCTV-024W-111.2	1		1				1							
C-CCTV-024W-113.8	11	D-CCTV-024W-113.8	1		1				1							
C-FDMS-024W-120.2	12	D-FDMS-024W-120.2	5			1				1				1		
C-FDMS-024E-125.6	13	D-FDMS-024E-125.6	5			1				1				1		
C-CCTV-024W-127.5	14	D-CCTV-024W-127.5	1		1				1							
C-INFR-024E-132.4	15	D-INFR-024E-132.4	3		1			1								INFRARED AND STATIC CAMERAS
C-FDBK-024W-132.7	16	D-FDBK-024W-132.7 D-RDS4-024W-132.7	6		1			1			2	1				SPEED FEEDBACK SIGN
C-RDS4-024W-132.7	16	D-RDS4-024W-132.7		1												HARDWIRE CONNECTION TO C-FDBK-024W-132.7
C-CCTV-024E-132.9	17	D-CCTV-024E-132.9	2		1			1								
C-INFR-024W-133.5	18	D-INFR-024W-133.5	3		1			1								INFRARED AND STATIC CAMERAS
NETWORK CABINET 024W-133.6	18	---				1		1	1							NETWORK CABINET
C-CCTV-024E-134.3	19	D-CCTV-024E-134.3	1		1				1							
C-CCTV-024E-135.8	20	D-CCTV-024E-135.8	1		1				1							
C-RDS4-024E-136.4	22	D-RDS4-024E-136.4		1												HARDWIRE CONNECTION TO C-SGNL-024E-136.6
NETWORK CABINET 024E-136.4	22	---				1		1	1							NETWORK CABINET
C-CCTV-024E-136.4	22	D-CCTV-024E-136.4	2		1			1								
C-FDMS-024E-136.6	22	D-FDMS-024E-136.6 D-FDMS-024E-136.6	8					1						2		MULTI-COLOR LEFT AND MULTI-COLOR RIGHT
C-SGNL-024E-136.6	22	D-SGNL-024E-136.6 D-RDS4-024E-136.4 D-RDS4-024E-136.6 D-RDS4-024E-136.6	7							1						
C-INFR-024E-138.0	26	D-INFR-024E-138.0 D-RDS4-024E-138.2	4		1			1				1				INFRARED AND STATIC CAMERAS
C-RDS4-024E-138.2	26	D-RDS4-024E-138.2		1												HARDWIRE CONNECTION TO C-INFR-024E-138.0
C-INFR-024E-139.2	29	D-INFR-024E-139.2 D-RDS4-024E-139.4	4		1			1				1				INFRARED AND STATIC CAMERAS
C-RDS4-024E-139.4	29	D-RDS4-024E-139.4		1												HARDWIRE CONNECTION TO C-INFR-024E-139.2
C-CCTV-024E-140.5	30	D-CCTV-024E-140.5	1		1				1							
C-FDMS-024E-141.8	31	D-FDMS-024E-141.8	5			1								1		
C-FDMS-024W-156.9	32	D-FDMS-024W-156.9	5			1								1		

- NOTES:
1. CABINET TYPE "S" IS A STANDARD PAD-MOUNTED TRAFFIC SIGNAL CABINET (TDOT ITEM NUMBER 730-15.32 (CABINET EIGHT PHASE BASE MOUNTED)).
 2. CC# = CABINET CONFIGURATION NUMBER. SEE SHEET 7 AND 7A.

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DEPARTMENT OF TRANSPORTATION

FIELD CABINET
SUMMARY
TABLE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	4B

GUARDRAIL SUMMARY TABLE

PLAN SHEET LABEL	PLAN SHEET NUMBER	DESCRIPTION	NOTES	SINGLE GUARDRAIL TYPE 2 705-02.02 (L.F.)	TERMINAL (TYPE 13) 705-04.03 (EACH)	TERMINAL (TYPE 38) NCHRP 350-TL3 705-04.07 (EACH)	GUARDRAIL REMOVED 706-01 (L.F.)
D-FDMS-024E-109.1	9	EB RT SHOULDER	REMOVE EXISTING END TERMINAL, EXTEND EXISTING GUARDRAIL, INSTALL NEW END TERMINAL	175		1	50
		EB MEDIAN	REMOVE EXISTING END TERMINAL, EXTEND EXISTING GUARDRAIL, INSTALL NEW END TERMINAL	75		1	50
D-FDMS-024W-120.2	12	WB RT SHOULDER	INSTALL NEW GUARDRAIL AND NEW END TERMINALS	125	1	1	
		WB MEDIAN	UTILIZE EXISTING GUARDRAIL				
D-FDMS-024E-125.6	13	EB RT SHOULDER	INSTALL NEW GUARDRAIL AND NEW END TERMINALS	125	1	1	
		EB MEDIAN	INSTALL NEW GUARDRAIL AND NEW END TERMINALS	175	1	1	
D-CCTV-024E-132.4	15	EB RT SHOULDER	REMOVE EXISTING END TERMINAL, EXTEND EXISTING GUARDRAIL, INSTALL NEW END TERMINAL	175		1	50
D-FDBK-024W-132.8	16	WB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
		WB MEDIAN	CONCRETE BARRIER MEDIAN EQUIPPED FOR OVERHEAD SIGN SUPPORT				
D-CCTV-024E-132.9	17	EB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
D-CCTV-024W-133.5	18	WB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
D-CCTV-024E-136.4	22	EB MEDIAN	NO GUARDRAIL NEEDED				
D-CCTV-024E-138.0	26	EB MEDIAN	NO GUARDRAIL NEEDED				
D-CCTV-024E-139.2	29	EB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
D-FDMS-024E-141.8	31	EB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
		EB MEDIAN	INSTALL NEW GUARDRAIL AND NEW END TERMINALS	175	1	1	
D-FDMS-024W-156.9	32	WB RT SHOULDER	UTILIZE EXISTING GUARDRAIL				
		WB MEDIAN	INSTALL NEW GUARDRAIL AND NEW END TERMINALS	175	1	1	
TOTAL				1200	5	8	150

NOTES: 1. ALL GUARDRAIL INSTALLATIONS SHALL BE PLACED AND INSTALLED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS.

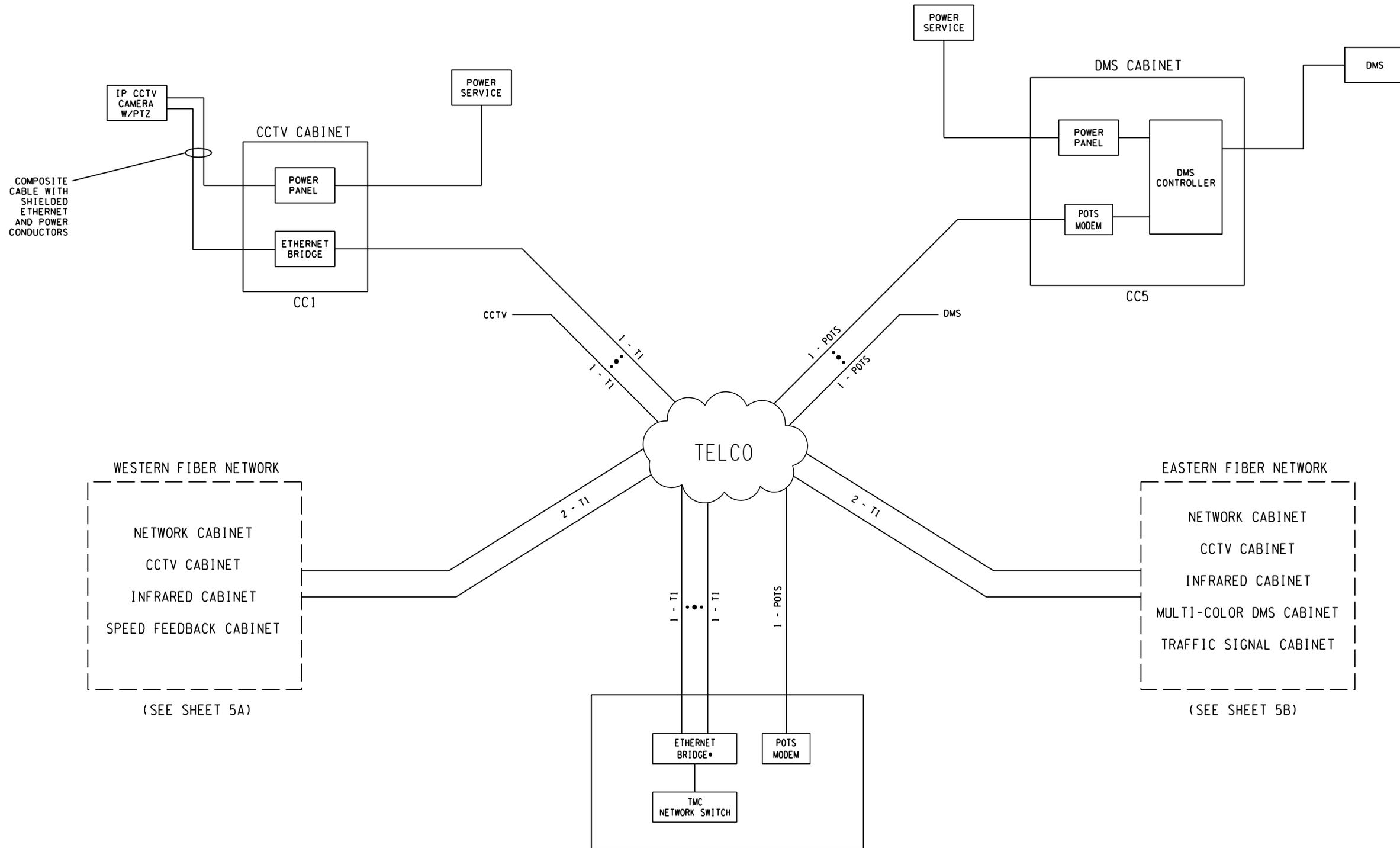
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BIDDING**

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DEPARTMENT OF TRANSPORTATION

GUARDRAIL
SUMMARY
TABLE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5



EXISTING REGION 2 TMC COMMUNICATIONS ROOM
 * EQUIPMENT TO BE INSTALLED AT TMC BY CONTRACTOR

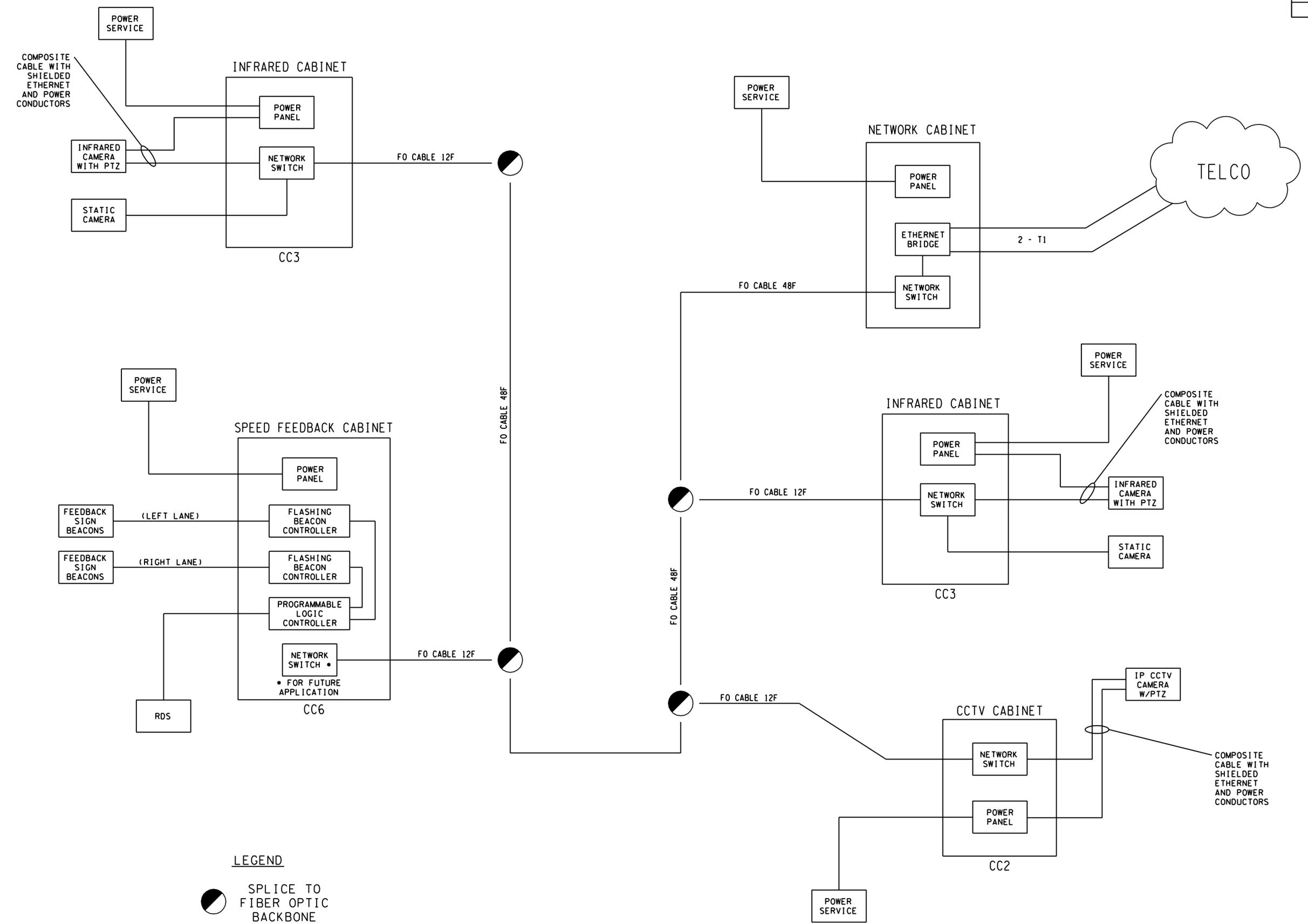
**UNOFFICIAL
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SYSTEM
 BLOCK
 DIAGRAM

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5A



LEGEND
 SPLICE TO FIBER OPTIC BACKBONE

**UNOFFICIAL SET
 NOT FOR BIDDING**

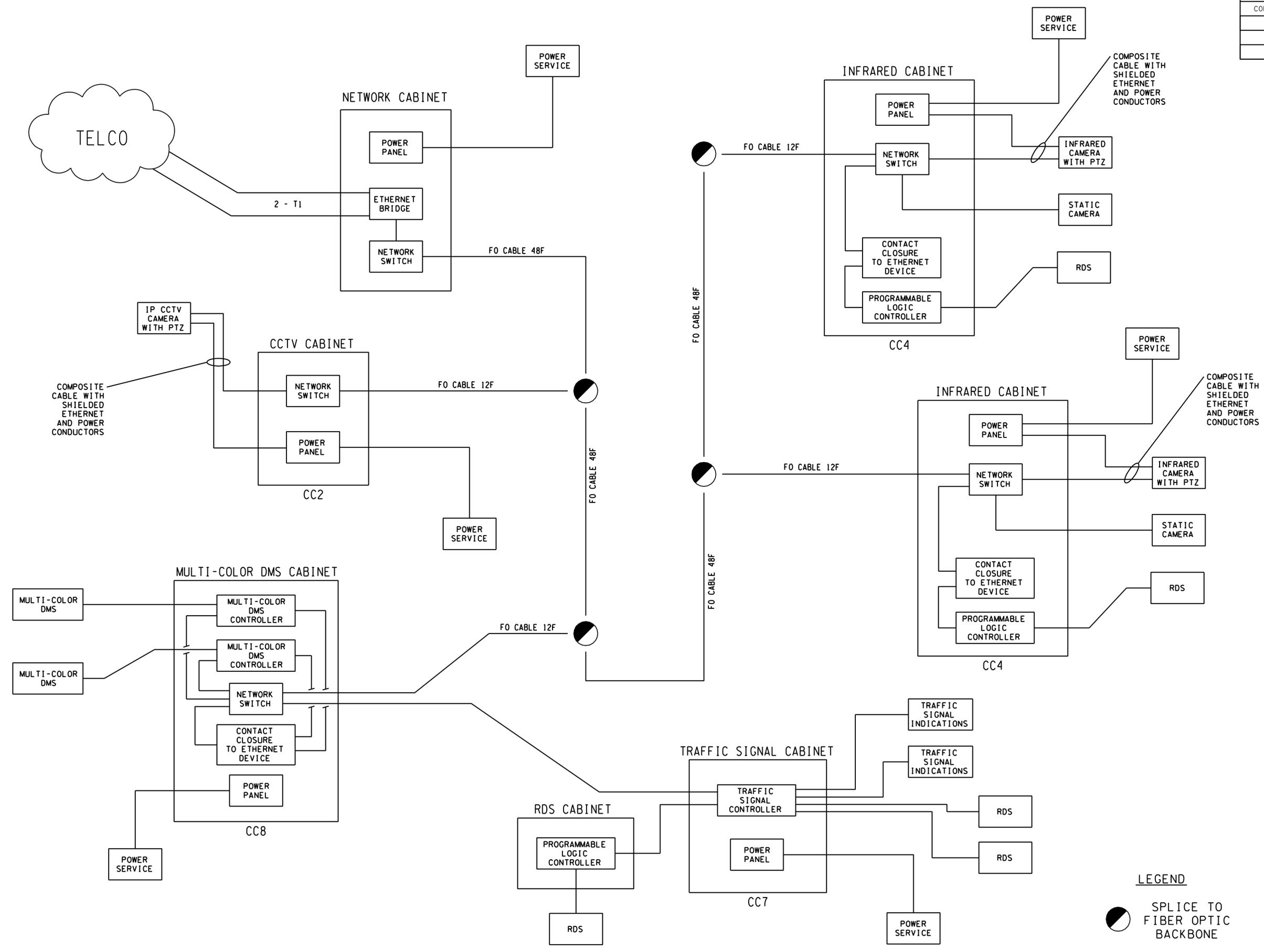
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SYSTEM BLOCK DIAGRAM

Plotted on Friday, July 25, 2014 at 12:59 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5B



**UNOFFICIAL
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SEALED BY

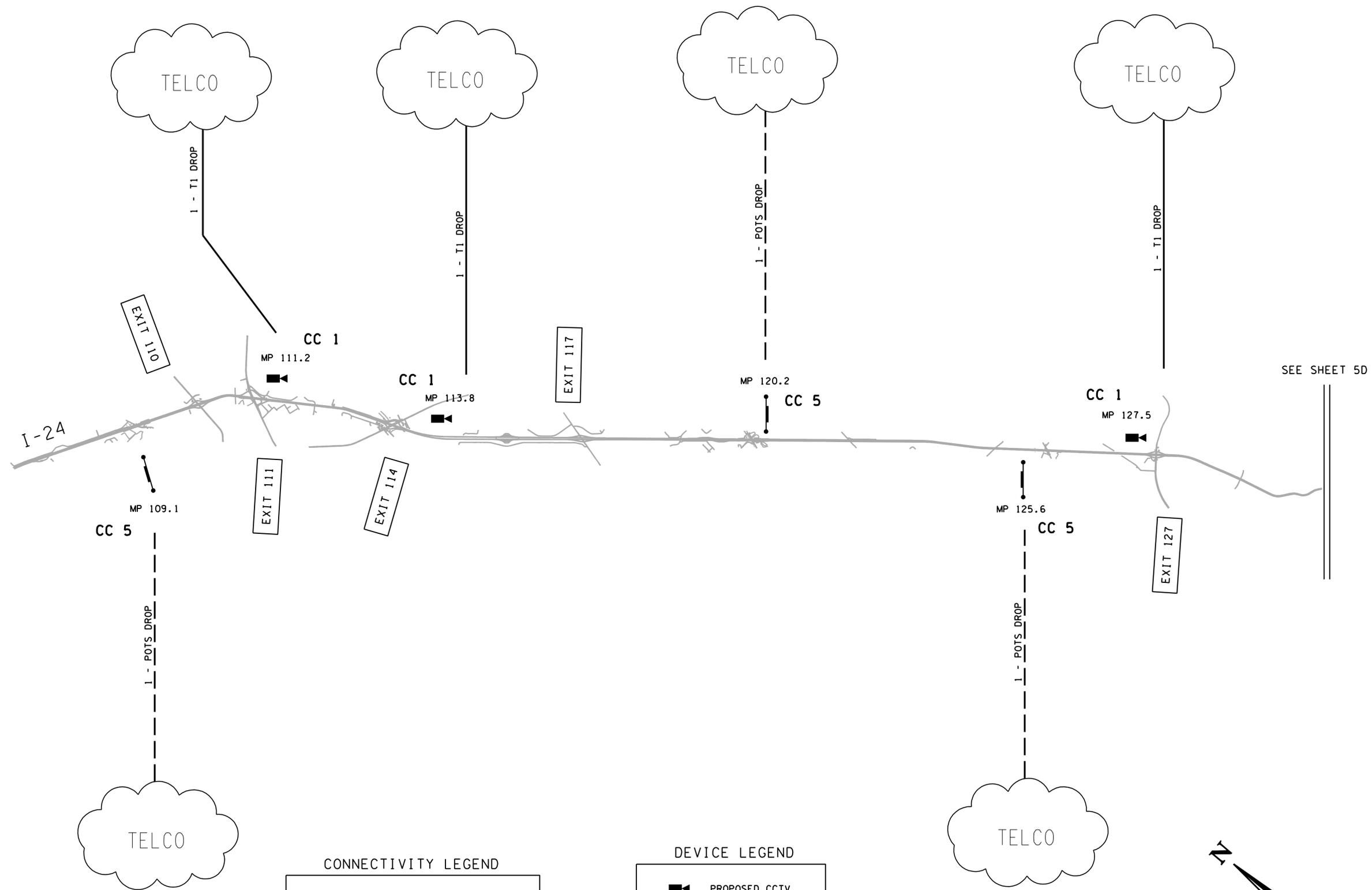
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SYSTEM
BLOCK
DIAGRAM

LEGEND
 SPLICE TO FIBER OPTIC BACKBONE

Plotted on Friday, July 25, 2014 at 12:59 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5C

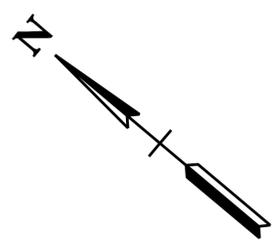


CONNECTIVITY LEGEND

	POTS DROP
	T1 DROP
CC X	CABINET CONFIGURATION TYPE

DEVICE LEGEND

	PROPOSED CCTV
	PROPOSED FDMS
	MP XXX.X MILE POST MARKER



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 BIDDING**

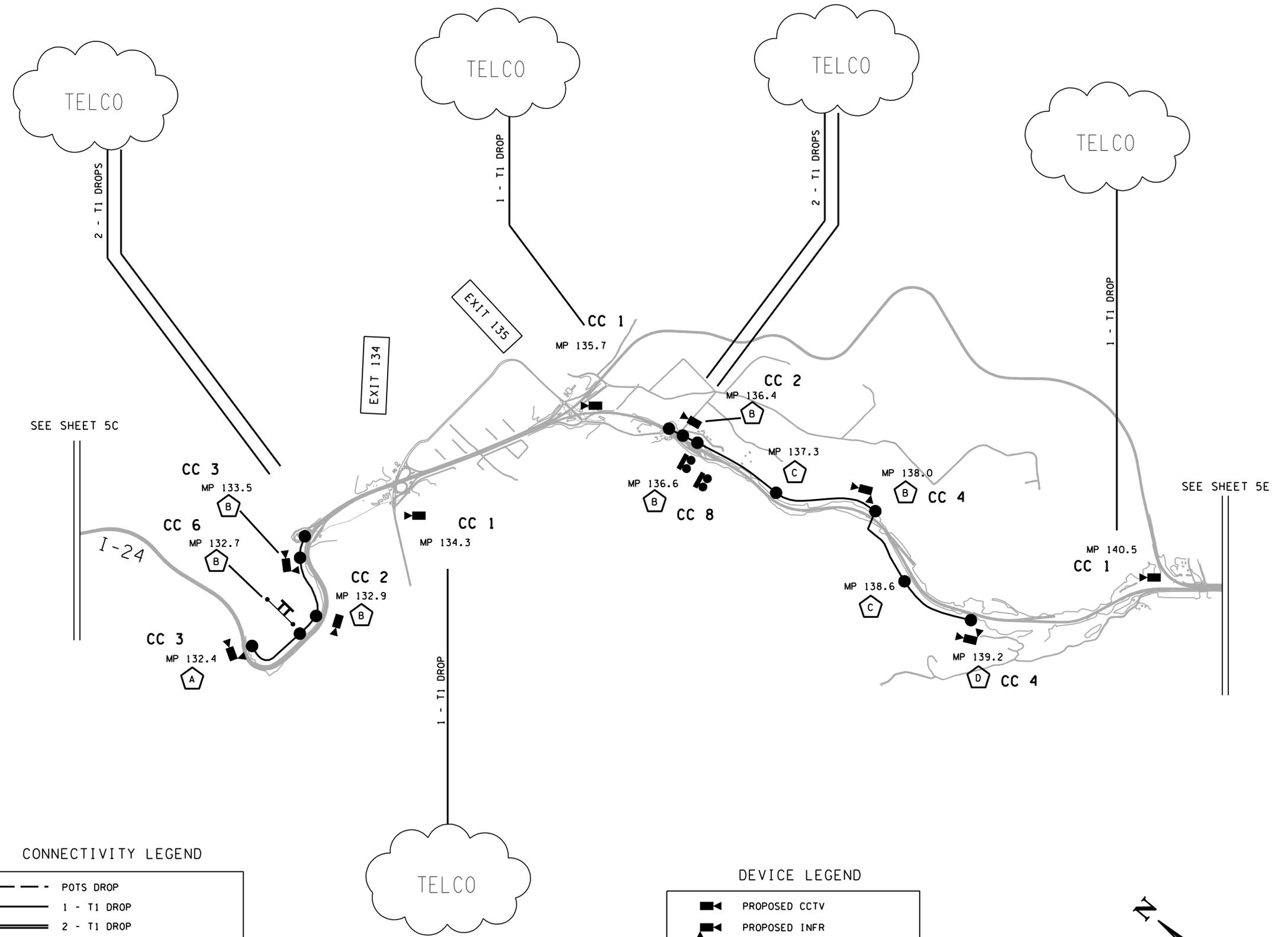
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COMMUNICATIONS
 SCHEMATIC
 N.T.S.

Plotted on Friday, July 25, 2014 at 12:59 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5D

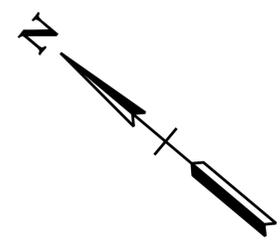


CONNECTIVITY LEGEND

	POTS DROP
	1 - T1 DROP
	2 - T1 DROP
	48 SMFO BACKBONE
	12 SMFO DROP
	SMFO BREAKOUT SPLICE DETAIL
CC X	CABINET CONFIGURATION TYPE

DEVICE LEGEND

	PROPOSED CCTV
	PROPOSED INFR
	PROPOSED MULTI-COLOR FDMs
	PROPOSED FDBK
	MP XXX.X MILE POST MARKER



**UNOFFICIAL
 SET
 NOT FOR
 BIDDING**

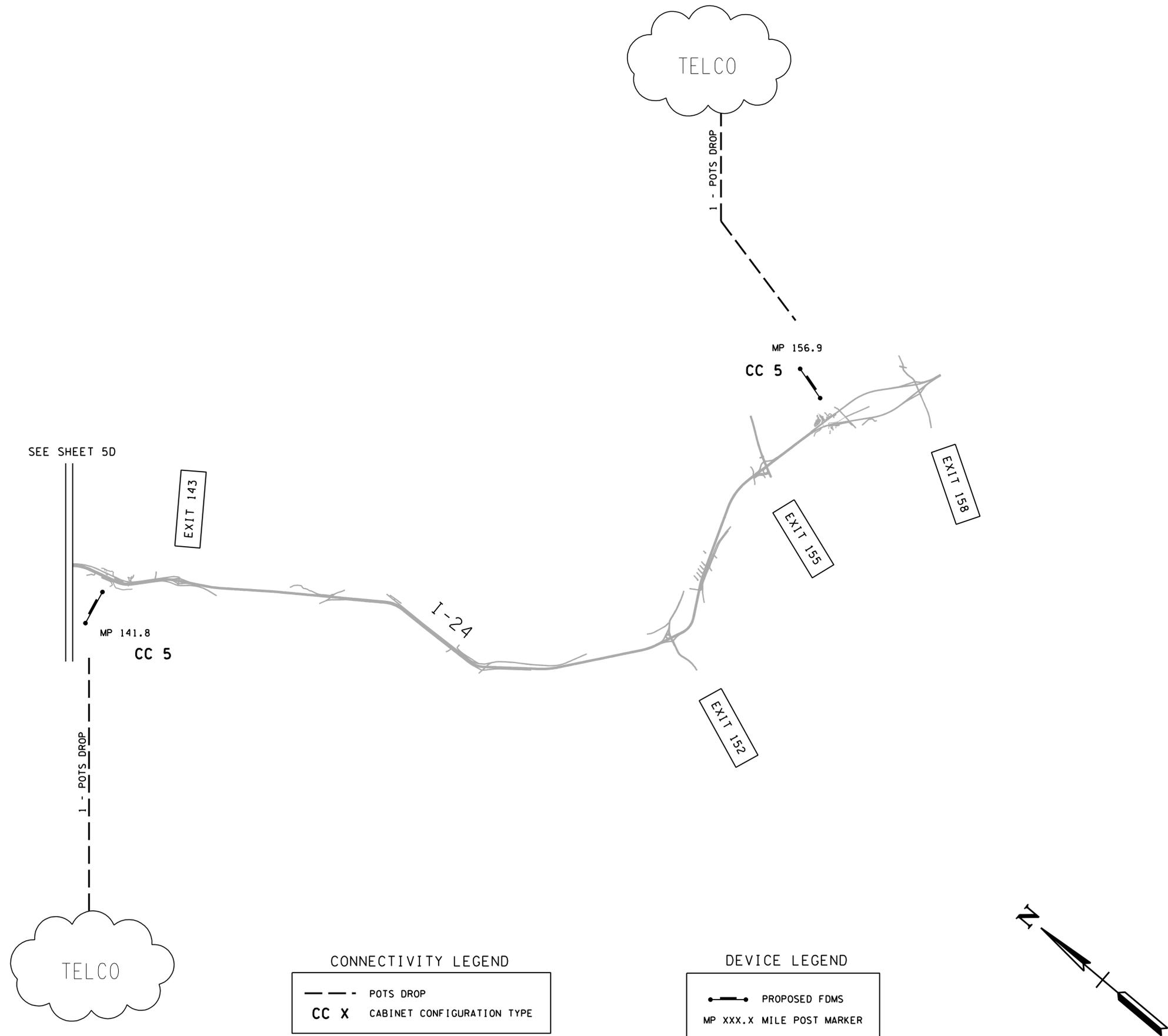
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COMMUNICATIONS
 SCHEMATIC
 N.T.S.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	5E



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 NOT FOR
 BIDDING**

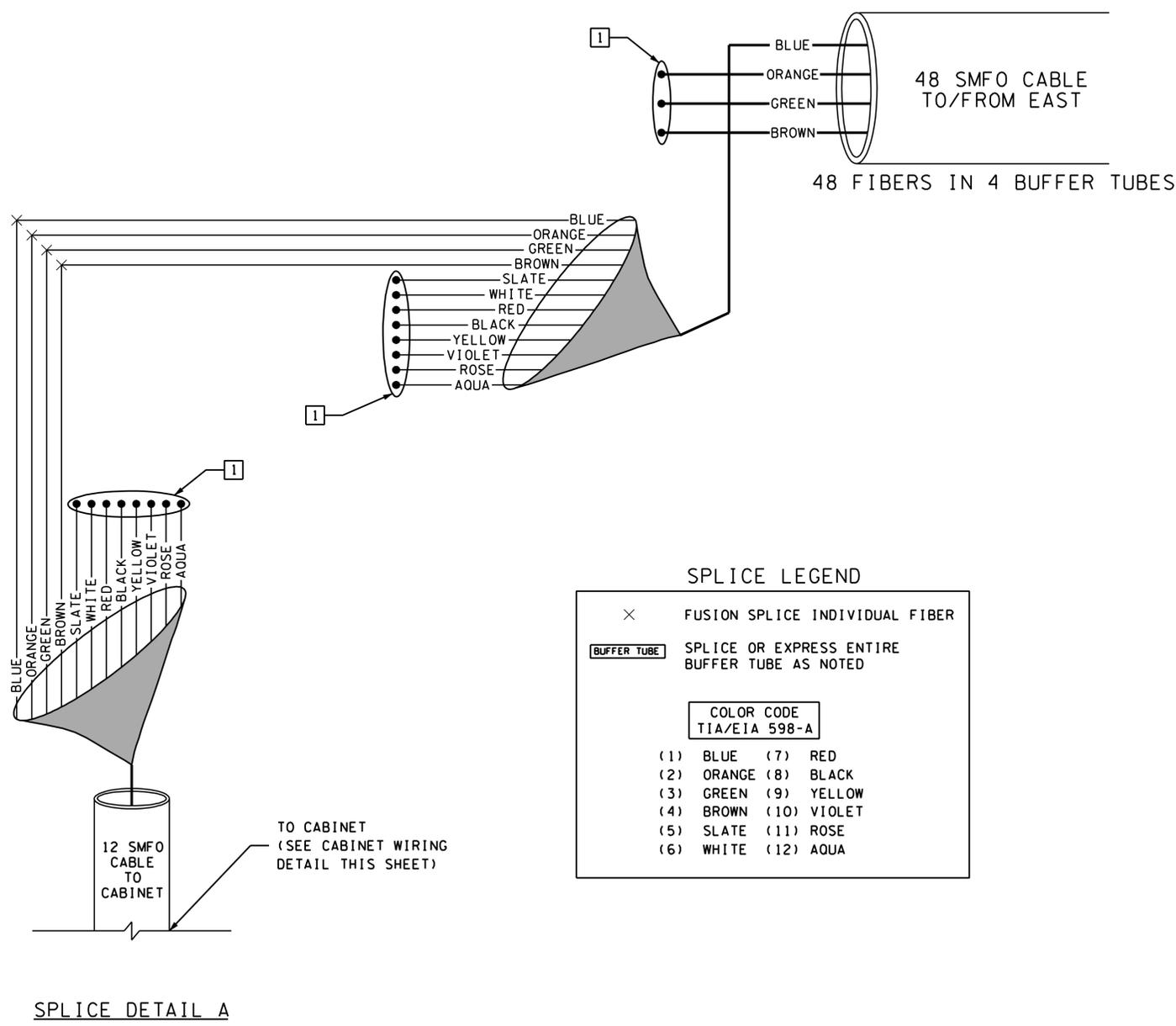
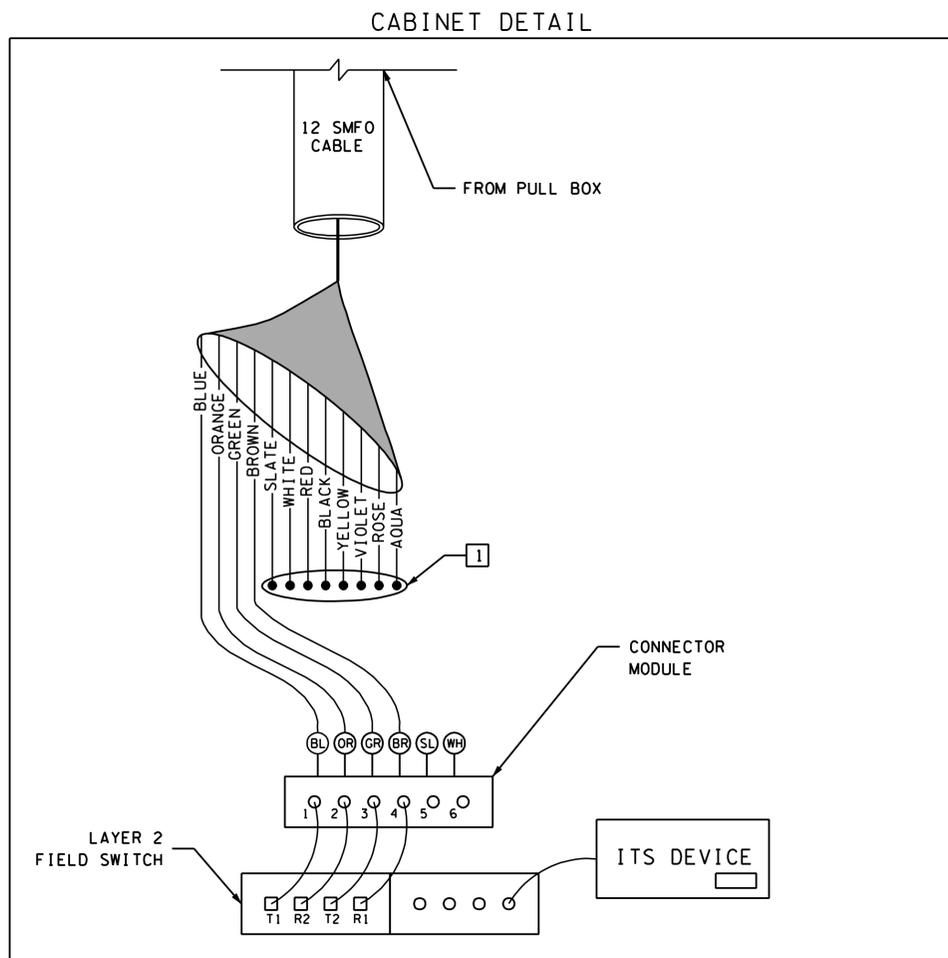
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COMMUNICATIONS
 SCHEMATIC

N.T.S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	6



SPLICE DETAIL NOTES:

1 CONTRACTOR SHALL CAP AND SEAL ANY UNUSED, NON-TERMINATED FIBERS AFTER COMPLETION OF PROPOSED NETWORK DEPLOYMENT.

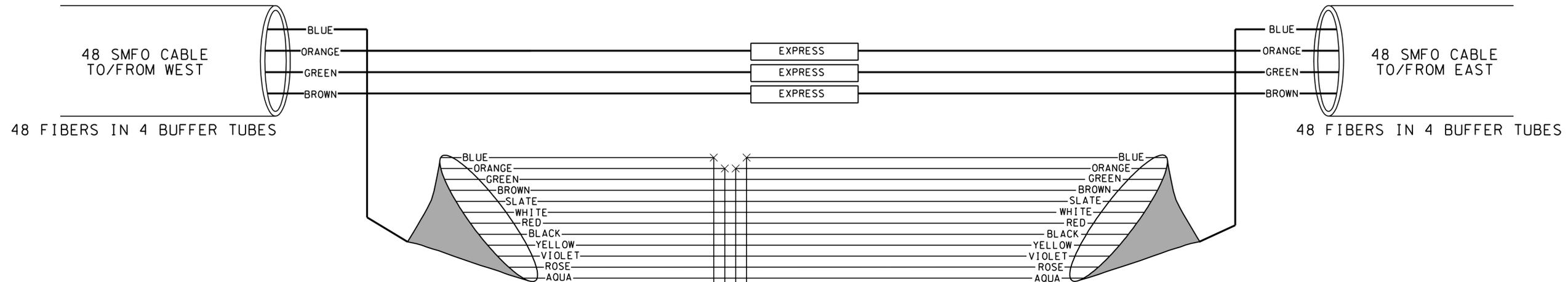
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SET
NOT FOR
BIDDING**

SEALED BY

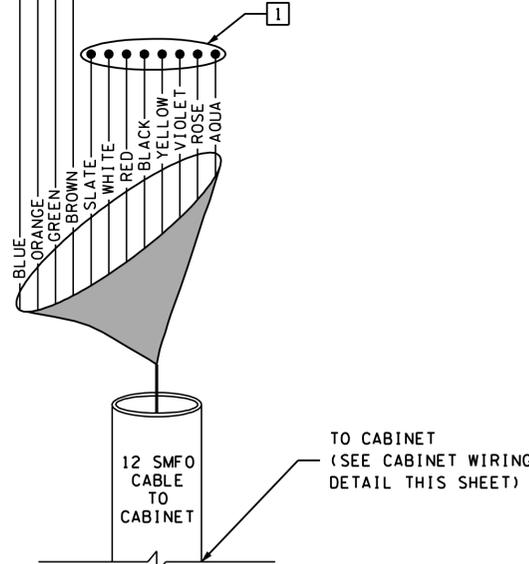
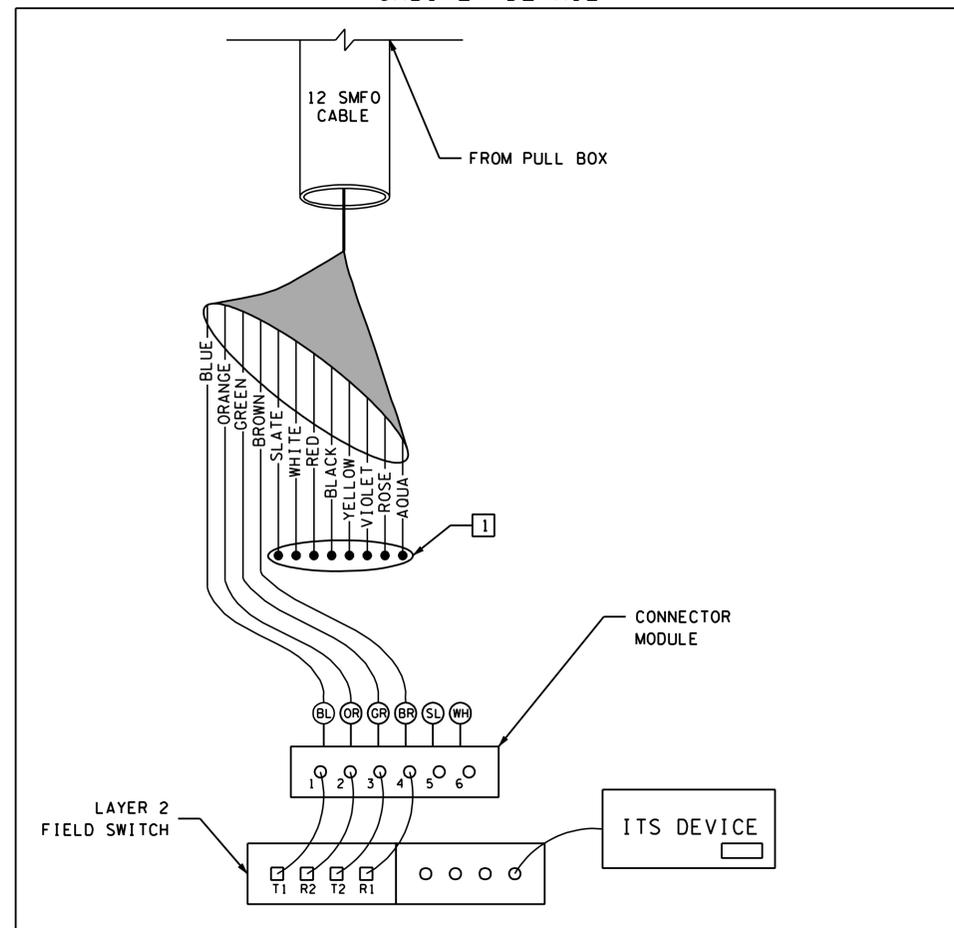
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPLICE DETAILS
TYPE A

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	6A



CABINET DETAIL



SPLICE DETAIL B

SPLICE LEGEND

×	FUSION SPLICE INDIVIDUAL FIBER
BUFFER TUBE	SPLICE OR EXPRESS ENTIRE BUFFER TUBE AS NOTED
COLOR CODE TIA/EIA 598-A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

SPLICE DETAIL NOTES:

- 1 CONTRACTOR SHALL CAP AND SEAL ANY UNUSED, NON-TERMINATED FIBERS AFTER COMPLETION OF PROPOSED NETWORK DEPLOYMENT.

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BIDDING**

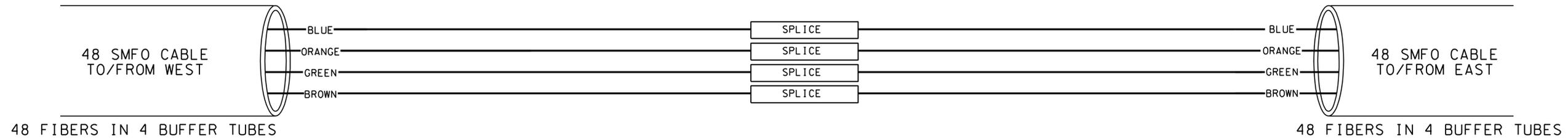
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SPLICE DETAILS
TYPE B

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	6B



SPLICE DETAIL C

SPLICE LEGEND

× FUSION SPLICE INDIVIDUAL FIBER

BUFFER TUBE SPLICE OR EXPRESS ENTIRE BUFFER TUBE AS NOTED

COLOR CODE
TIA/EIA 598-A

(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

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 BIDDING**

SEALED BY

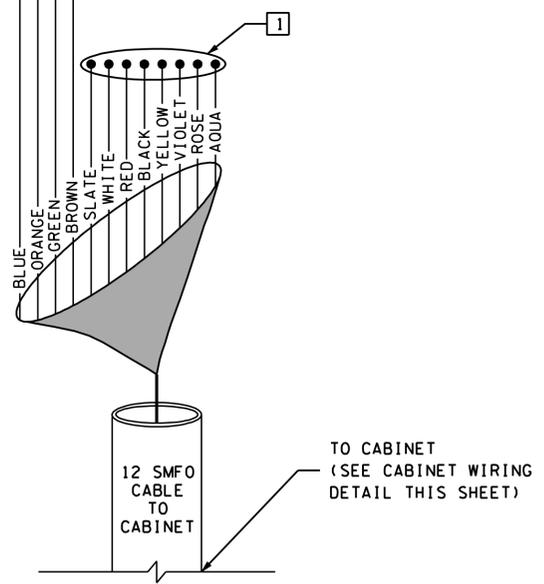
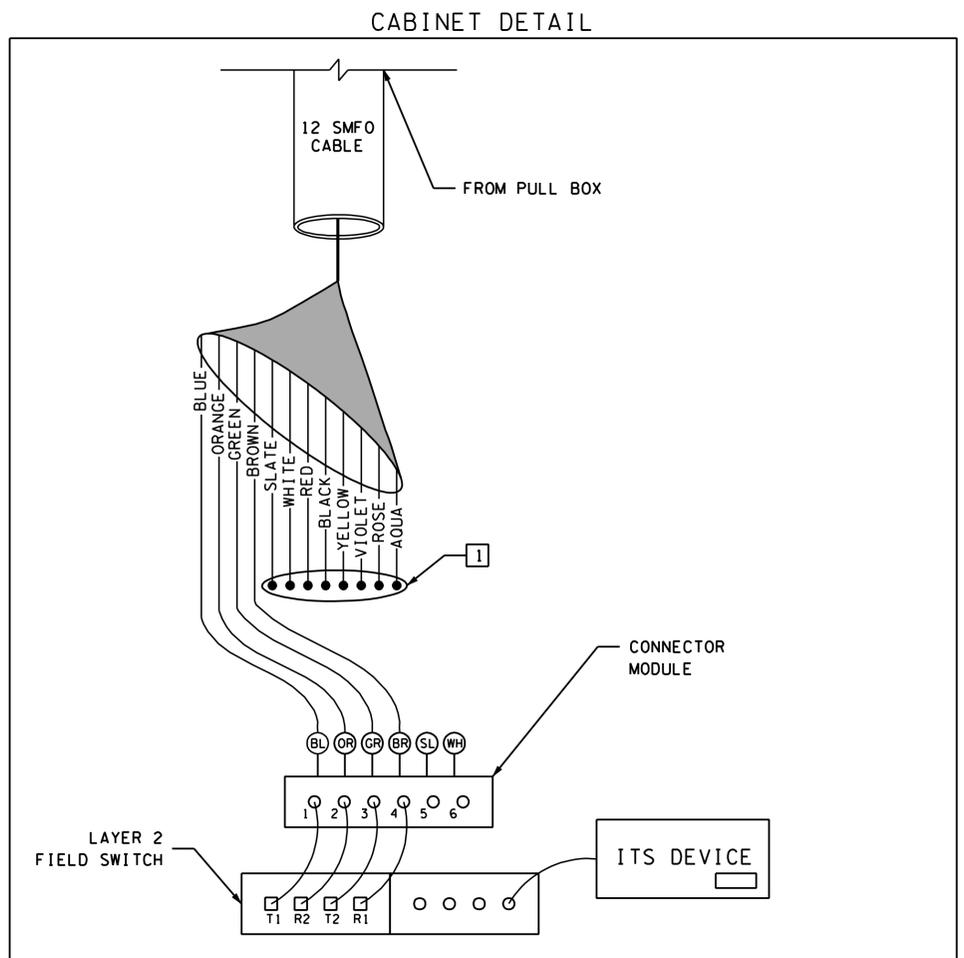
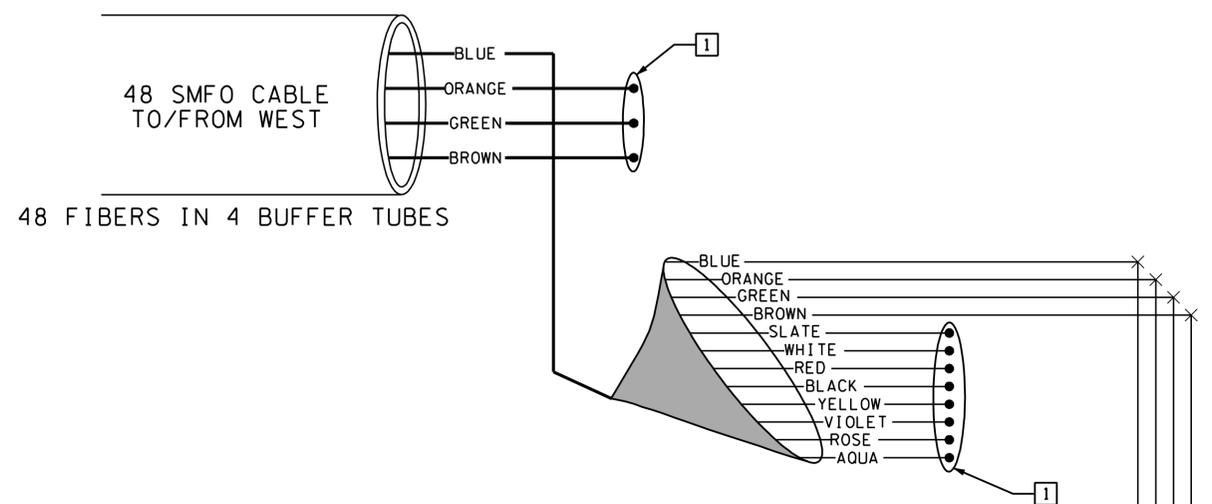
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

SPLICE DETAILS
 TYPE C

SPLICE DETAIL NOTES:

- 1 CONTRACTOR SHALL CAP AND SEAL ANY UNUSED, NON-TERMINATED FIBERS AFTER COMPLETION OF PROPOSED NETWORK DEPLOYMENT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	6C



SPLICE LEGEND

× FUSION SPLICE INDIVIDUAL FIBER

BUFFER TUBE SPLICE OR EXPRESS ENTIRE BUFFER TUBE AS NOTED

COLOR CODE TIA/EIA 598-A

(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

SPLICE DETAIL NOTES:

1 CONTRACTOR SHALL CAP AND SEAL ANY UNUSED, NON-TERMINATED FIBERS AFTER COMPLETION OF PROPOSED NETWORK DEPLOYMENT.

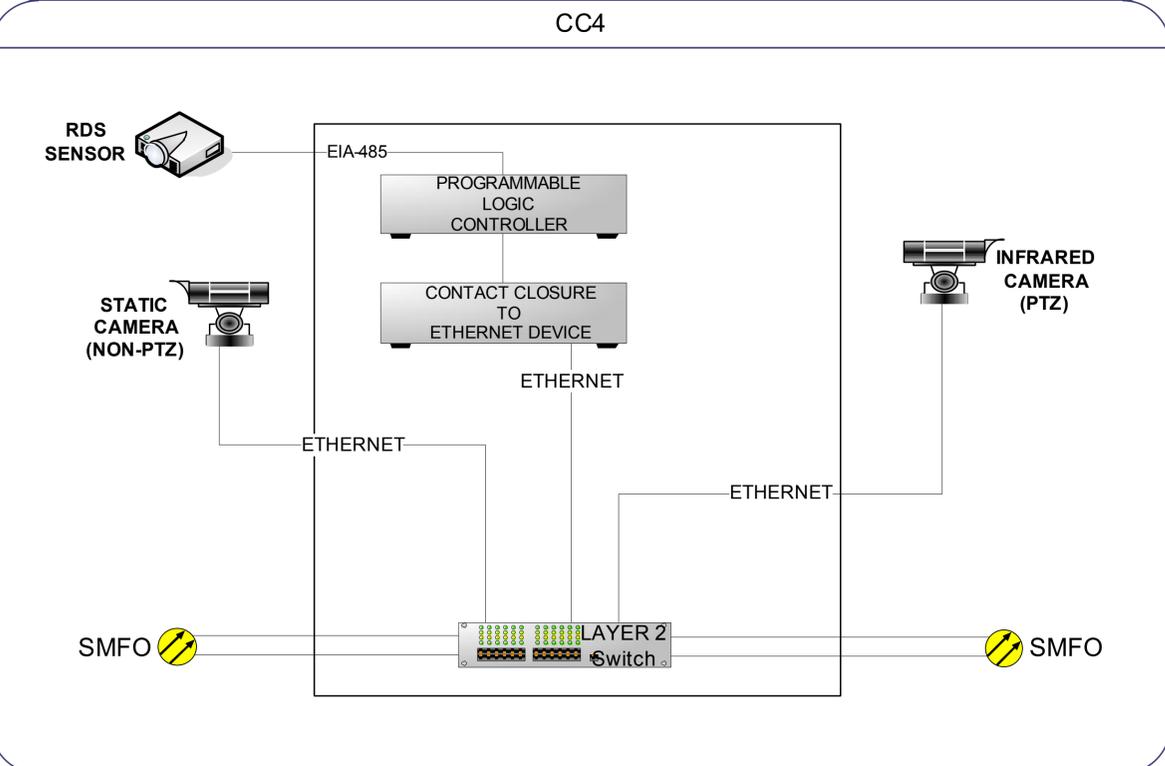
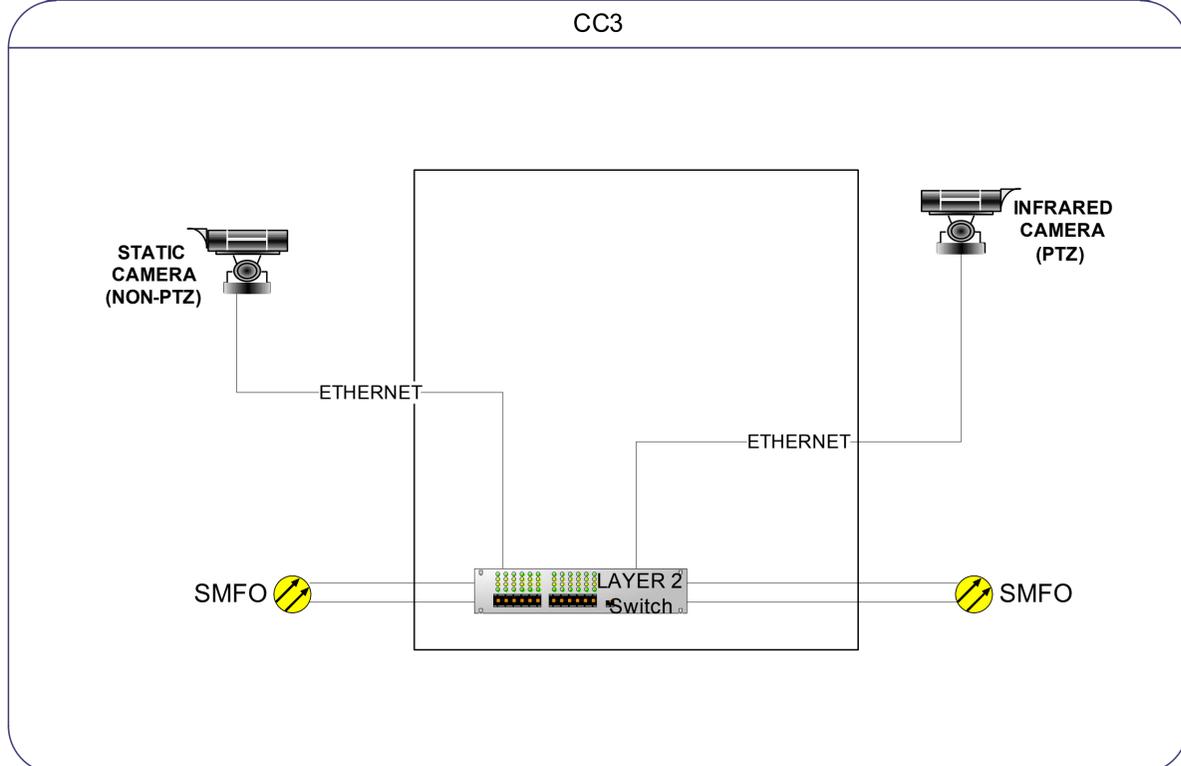
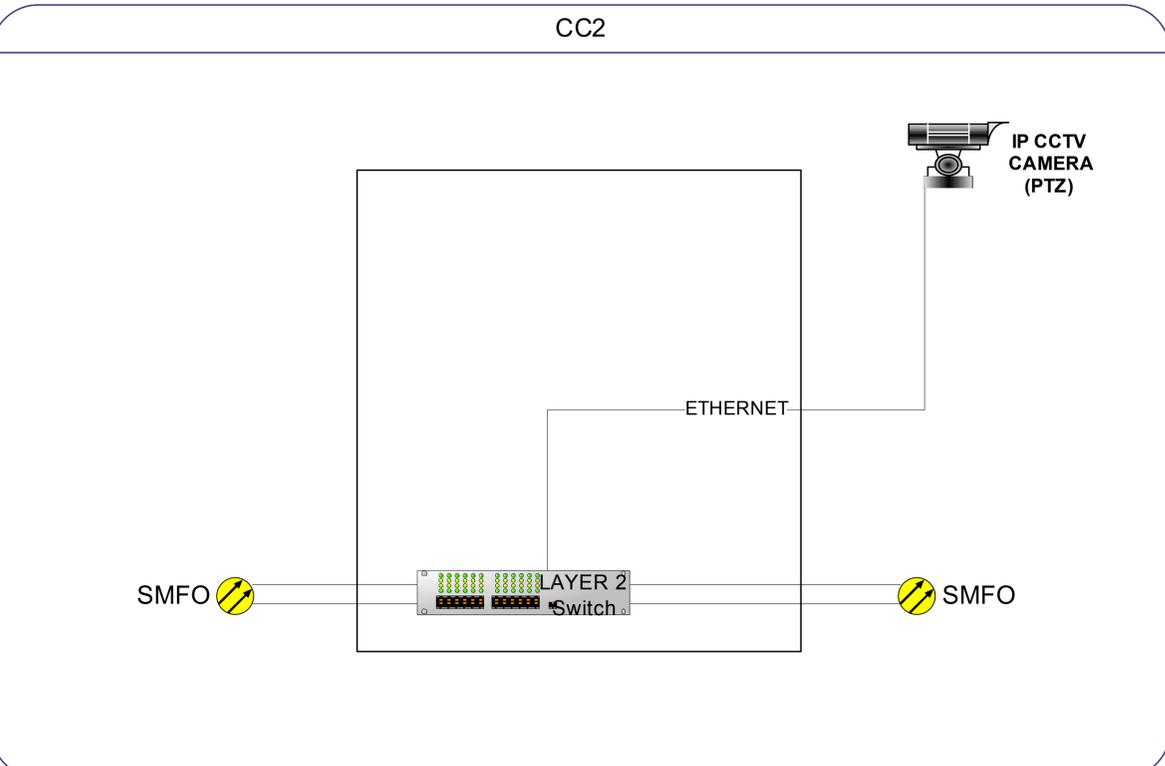
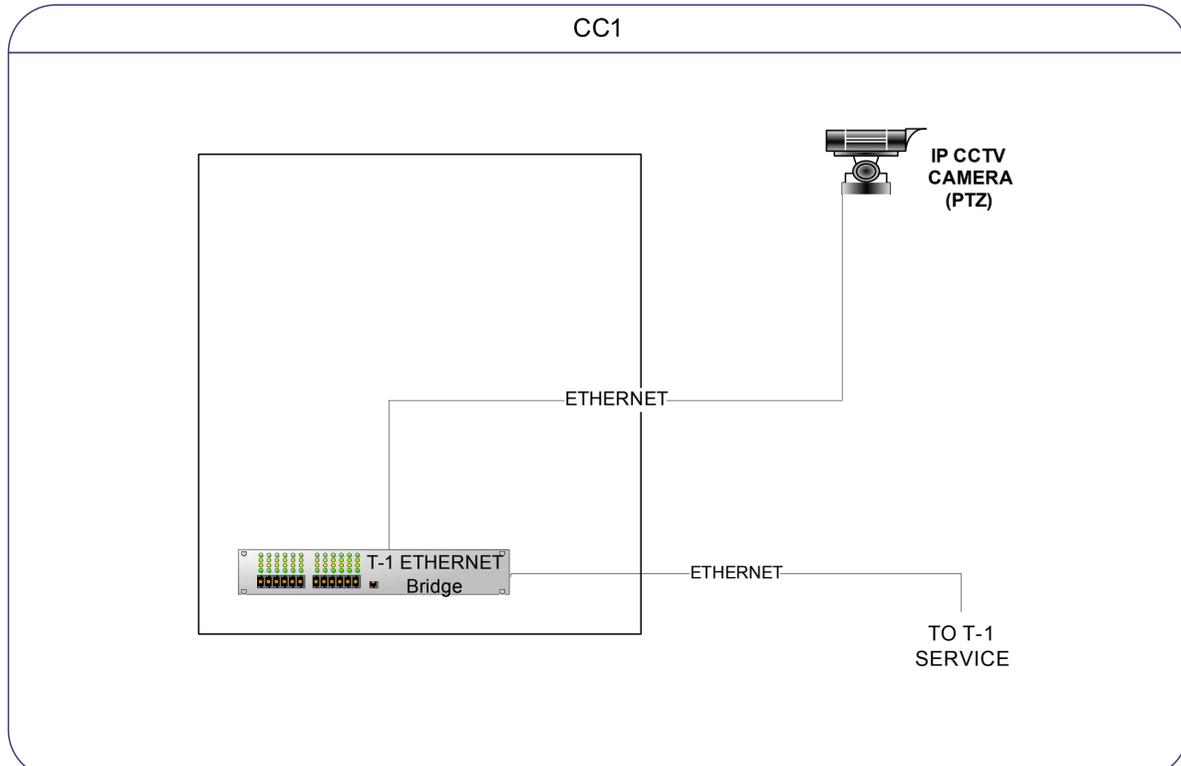
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SPLICE DETAILS
 TYPE D

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	7



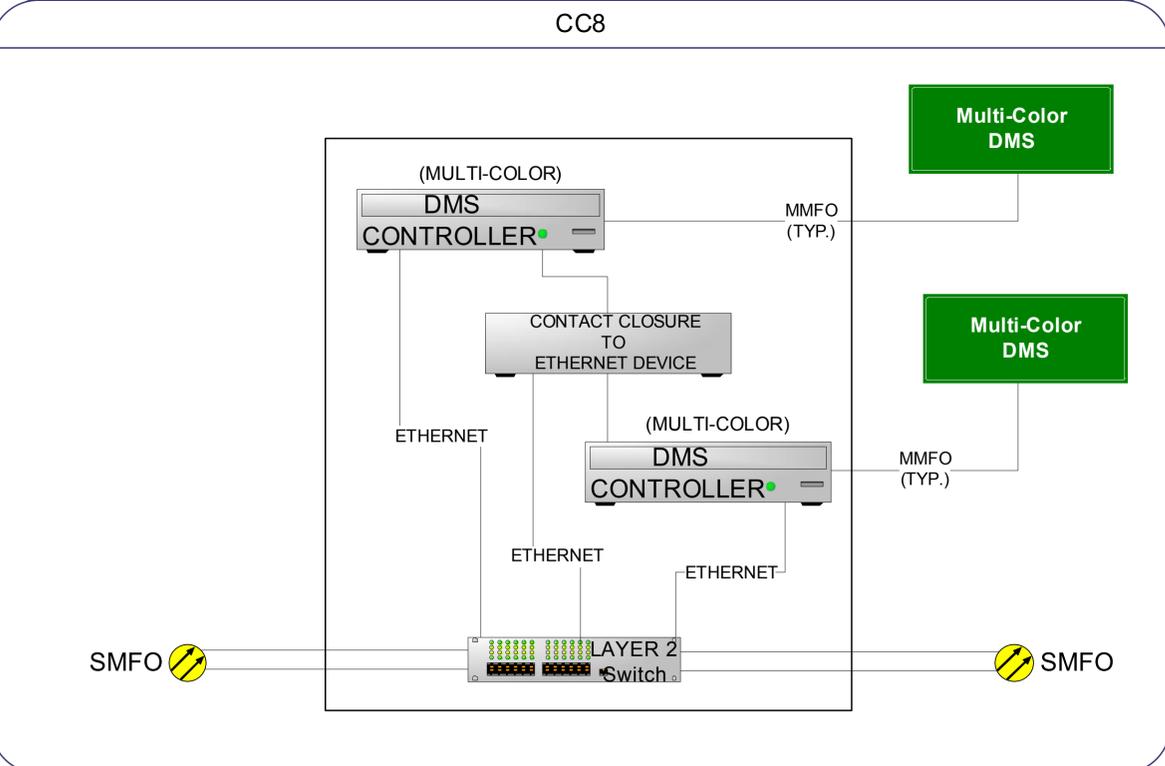
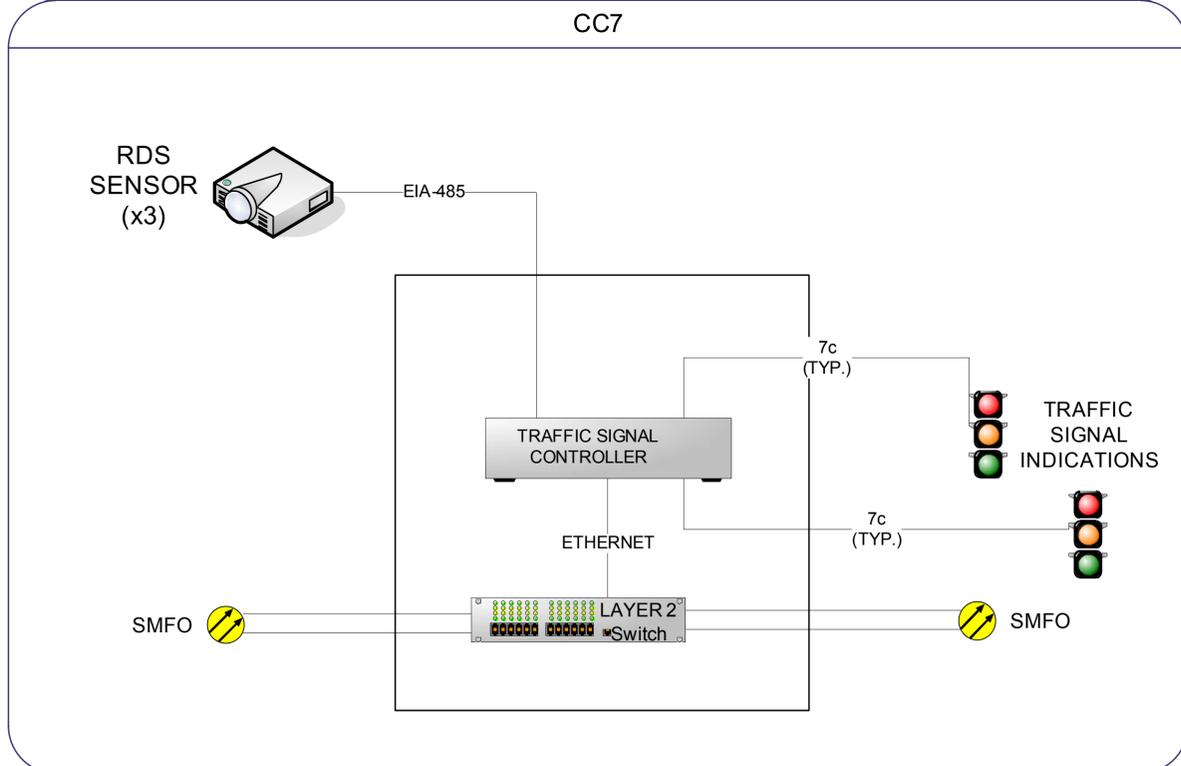
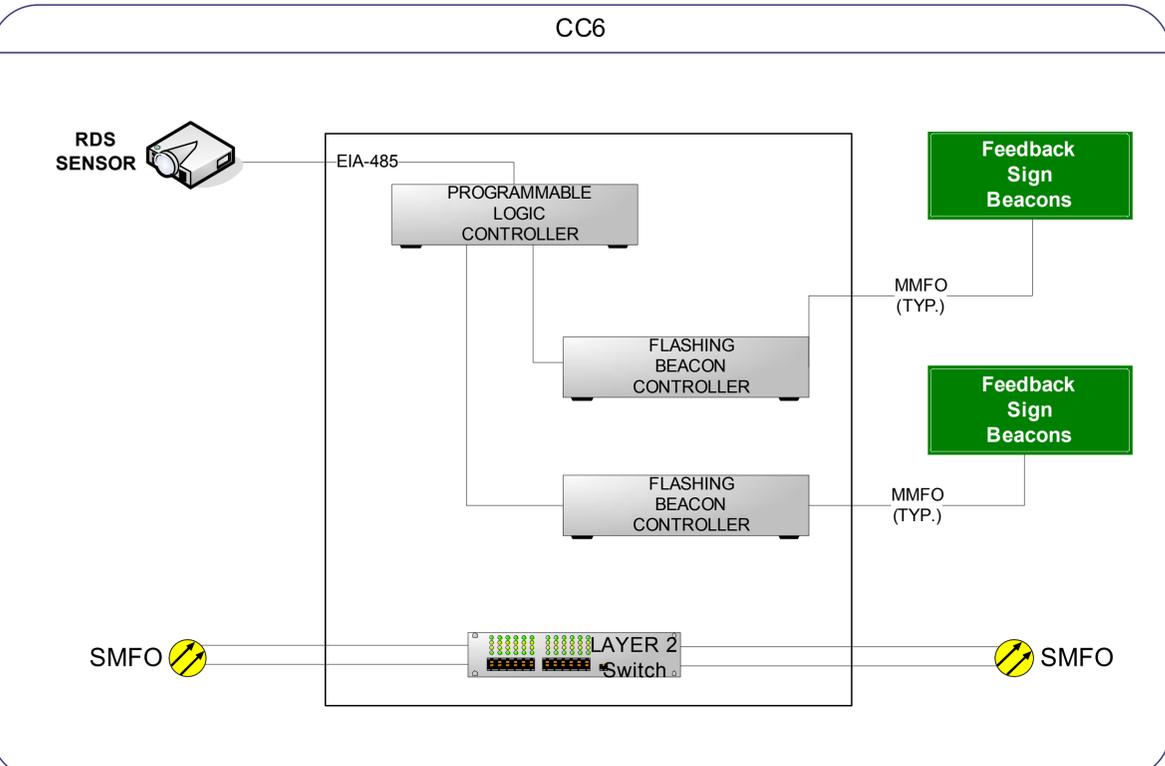
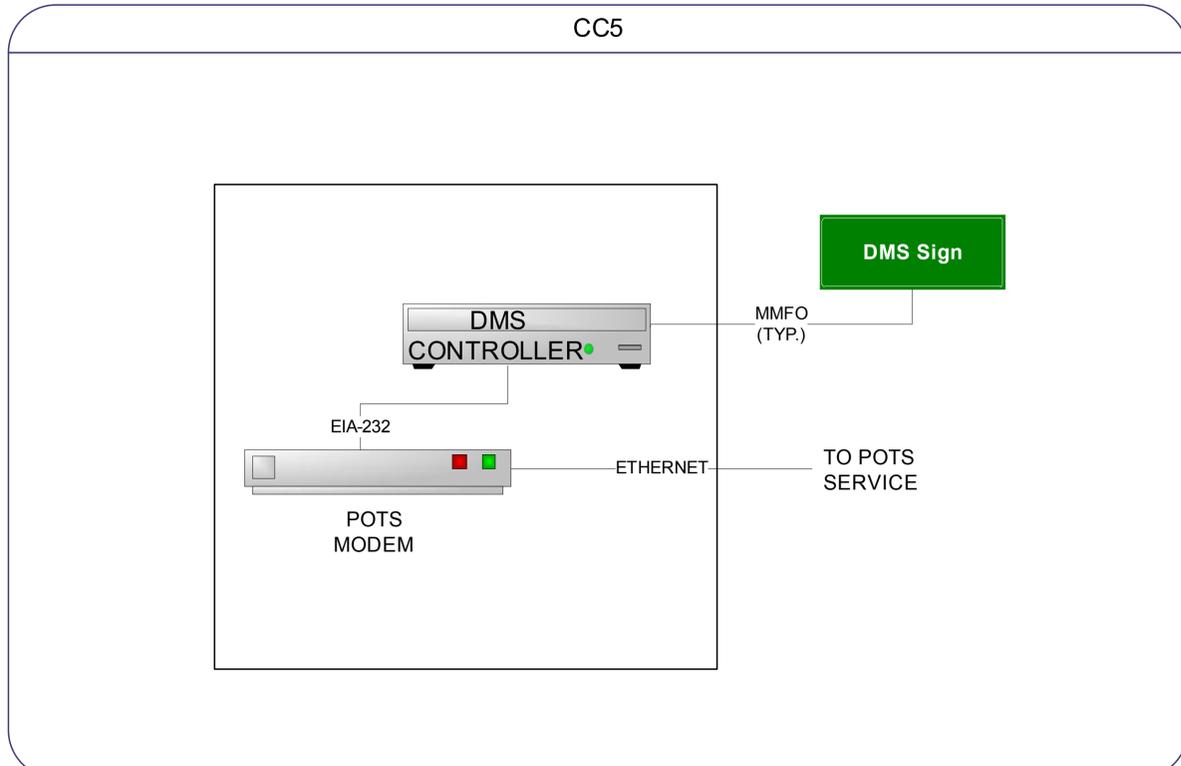
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CABINET
 CONFIGURATION
 SCHEMATICS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	7A



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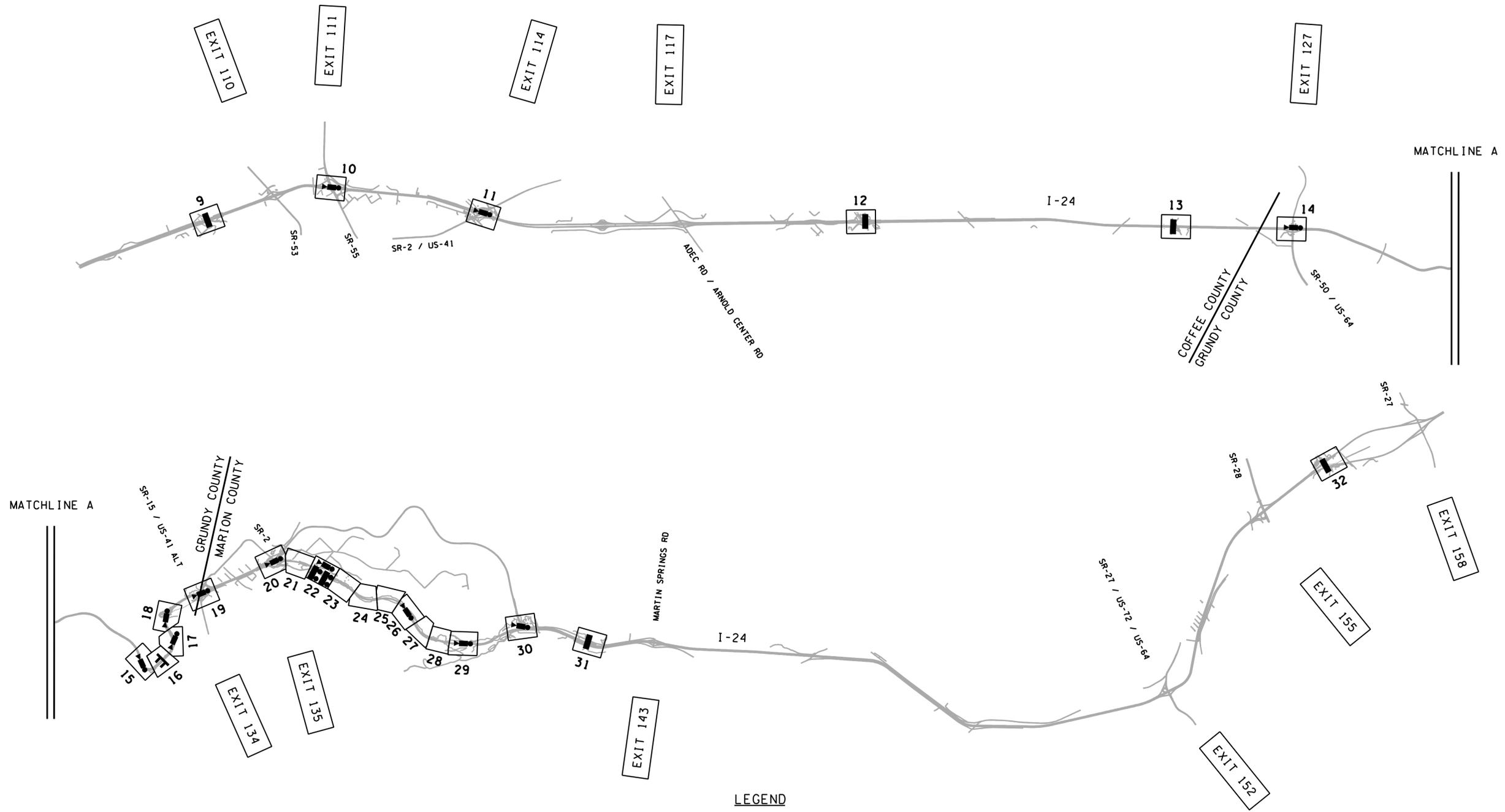
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CABINET
 CONFIGURATION
 SCHEMATICS

Plotted on Friday, July 25, 2014 at 12:59 PM
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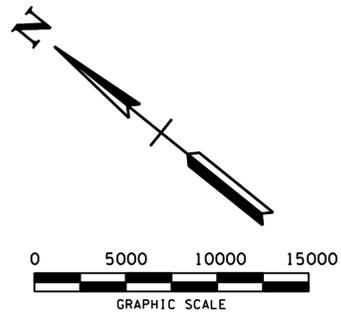
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	8



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LEGEND

- CCTV CAMERA SITE
- FDMS SITE
- MULTI-COLOR FDMS SITE
- FDBK SITE
- PLAN SHEET NUMBER



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KEY MAP

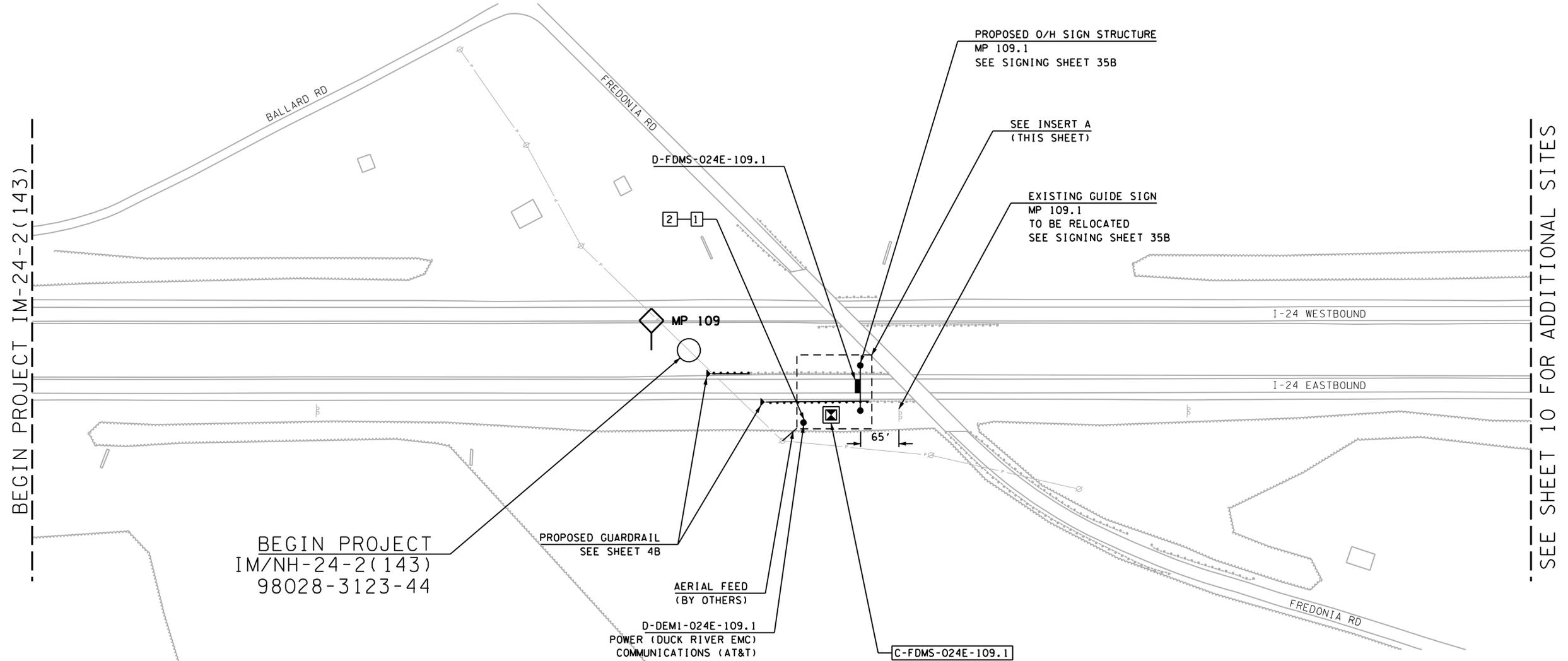
1" = 5000'

CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			4	
CAT 6 CBL	1			
DMS PWR CBL				1
DMS COMM CBL		1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	2" CONDUIT	2" CONDUIT

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 240/120V, 70A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 3-WIRE 240V, 100A RATED FUSED DISCONNECT FUSED AT 70A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 240/120V METER BASE PER DUCK RIVER EMC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR POTS COMMUNICATION SERVICE (ONE POTS DROP REQUIRED) AT THIS LOCATION.

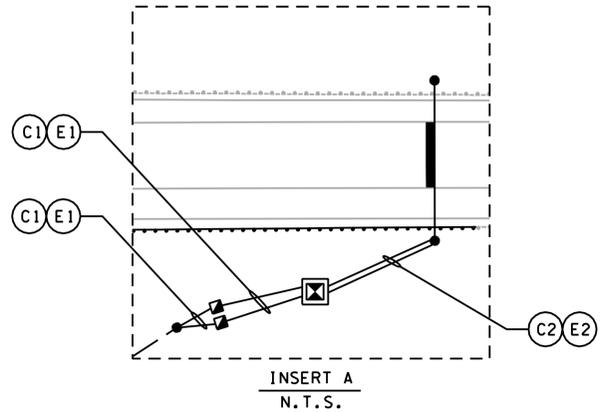
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	9



BEGIN PROJECT IM-24-2(143)

SEE SHEET 10 FOR ADDITIONAL SITES

BEGIN PROJECT
IM/NH-24-2(143)
98028-3123-44

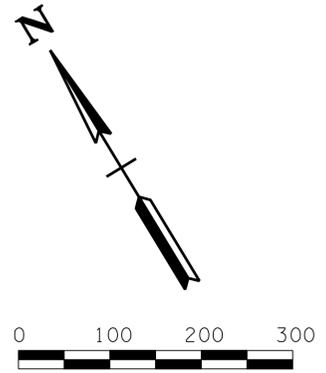


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ITS LAYOUT
I-24
MP 109.1
FDMS
1" = 100'



TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			3	3
CAT 6 CBL	1	1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT (BORED)	2" CONDUIT	2" CONDUIT (BORED)

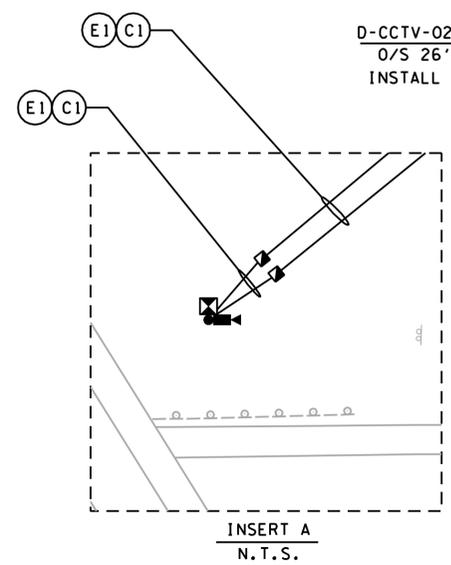
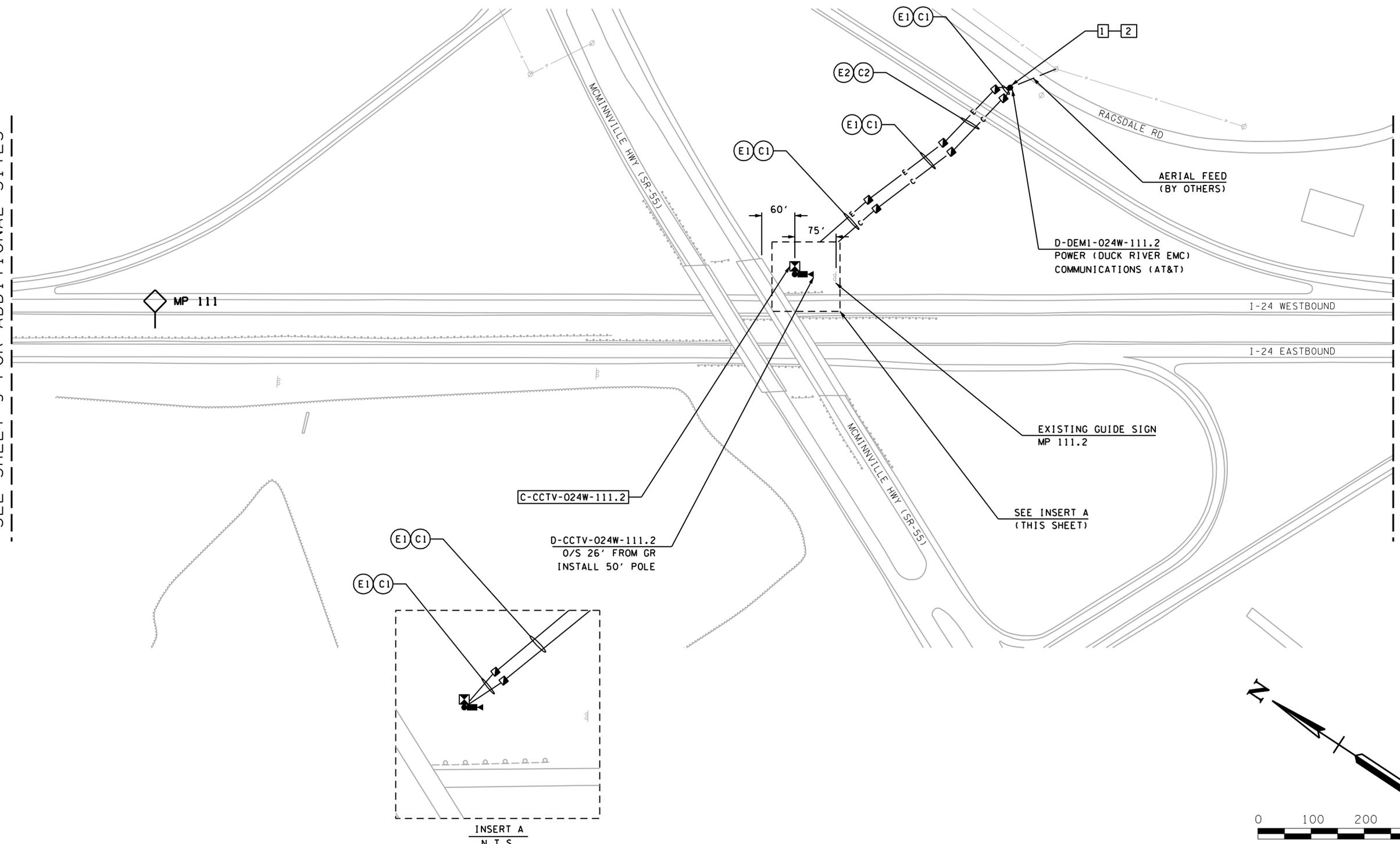
NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER DUCK RIVER EMC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	10

SEE SHEET 9 FOR ADDITIONAL SITES

SEE SHEET 11 FOR ADDITIONAL SITES



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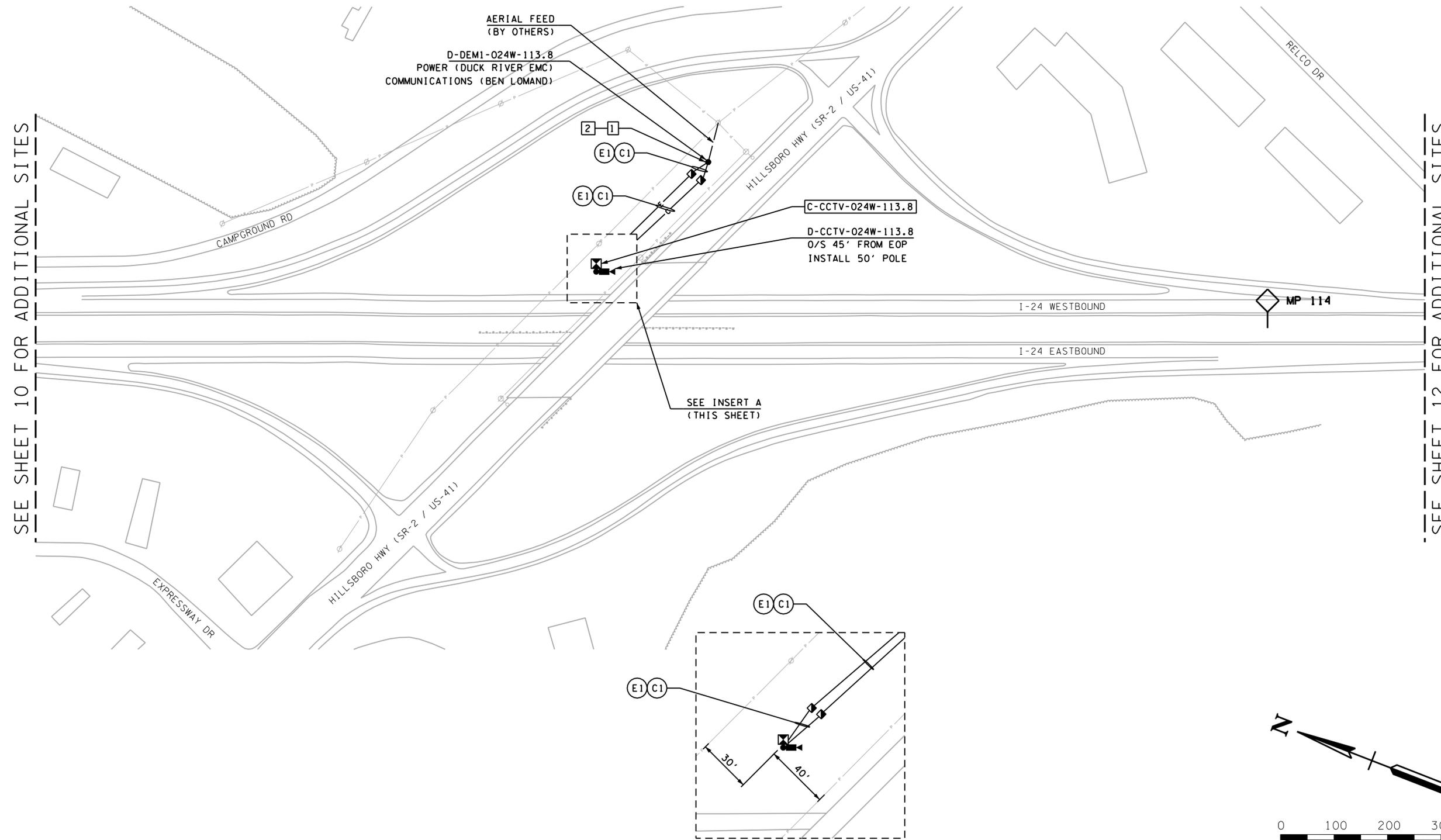
ITS LAYOUT
I-24
MP 111.2
CCTV
1" = 100'

TENNESSEE D.O.T. DESIGN DIVISION FILE NO.	CONDUIT AND CABLE SCHEDULE		
	ITEM	RUN	
		C1	E1
	#6 AWG CBL		3
CAT 6 CBL	1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	11

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER DUCK RIVER EMC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.



SEE SHEET 10 FOR ADDITIONAL SITES

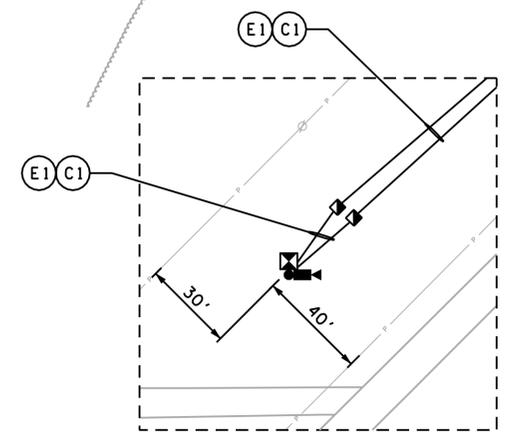
SEE SHEET 12 FOR ADDITIONAL SITES

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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 113.8
CCTV
1" = 100'



CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			4	
CAT 6 CBL	1			
DMS PWR CBL				1
DMS COMM CBL		1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	2" CONDUIT	2" CONDUIT

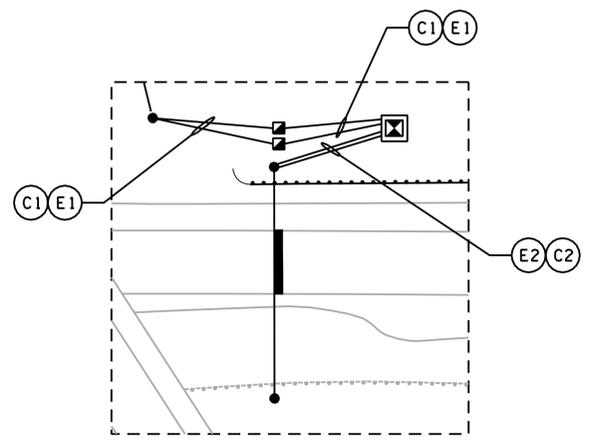
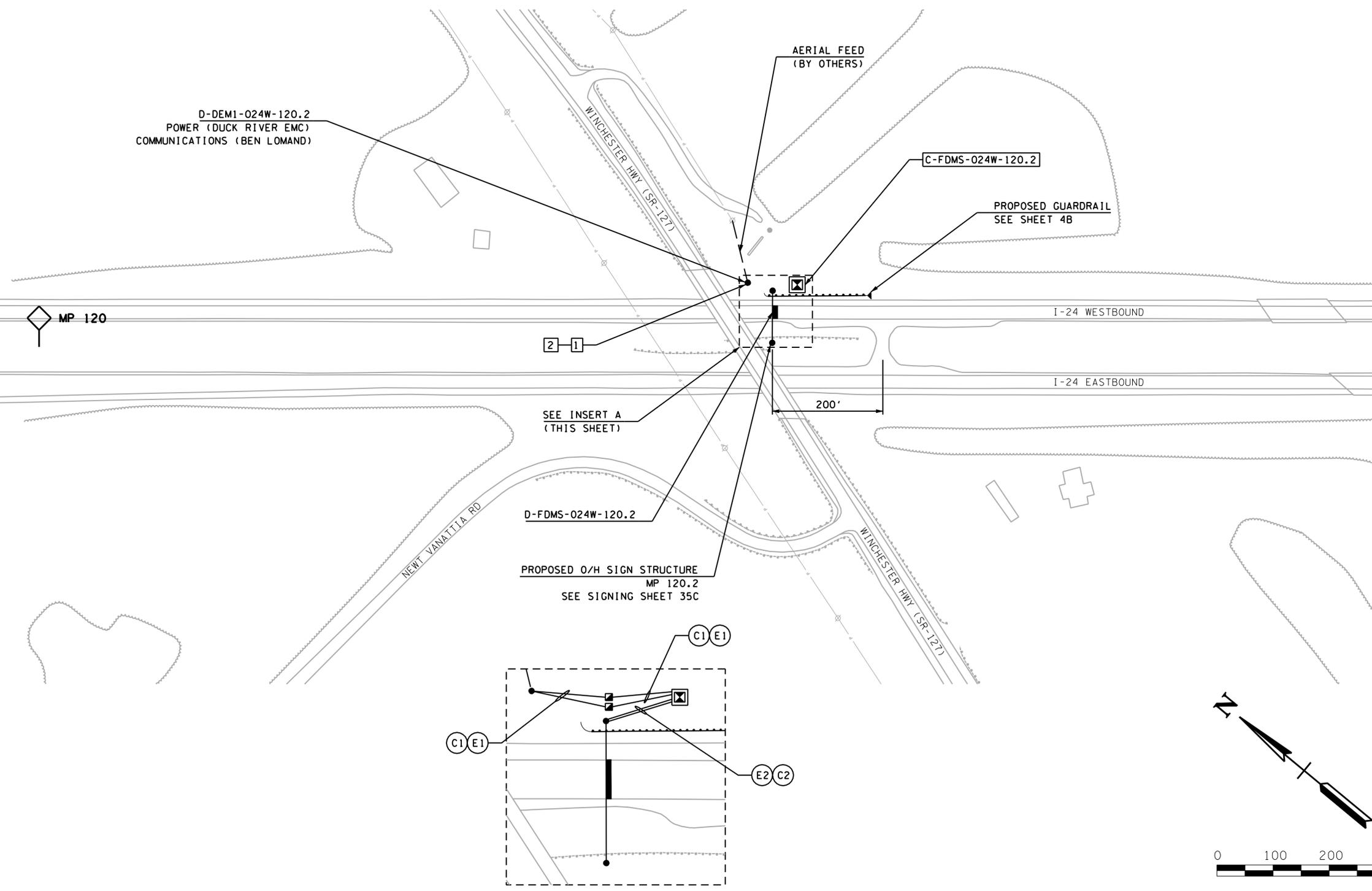
NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 240/120V, 70A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 3-WIRE 240V, 100A RATED FUSED DISCONNECT FUSED AT 70A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 240/120V METER BASE PER DUCK RIVER EMC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR POTS COMMUNICATION SERVICE (ONE POTS DROP REQUIRED) AT THIS LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	12

SEE SHEET 11 FOR ADDITIONAL SITES

SEE SHEET 13 FOR ADDITIONAL SITES



INSERT A
N.T.S.

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ITS LAYOUT
I-24
MP 120.2
FDMS
1" = 100'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			4	
CAT 6 CBL	1			
DMS PWR CBL				1
DMS COMM CBL		1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	2" CONDUIT	2" CONDUIT

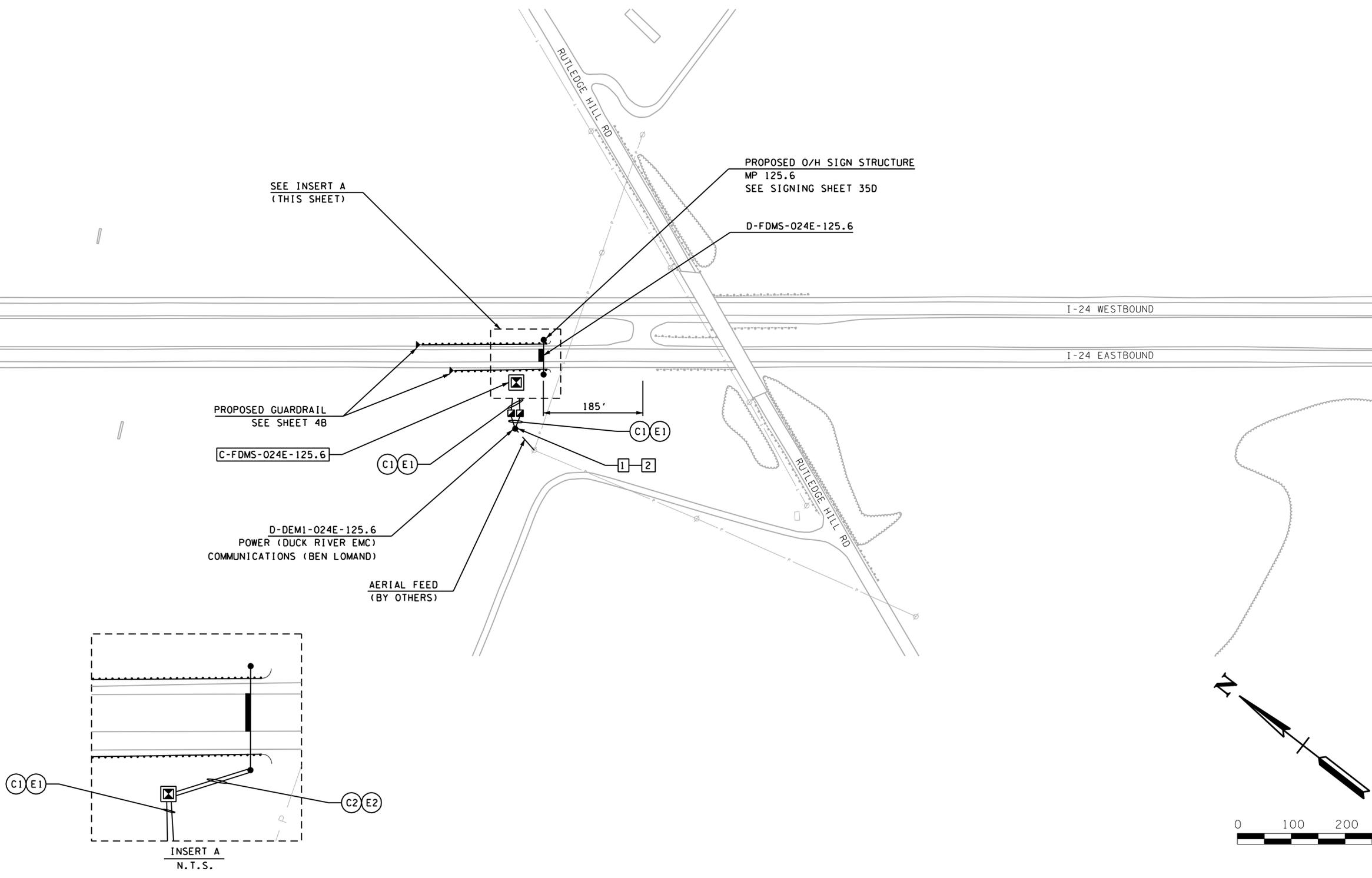
NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 240/120V, 70A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 3-WIRE 240V, 100A RATED FUSED DISCONNECT FUSED AT 70A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 240/120V METER BASE PER DUCK RIVER EMC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR POTS COMMUNICATION SERVICE (ONE POTS DROP REQUIRED) AT THIS LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	13

SEE SHEET 12 FOR ADDITIONAL SITES

SEE SHEET 14 FOR ADDITIONAL SITES



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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 125.6
FDMS
1" = 100'

Plotted on Friday, July 25, 2014 at 12:59 PM
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CONDUIT AND CABLE SCHEDULE		
ITEM	RUN	
	C1	E1
#8 AWG CBL		3
CAT 6 CBL	1	
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT

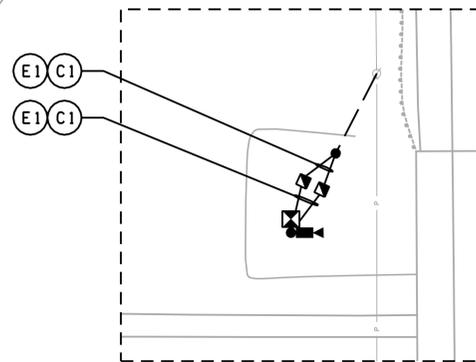
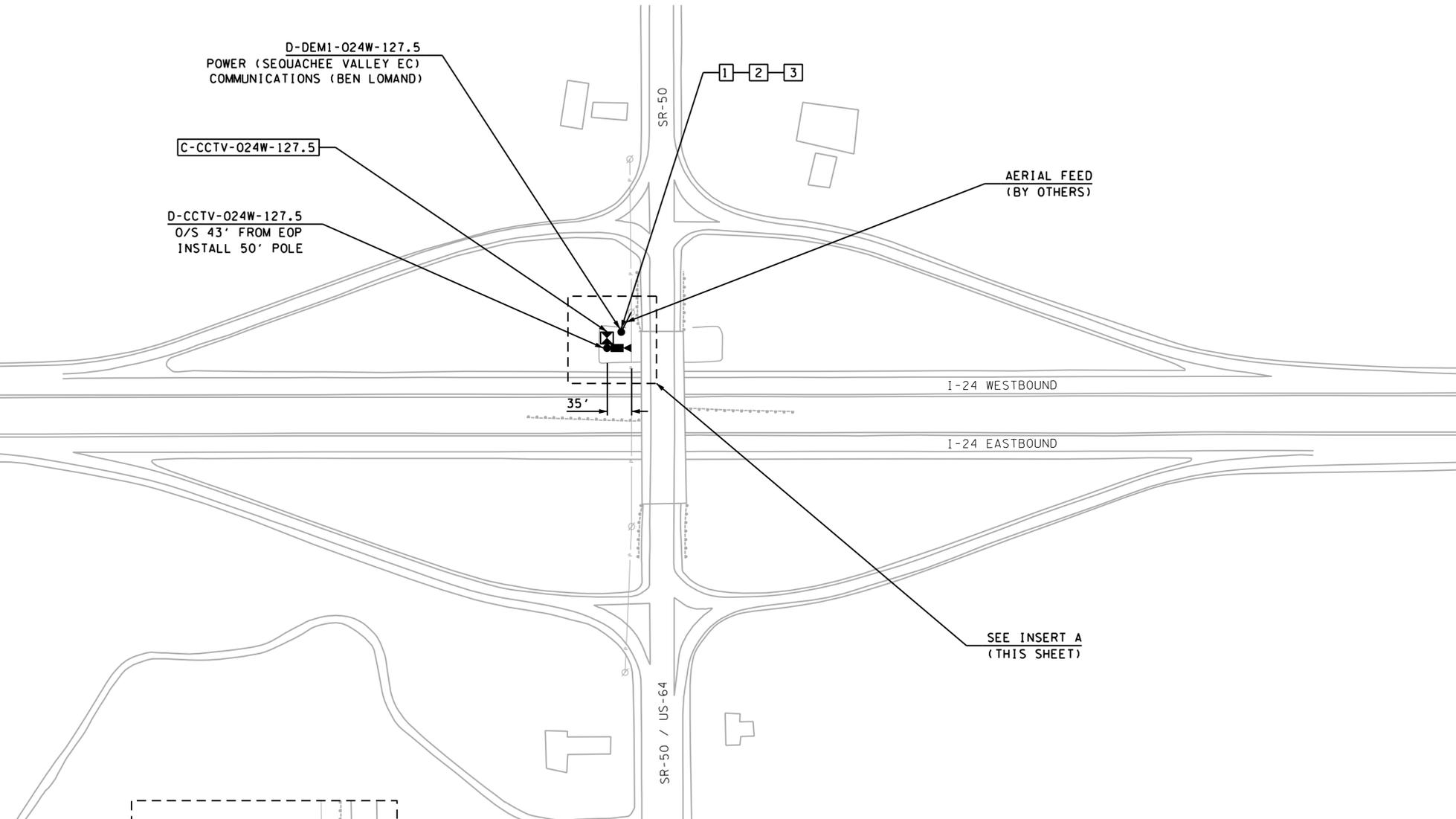
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	14

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.
- 3 AVOID CONCRETE DRAINAGE DITCH, AND AVOID EXISTING WATER LINE.

SEE SHEET 13 FOR ADDITIONAL SITES

SEE SHEET 15 FOR ADDITIONAL SITES

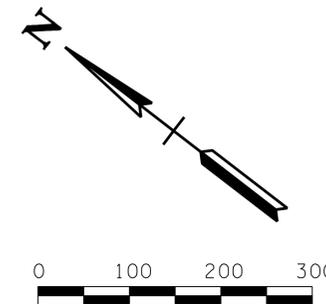


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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 127.5
CCTV
1" = 100'



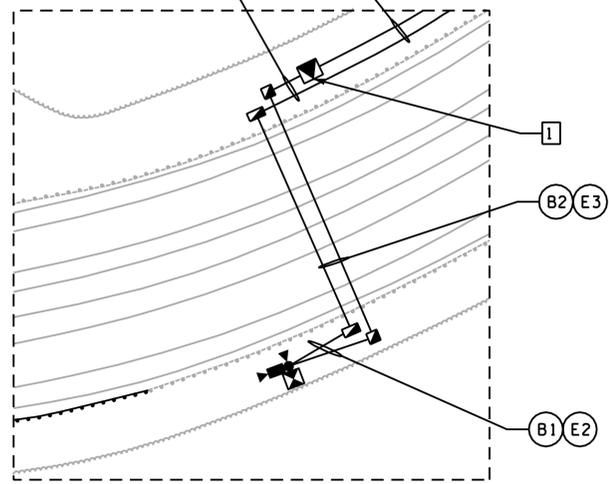
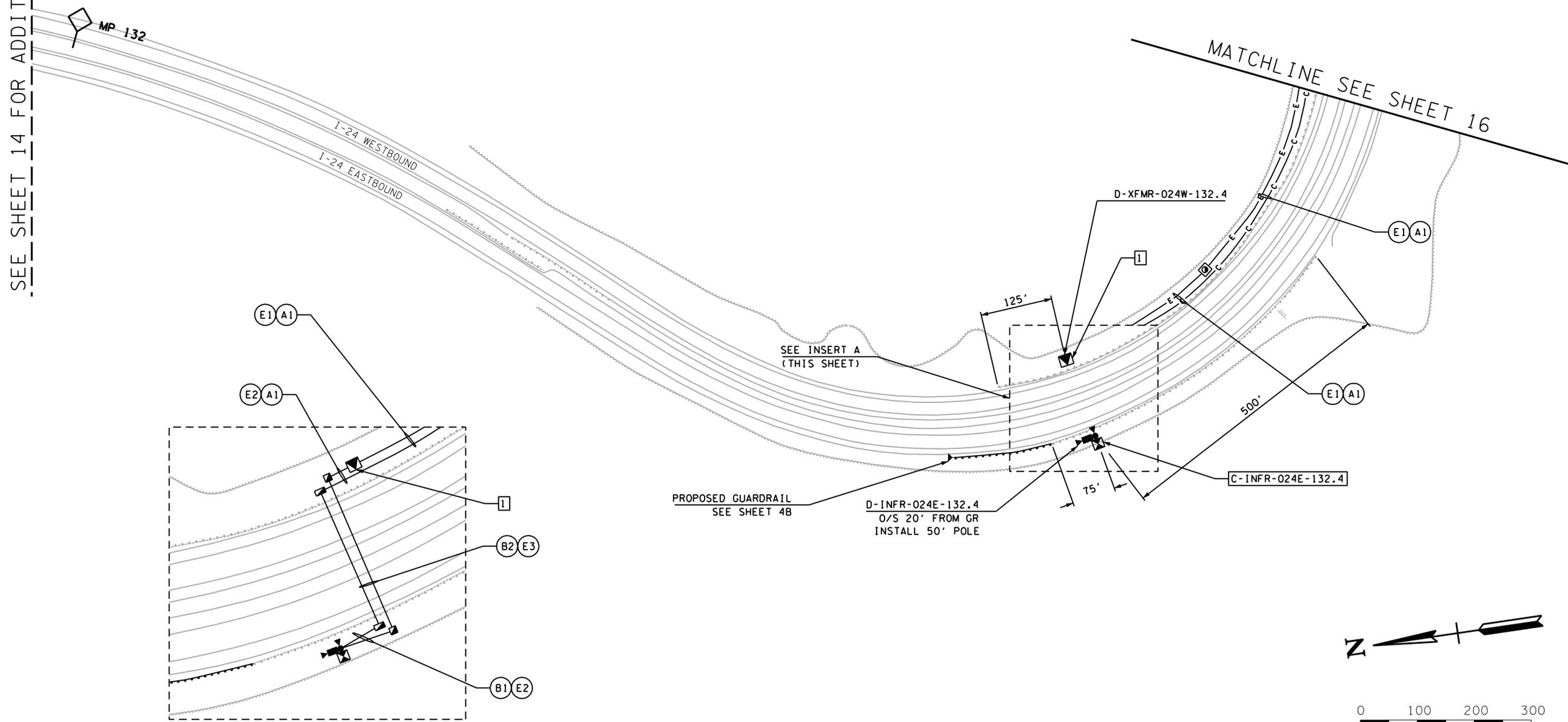
CONDUIT AND CABLE SCHEDULE														
ITEM	RUN													
	A1				B1			B2			E1	E2	E3	
	O	B	W	BR	G	B	W	G	B	W				
25KV #1/0 AWG CBL												2		
600V 1/C #4 AWG CBL												1		
#6 AWG CBL													4	4
48 SMFO CBL	1													
12 SMFO CBL					1			1						
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				TYPE 3 CONDUIT BANK			TYPE 3 CONDUIT BANK (BORED)			4" CONDUIT	2" CONDUIT	2" CONDUIT (BORED)	

NOTES:

- 1 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL 120V/240V MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET AS REQUIRED BY THE SPECIFICATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	15

SEE SHEET 14 FOR ADDITIONAL SITES



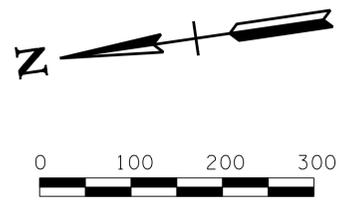
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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 132.4
INFR
1" = 100'



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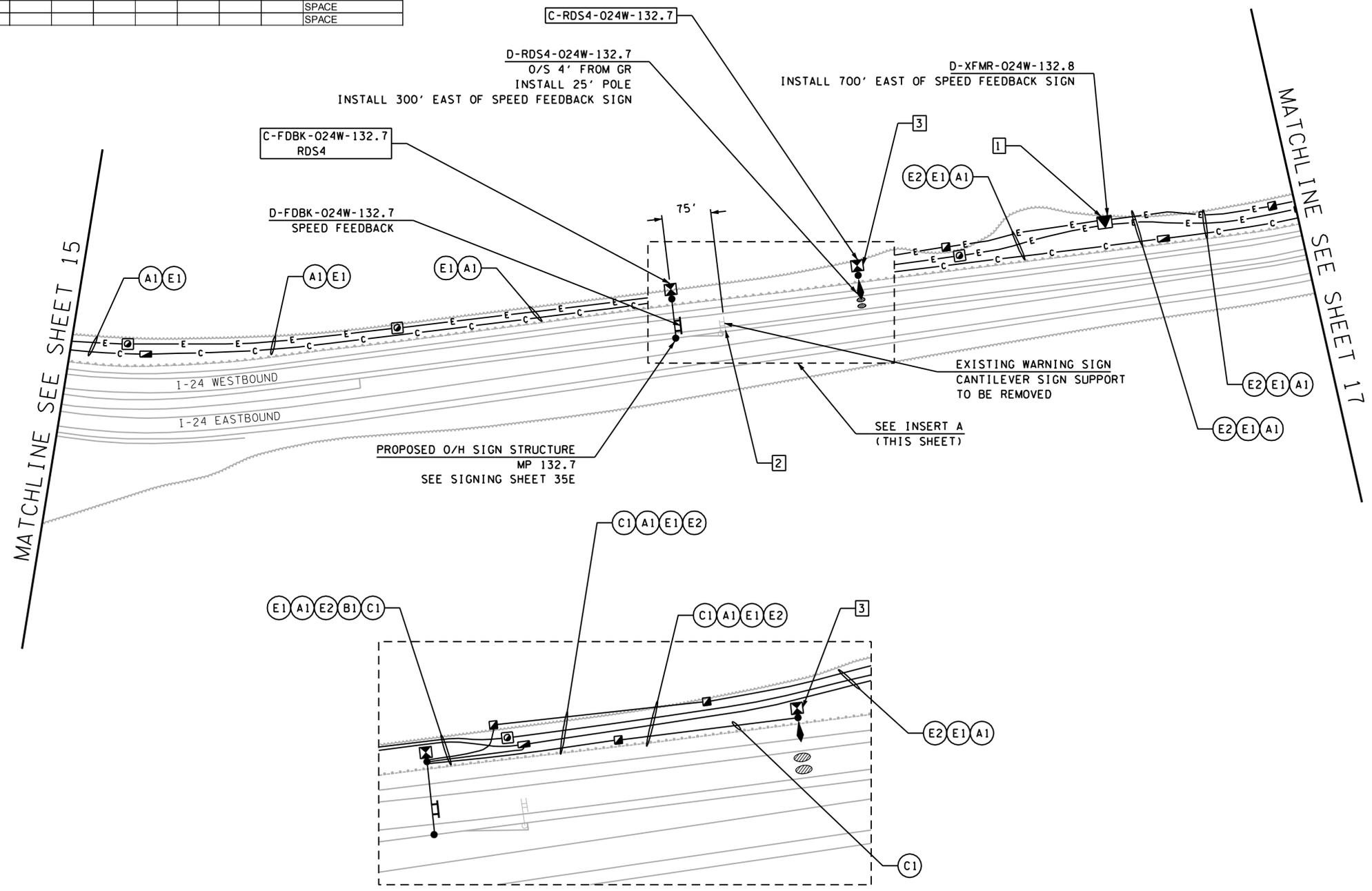
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

ITEM	CONDUIT AND CABLE SCHEDULE										E1	E2
	RUN											
	A1			B1			C1		E1	E2		
O	B	W	BR	G	B	W	GR					
25KV #1/0 AWG CBL											2	
600V 1/C #4 AWG CBL											1	
#1/0 AWG CBL												4
48 SMFO CBL	1											
12 SMFO CBL					1							
RDS CBL								1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK			TYPE 3 CONDUIT BANK			TYPE 1 CONDUIT BANK		4" CONDUIT	2" CONDUIT		

- NOTES:
- 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL A 6 SPACE 120V/240V MCB LOAD CENTER ON TRANSFORMER SECONDARY SIDE AS SHOWN ON SHEET 3R. PANELBOARD DETAIL IS SHOWN ON THIS SHEET.
 - EXISTING WARNING SIGN SHALL REMAIN FUNCTIONAL UNTIL PROPOSED SIGN IS COMPLETED AND FULLY OPERATIONAL.
 - CONTRACTOR TO VERIFY FINAL INSTALLATION LOCATION FOR THIS RADAR DETECTION SYSTEM, WITH REGARD TO DISTANCE FROM THE PROPOSED SPEED FEEDBACK SIGN. THIS DISTANCE, CURRENTLY SHOWN AT 300 FEET, MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	16

PANELBOARD SCHEDULE									
60 A MAIN CIRCUIT BREAKER, 120/240 V., 1 PHASE, 3 WIRE, 10 KAIC MINIMUM									
LOAD DESCRIPTION	BRKR AMPS	WIRE (AWG)	CKT NO	P1	P2	CKT NO	WIRE (AWG)	BRKR AMPS	LOAD DESCRIPTION
C-FDBK-024W-132.7 RDS4	15	1/0	1	x	x	2	1/0	15	C-CCTV-024E-132.9
SPACE									SPACE
SPACE									SPACE

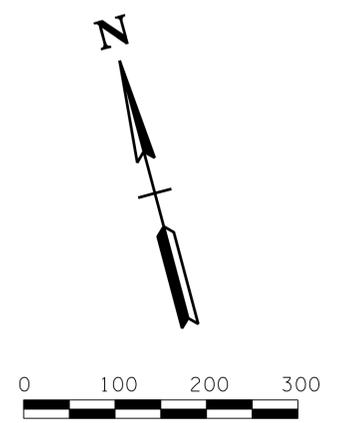


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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 132.7
FDBK
1" = 100'



Plotted on Friday, July 25, 2014 at 12:59 PM
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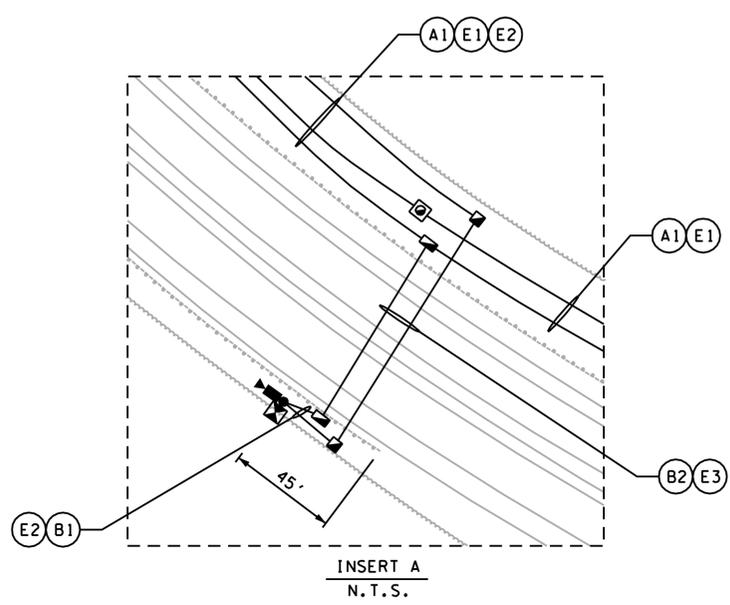
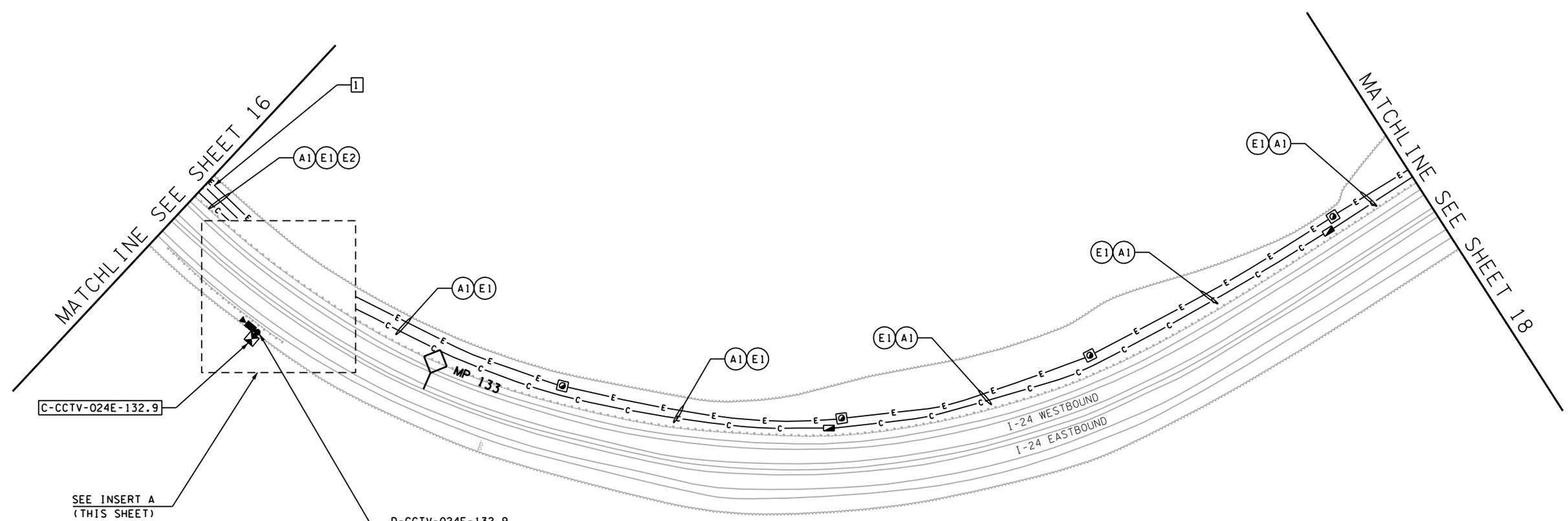
INSERT A
N. T. S.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

CONDUIT AND CABLE SCHEDULE														
ITEM	RUN													
	A1				B1			B2			E1	E2	E3	
	O	B	W	BR	G	B	W	G	B	W				
25KV #1/0 AWG CBL												2		
600V 1/C #4 AWG CBL												1		
#1/0 AWG CBL													4	4
48 SMFO CBL	1													
12 SMFO CBL					1			1						
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				TYPE 3 CONDUIT BANK			TYPE 3 CONDUIT BANK (BORED)			4" CONDUIT	2" CONDUIT	2" CONDUIT (BORED)	

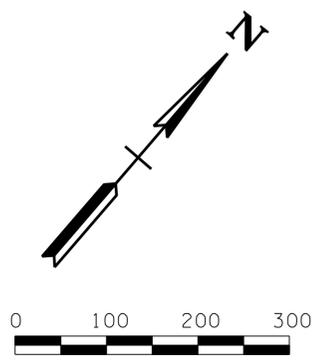
NOTES:
 1 ELECTRICAL SERVICE IS PROVIDED FOR D-CCTV-024E-132.9 FROM TRANSFORMER LOCATED ON SHEET 16.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	17



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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
 I-24
 MP 132.9
 CCTV
 1" = 100'

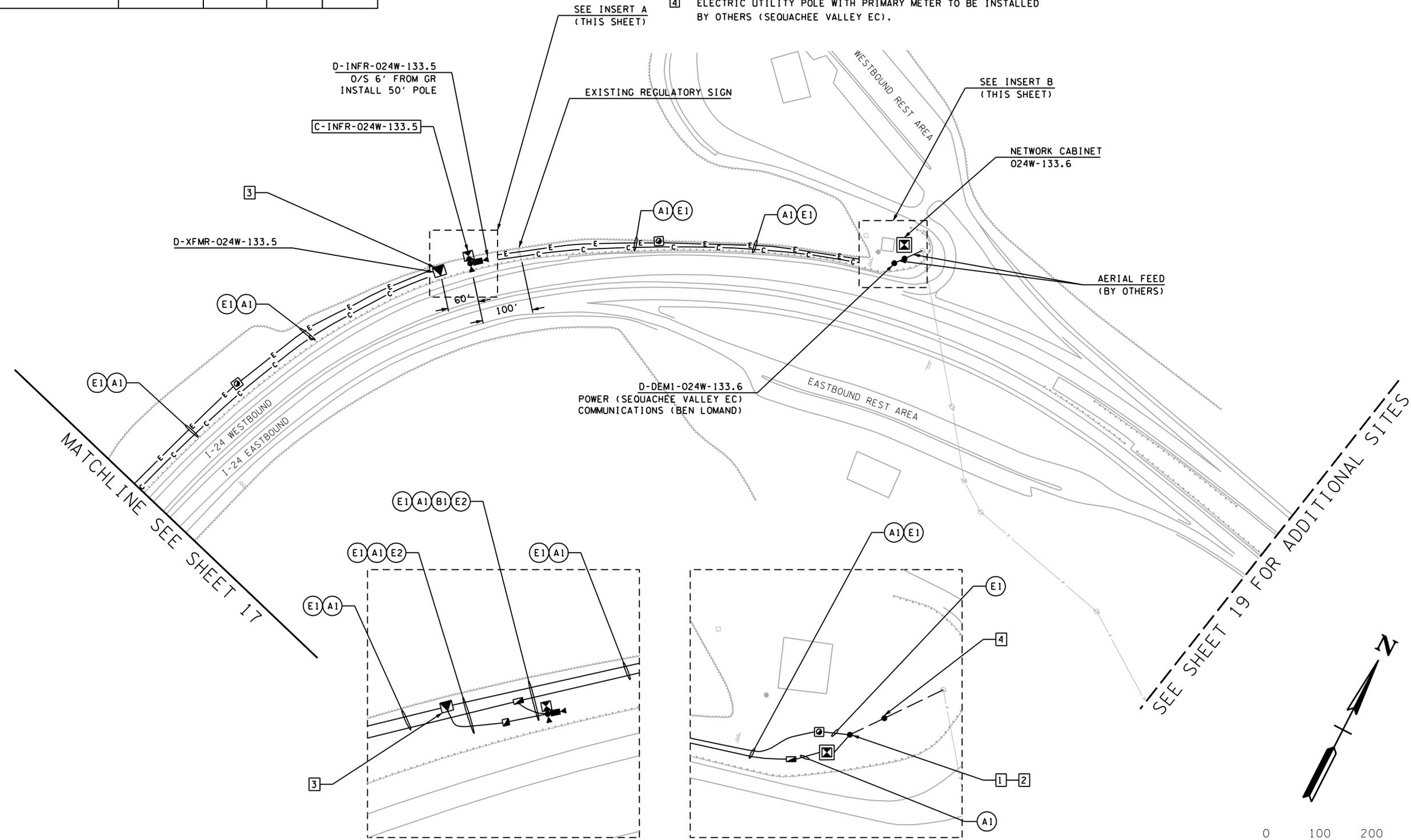
Plotted on Friday, July 25, 2014 at 12:59 PM
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CONDUIT AND CABLE SCHEDULE									
ITEM	RUN								
	A1				B1			E1	E2
	O	B	W	BR	G	B	W		
25KV #1/0 AWG CBL								2	
600V 1/C #4 AWG CBL								1	
#8 AWG CBL									4
48 SMFO CBL	1								
12 SMFO CBL					1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK			TYPE 3 CONDUIT BANK			4" CONDUIT	2" CONDUIT	

NOTES:

- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 7.2 KV SINGLE PHASE ELECTRICAL SERVICE (FUTURE UPGRADE TO 14.4KV) AT THIS LOCATION. CONTRACTOR SHALL PROVIDE NEW 40' DEMARCATION POLE AT THIS LOCATION FOR OVERHEAD ELECTRICAL SERVICE. CONTRACTOR SHALL COORDINATE WITH SEQUACHEE VALLEY EC FOR POLE REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (TWO T1 DROPS REQUIRED) AT THIS LOCATION.
- 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL 120V/240V MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET AS REQUIRED BY THE SPECIFICATIONS.
- ELECTRIC UTILITY POLE WITH PRIMARY METER TO BE INSTALLED BY OTHERS (SEQUACHEE VALLEY EC).

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	18

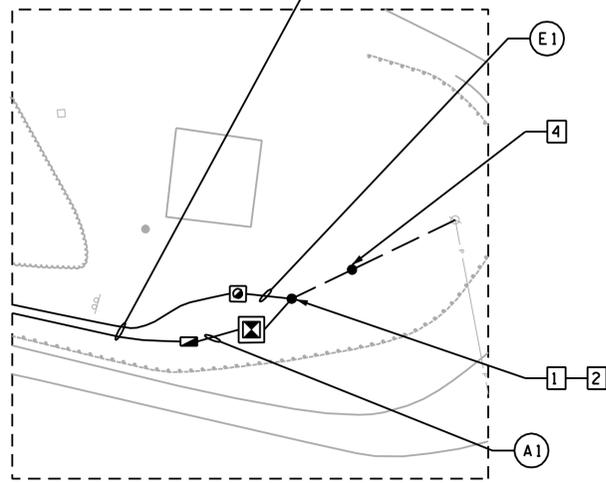
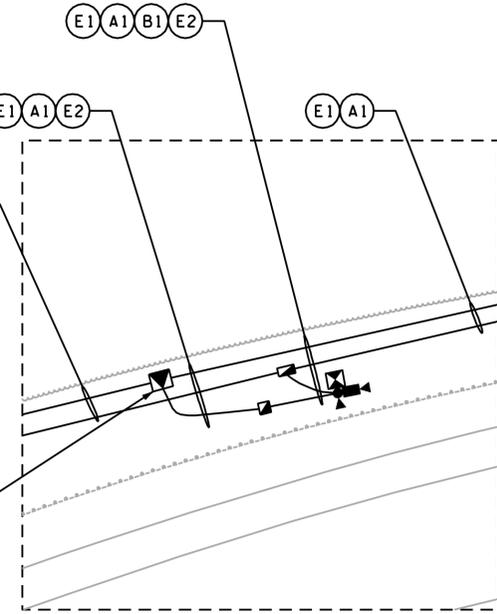
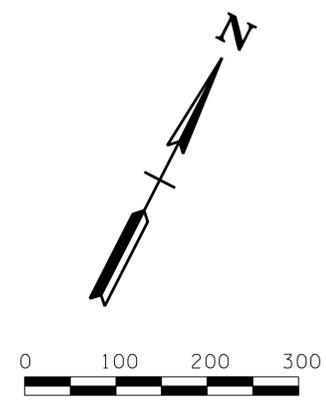


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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 133.5
INFR
1" = 100'



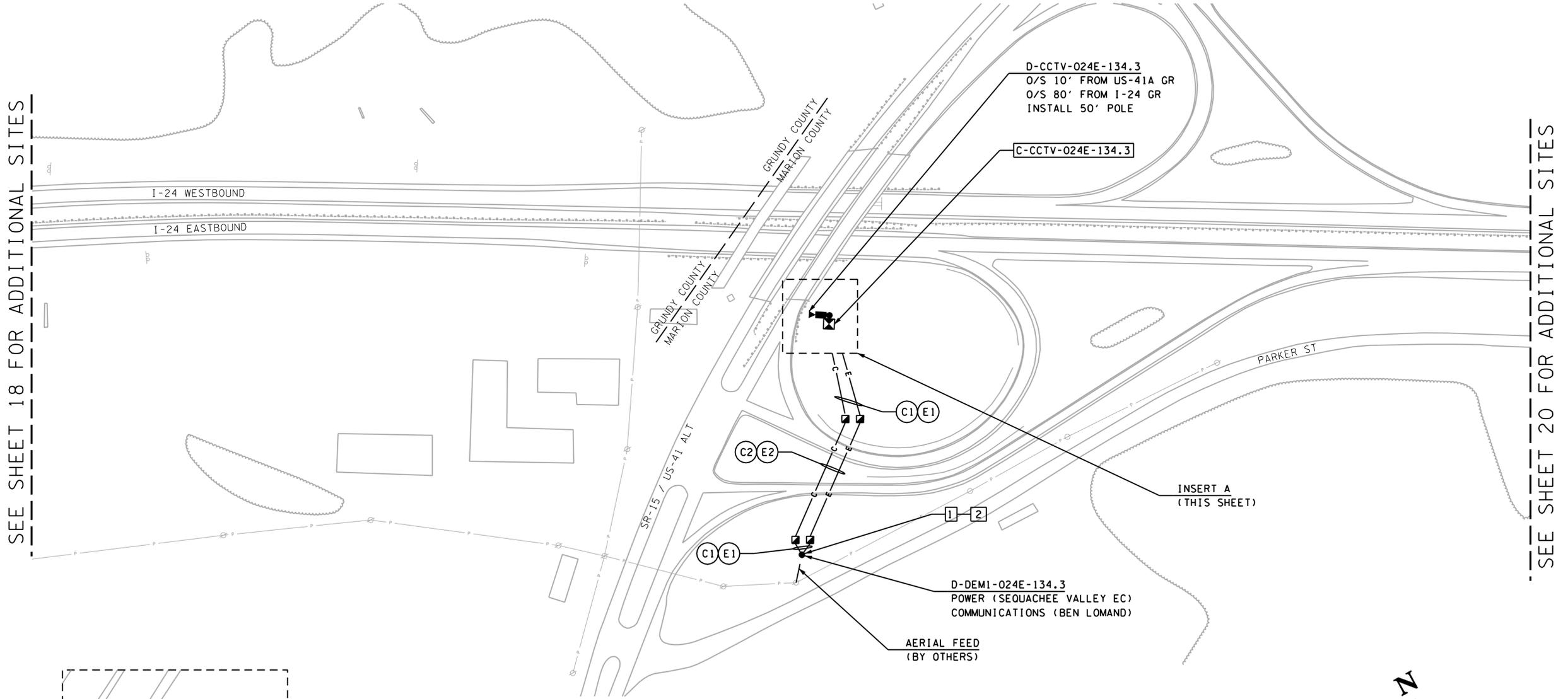
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ITEM	CONDUIT AND CABLE SCHEDULE			
	RUN			
	C1	C2	E1	E2
#4 AWG CBL			3	3
CAT 6 CBL	1	1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT (BORED)	2" CONDUIT	2" CONDUIT (BORED)

NOTES:

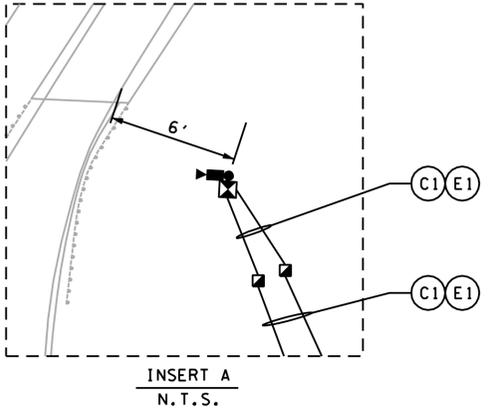
- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	19



SEE SHEET 18 FOR ADDITIONAL SITES

SEE SHEET 20 FOR ADDITIONAL SITES



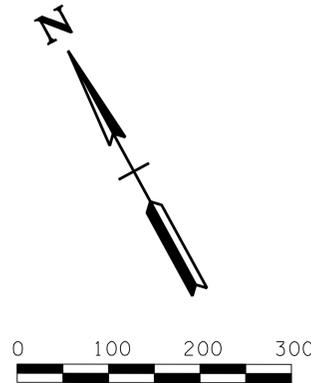
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N.T.S.

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DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 134.3
CCTV
1" = 100'



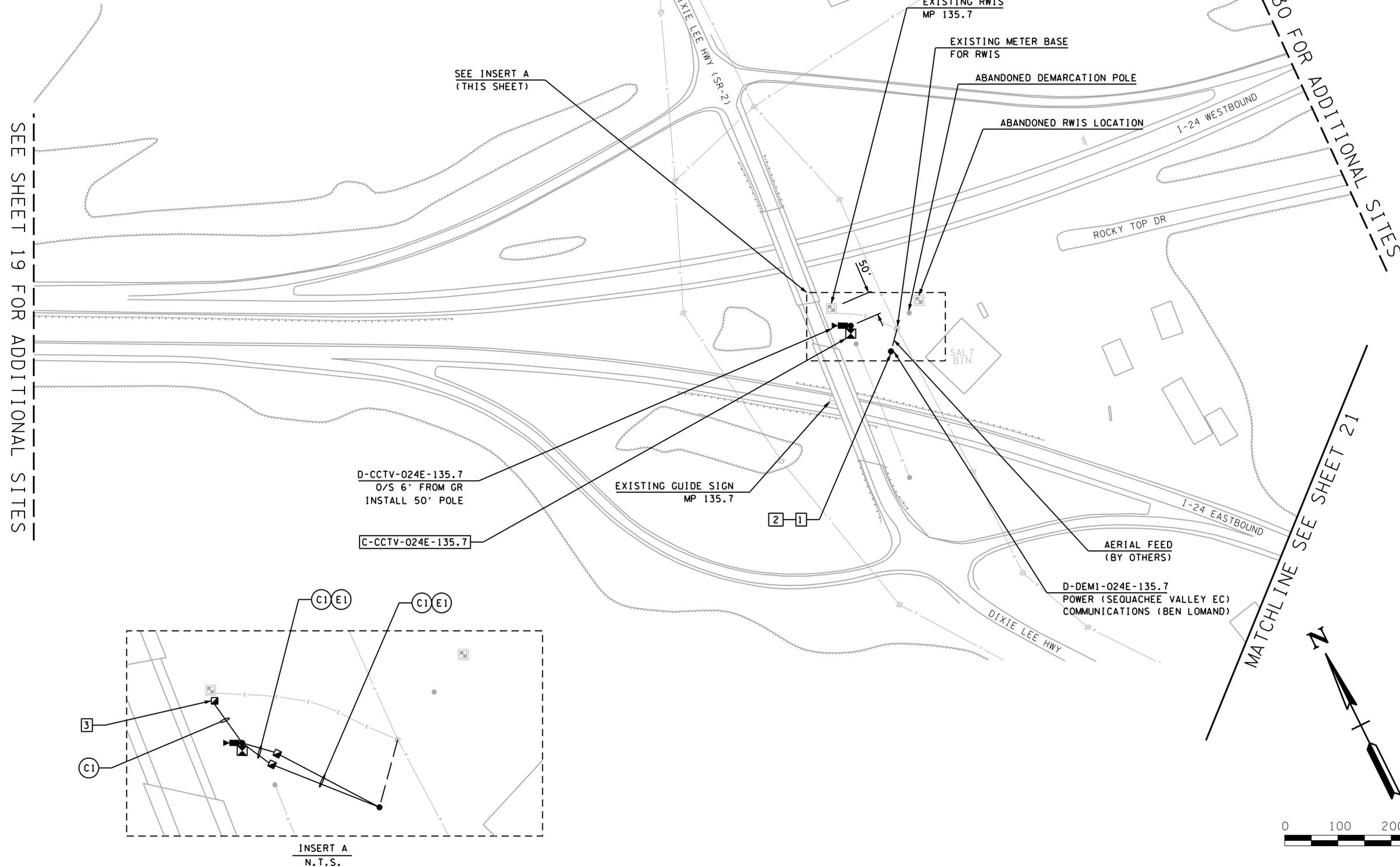
Plotted on Friday, July 25, 2014 at 12:59 PM
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CONDUIT AND CABLE SCHEDULE		
ITEM	RUN	
	C1	E1
#8 AWG CBL		3
CAT 6 CBL	1	
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.
- 3 PROVIDE CONDUIT AND PULL BOX WITH COIL OF CAT 6 CABLE. FUTURE CONNECTION TO THE EXISTING RWIS EQUIPMENT WILL BE PERFORMED BY OTHERS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	20



SEE SHEET 19 FOR ADDITIONAL SITES

SEE SHEET 30 FOR ADDITIONAL SITES

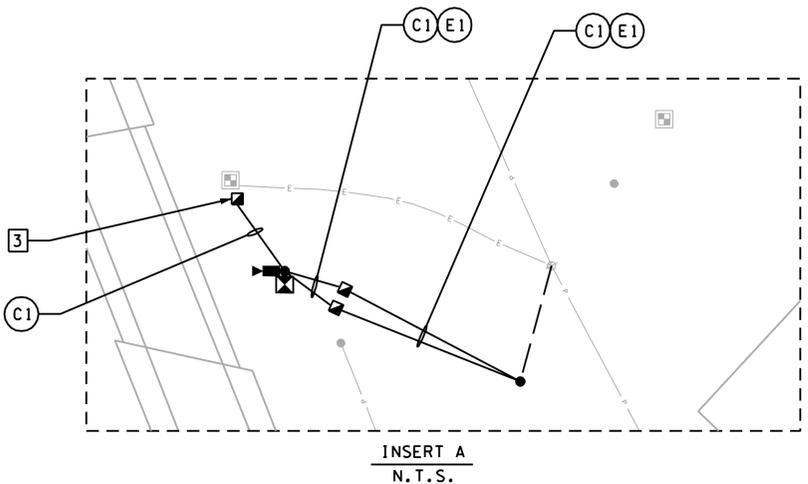
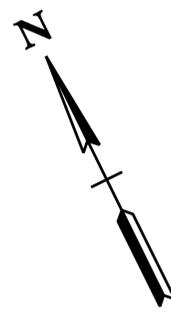
MATCHLINE SEE SHEET 21

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DEPARTMENT OF TRANSPORTATION

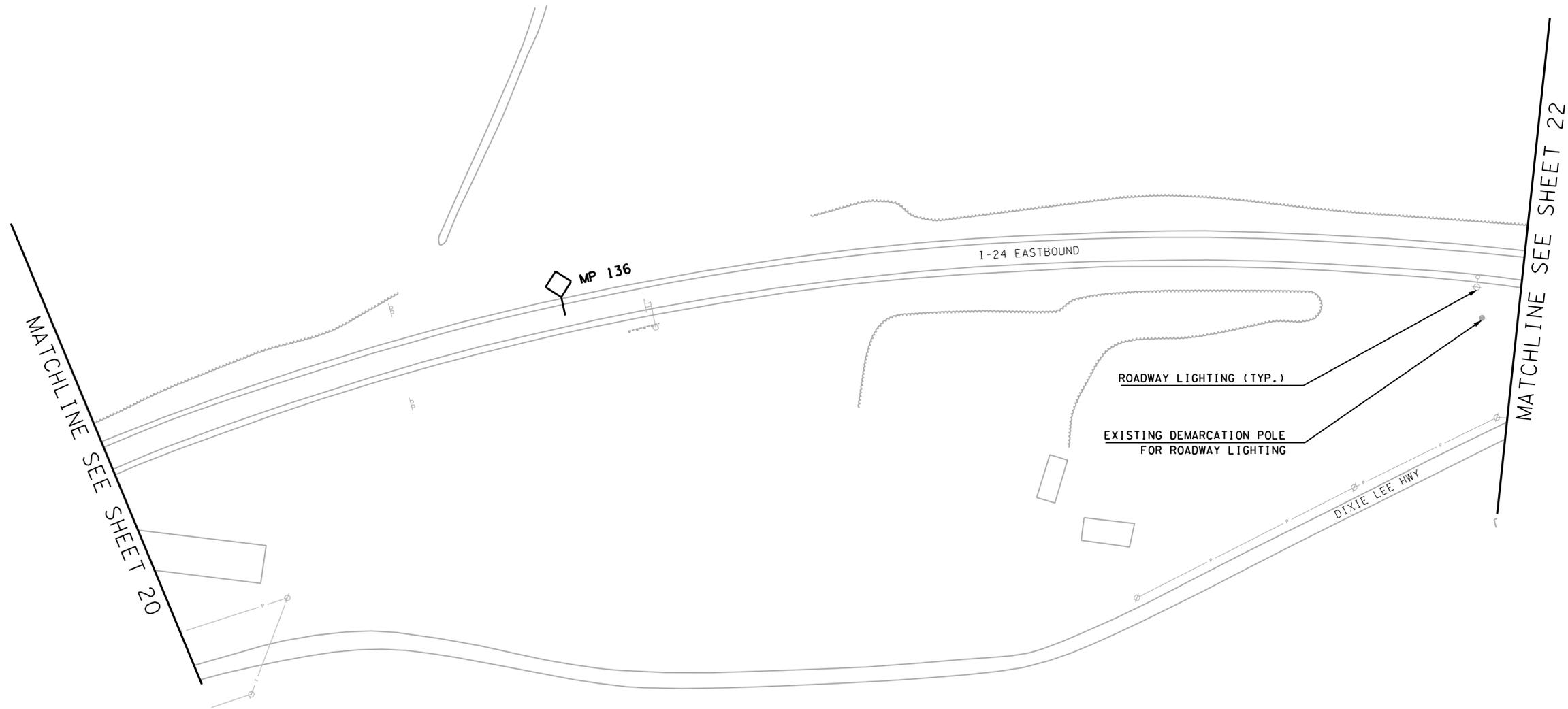
ITS LAYOUT
I-24
MP 135.7
CCTV
1" = 100'



NOTES:

1 NO CONSTRUCTION ACTIVITY IS PROPOSED ON THIS SHEET.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	21



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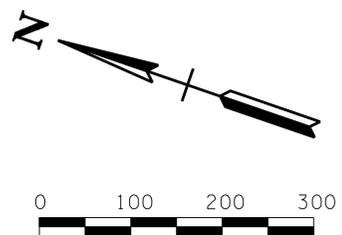
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

ITS LAYOUT

I-24
 MP 136.0

1" = 100'



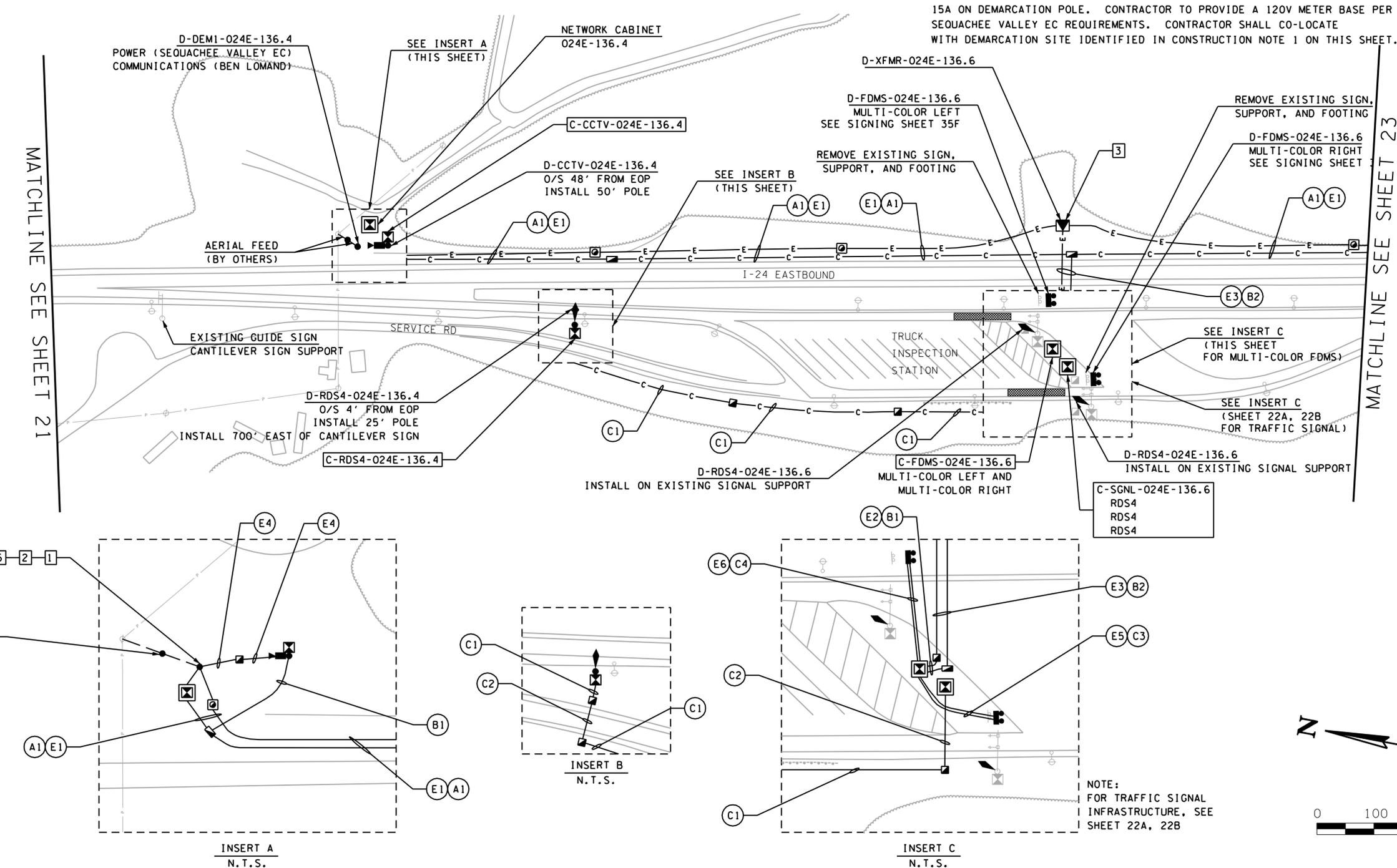
CONDUIT AND CABLE SCHEDULE

ITEM	RUN																				
	A1				B1			B2			C1	C2	C3	C4	E1	E2	E3	E4	E5	E6	
	O	B	W	BR	O	B	W	O	B	W	GR	GR									
25KV #1/0 AWG CBL														2							
600V 1/C #4 AWG CBL														1							
#1/0 AWG CBL															4	4					
#8 AWG CBL																	3				
48 SMFO CBL	1																				
12 SMFO CBL					1		1														
RDS CBL										1	1										
DMS PWR CBL																		1	1		
DMS COMM CBL												1	1								
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				TYPE 3 CONDUIT BANK			TYPE 3 CONDUIT BANK (BORED)			TYPE 1 CONDUIT BANK		TYPE 1 CONDUIT BANK (BORED)		2" CONDUIT	2" CONDUIT (BORED)	4" CONDUIT	2" CONDUIT	2" CONDUIT (BORED)	2" CONDUIT	2" CONDUIT (BORED)

NOTES:

- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 7.2 KV SINGLE PHASE ELECTRICAL SERVICE (FUTURE UPGRADE TO 14.4KV) AT THIS LOCATION. CONTRACTOR SHALL PROVIDE NEW 40' DEMARCATION POLE AT THIS LOCATION FOR OVERHEAD ELECTRICAL SERVICE. CONTRACTOR SHALL COORDINATE WITH SEQUACHEE VALLEY EC FOR POLE REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (TWO T1 DROPS REQUIRED) AT THIS LOCATION.
- 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL 120V/240V MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET AS REQUIRED BY THE SPECIFICATIONS. MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET "C-FDMS-024E-136.6" SHALL INCLUDE ADDITIONAL SPACE FOR TWO (2) 40A TWO-POLE MOLDED CASE CIRCUIT BREAKERS TO SERVE THE TWO (2) MULTI-COLOR DMS.
- ELECTRIC UTILITY POLE WITH PRIMARY METER TO BE INSTALLED BY OTHERS (SEQUACHEE VALLEY EC).
- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS. CONTRACTOR SHALL CO-LOCATE WITH DEMARCATION SITE IDENTIFIED IN CONSTRUCTION NOTE 1 ON THIS SHEET.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	22

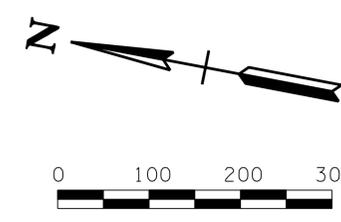


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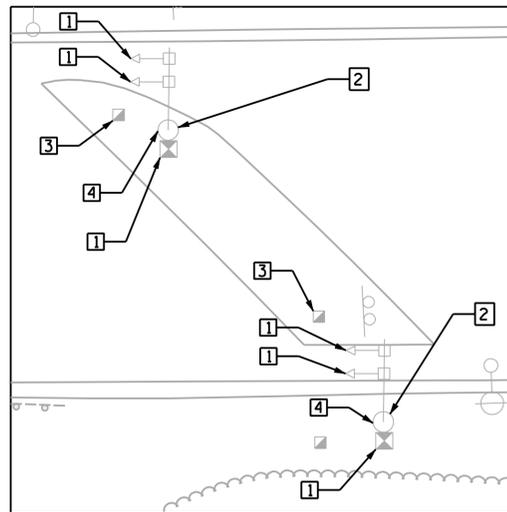
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ITS LAYOUT
I-24
MP 136.4
CCTV
1" = 100'



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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	22A



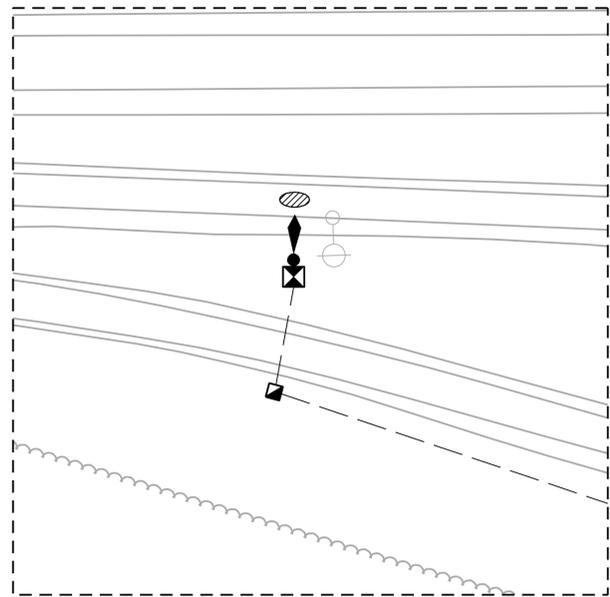
REMOVAL DIAGRAM
N.T.S.

REMOVAL NOTES:

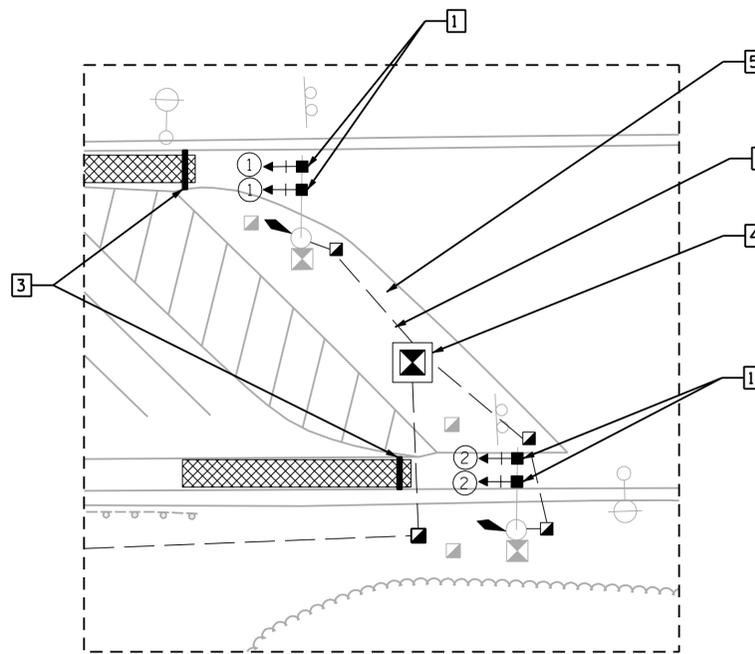
- 1 REMOVE EXISTING SIGNAL HEADS (INCLUDING MOUNTING EQUIPMENT), SIGNAL CONDUCTOR CABLES, POLE-MOUNTED CABINETS (AND ALL OF THEIR CONTENTS), AND LOOP LEAD-IN CABLES.
- 2 EXISTING MAST ARM POLE, SHAFT, AND FOUNDATION ARE TO REMAIN IN PLACE.
- 3 UNDERGROUND CONDUIT SYSTEM SHALL BE ABANDONED IN PLACE.
- 4 VOID ON EACH SIGNAL POLE LEFT AFTER THE REMOVAL OF THE CONDUIT ENTRANCE FROM THE REMOVED CABINET SHALL BE CAPPED AND CLOSED VIA A WATERPROOF COVERING MADE OF SIMILAR MATERIAL TO THAT OF THE SIGNAL POLE.

CONSTRUCTION NOTES:

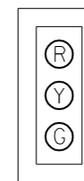
- 1 INSTALL PROPOSED SIGNAL HEADS AT SAME POSITIONS ON THE MAST ARM AS THE REMOVED EXISTING SIGNAL HEADS.
- 2 CONNECTION OF PROPOSED CONDUIT INTO EXISTING SIGNAL POLE FOUNDATION SHALL BE ACCOMPLISHED BY INTERCEPTING AN EXISTING SPARE CONDUIT STUB-OUT OR BY RE-USING THE EXISTING CONDUIT SYSTEM.
- 3 RESTRIPE 24" WIDTH STOP LINE.
- 4 MODIFY AND RE-ROUTE THE EXISTING ELECTRICAL SERVICE CONNECTION FROM EITHER OF THE EXISTING POLE-MOUNTED TRAFFIC SIGNAL CABINETS TO THE PROPOSED BASE-MOUNTED TRAFFIC SIGNAL CABINET.
- 5 REMOVAL AND DISPOSAL OF EXISTING CONCRETE, PLACEMENT OF NEW CONCRETE, AND SAWING FOR THE INSTALLATION OF NEW CABINET FOUNDATIONS SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER USING PAY ITEM 501-01.



INSERT B
FROM SHEET 22



INSERT C
FROM SHEET 22



1 2
SIGNAL HEADS

LEGEND

- CONTROLLER CABINET
- EXISTING STEEL MAST ARM POLE
- SIGNAL HEAD WITH BACK PLATE
- PULL BOX TYPE B (SIGNAL)
- PULL BOX TYPE E (FIBER)
- RADAR DETECTION SYSTEM (RDS)
- RDS DETECTION ZONE
- RDS DETECTION ZONE

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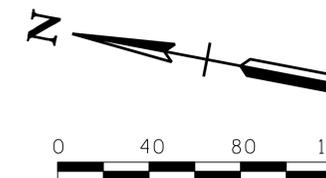
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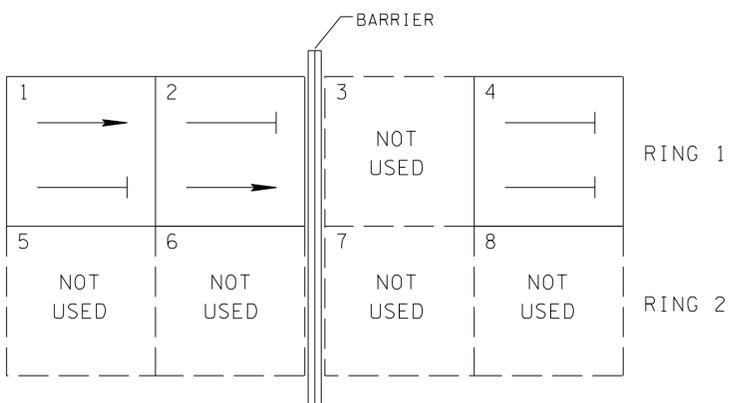
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
SIGNAL LAYOUT

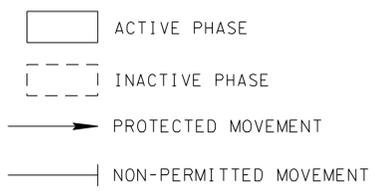
I-24
MP 136.6

1" = 40'





NEMA EIGHT PHASE DESIGNATIONS



- SIGNAL SHOULD REST IN PHASE 4, WHICH IS A RED INDICATION FOR BOTH TRUCK LANES, UNTIL A CALL IS PLACE ON EITHER PHASE 1 OR 2.
- TIMING PLAN 1 SHALL REMAIN OPERATIONAL AT ALL TIMES UNLESS THE UPSTREAM QUEUE DETECTOR SHOWN AS DETECTION ZONE 1-2 DETECTS VEHICLE OCCUPANCY. IF AFTER A 20 SECOND DELAY, OCCUPANCY IS STILL DETECTED, THEN TIMING PLAN 2 SHALL BE USED. TIMING PLAN 2 SHALL RUN UNTIL OCCUPANCY IS NO LONGER DETECTED ON DETECTION ZONE 1-2 FOLLOWING A 30 SECOND DELAY.
- THESE TIMINGS ARE INITIAL AND MAY BE ADJUSTED BY THE ENGINEER BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

TIMING PLAN 1 (SEC.)

PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX 1	MAX 2	CLEARANCE		RECALL TO	MEMORY POSITION (1)
					YELLOW	ALL RED		
1	4.0	0.0	--	--	3.0	0.0		L
2	4.0	0.0	--	--	3.0	0.0		L
4	--	--	--	--				

(1) L = LOCK

TIMING PLAN 2 (SEC.)

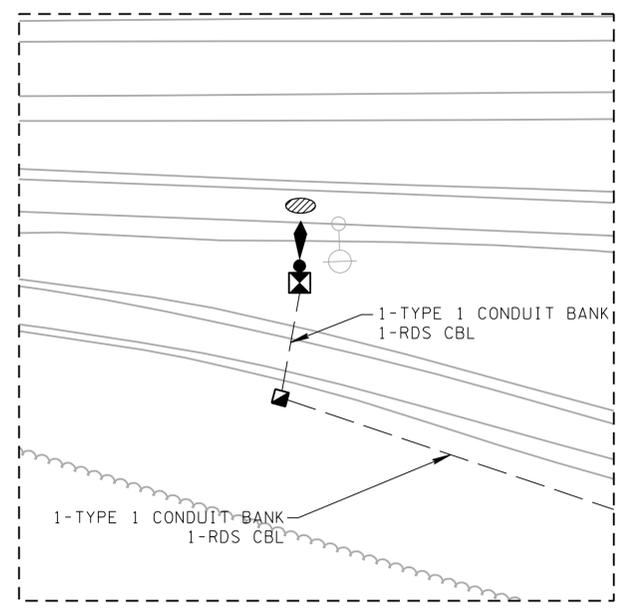
PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX 1	MAX 2	CLEARANCE		RECALL TO	MEMORY POSITION (1)
					YELLOW	ALL RED		
1	16.0	0.0	--	--	3.0	0.0		L
2	16.0	0.0	--	--	3.0	0.0		L
4	--	--	--	--				

(1) L = LOCK

DETECTION ZONE AND AMP ASSIGNMENTS

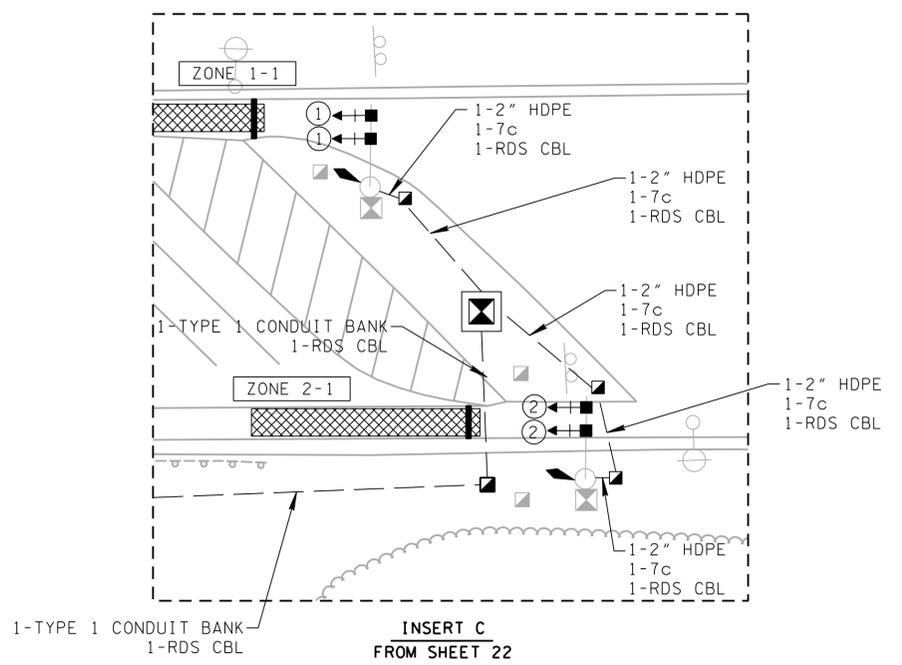
ZONE #	ZONE LENGTH	AMP MODE	AMP FEATURE TIMING (SEC.)	ASSOC. #
1-1	80'	PRES.		1
2-1	80'	PRES.		2

WIRING DIAGRAM



**INSERT B
FROM SHEET 22**

WIRING DIAGRAM



**INSERT C
FROM SHEET 22**

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BIDDING**

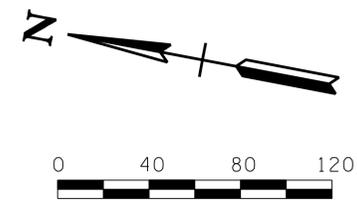
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DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL
SIGNAL LAYOUT**

I-24
MP 136.6

1" = 40'



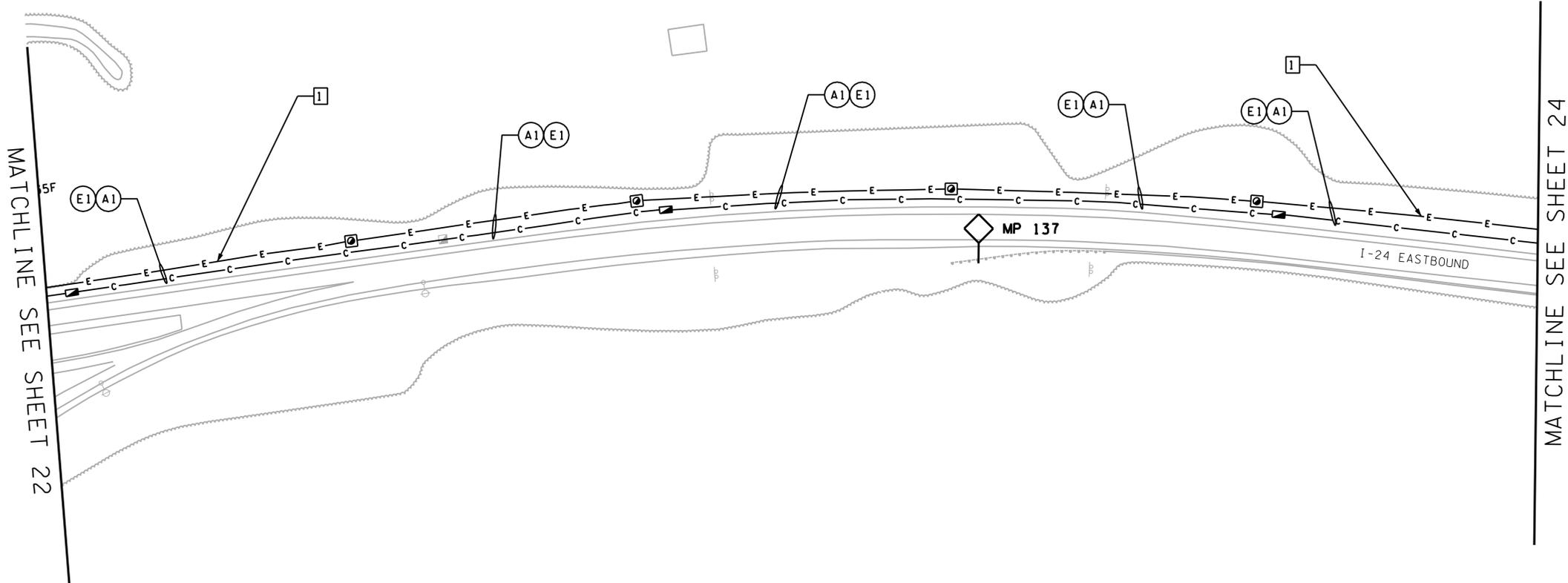
CONDUIT AND CABLE SCHEDULE					
ITEM	RUN				
	A1				E1
	O	B	W	BR	
25KV #1/0 AWG CBL					2
600V 1/C #4 AWG CBL					1
48 SMFO CBL	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				4" CONDUIT

NOTES:

- 1 EXISTING PULLBOXES (APPROXIMATE 250 FEET SPACING) AND ELECTRICAL CONDUIT TO BE REMOVED. PROPOSED CONDUIT ROUTE SHALL BE INSTALLED IN EXISTING TRENCH ONCE EXISTING CONDUIT ROUTE HAS BEEN REMOVED. NO SEPARATE PAYMENT IS PROVIDED FOR REMOVAL AND DISPOSAL OF EXISTING CONDUIT, CABLE, AND PULL BOXES ALONG THIS ROUTE. THE COST OF REMOVAL SHALL BE INCLUDED AS PART OF THE 725-22.24 PAY ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	23

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

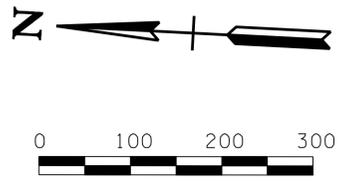


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ITS LAYOUT
I-24
MP 137.0
CONDUIT
1" = 100'



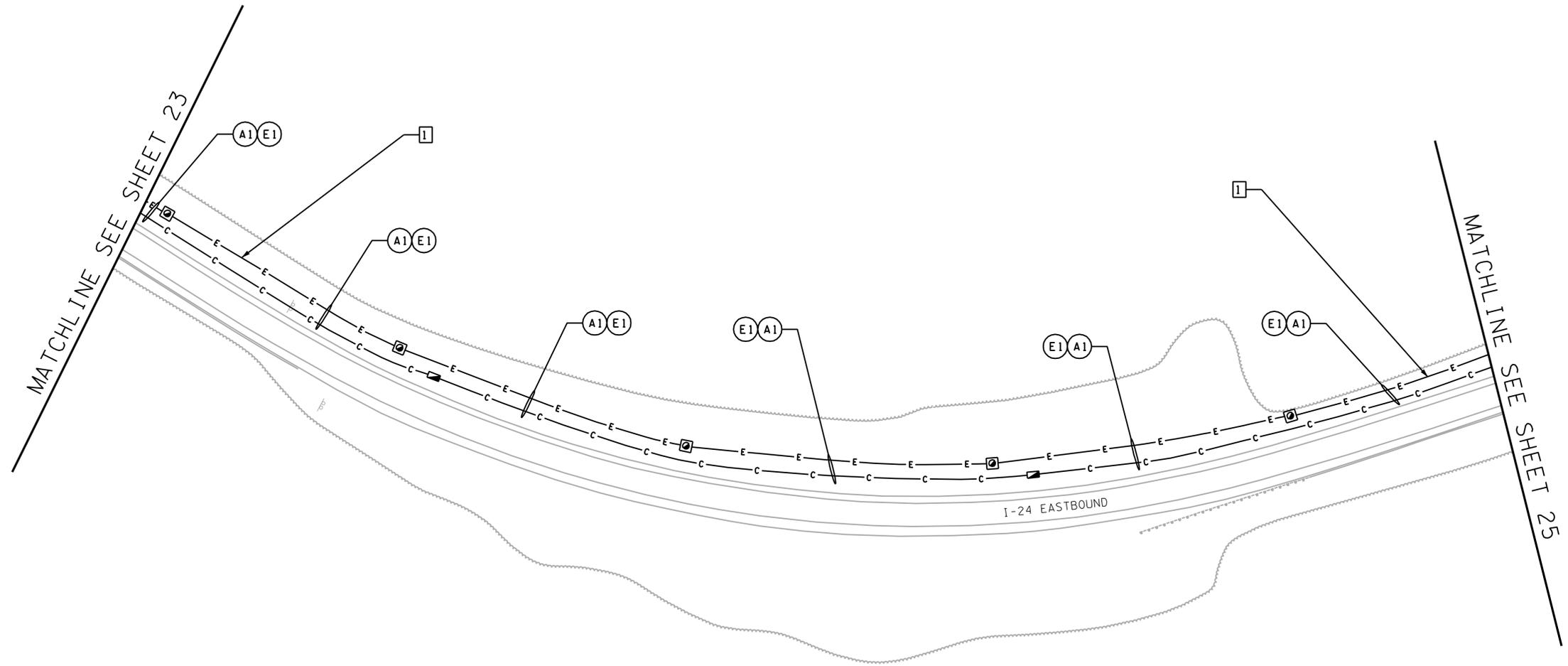
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TENNESSEE D.O.T.					
DESIGN DIVISION					
FILE NO.					
CONDUIT AND CABLE SCHEDULE					
ITEM	RUN				
	A1				E1
	O	B	W	BR	
25KV #1/0 AWG CBL					2
600V 1/C #4 AWG CBL					1
48 SMFO CBL	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK		4" CONDUIT		

NOTES:

- 1 EXISTING PULLBOXES (APPROXIMATE 250 FEET SPACING) AND ELECTRICAL CONDUIT TO BE REMOVED. PROPOSED CONDUIT ROUTE SHALL BE INSTALLED IN EXISTING TRENCH ONCE EXISTING CONDUIT ROUTE HAS BEEN REMOVED. NO SEPARATE PAYMENT IS PROVIDED FOR REMOVAL AND DISPOSAL OF EXISTING CONDUIT, CABLE, AND PULL BOXES ALONG THIS ROUTE. THE COST OF REMOVAL SHALL BE INCLUDED AS PART OF THE 725-22.24 PAY ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	24

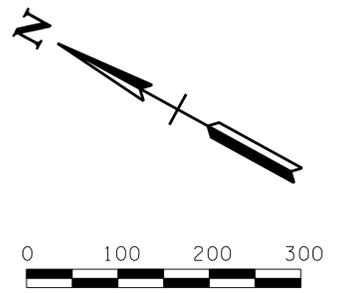


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ITS LAYOUT
I-24
MP 137.4
CONDUIT
1" = 100'



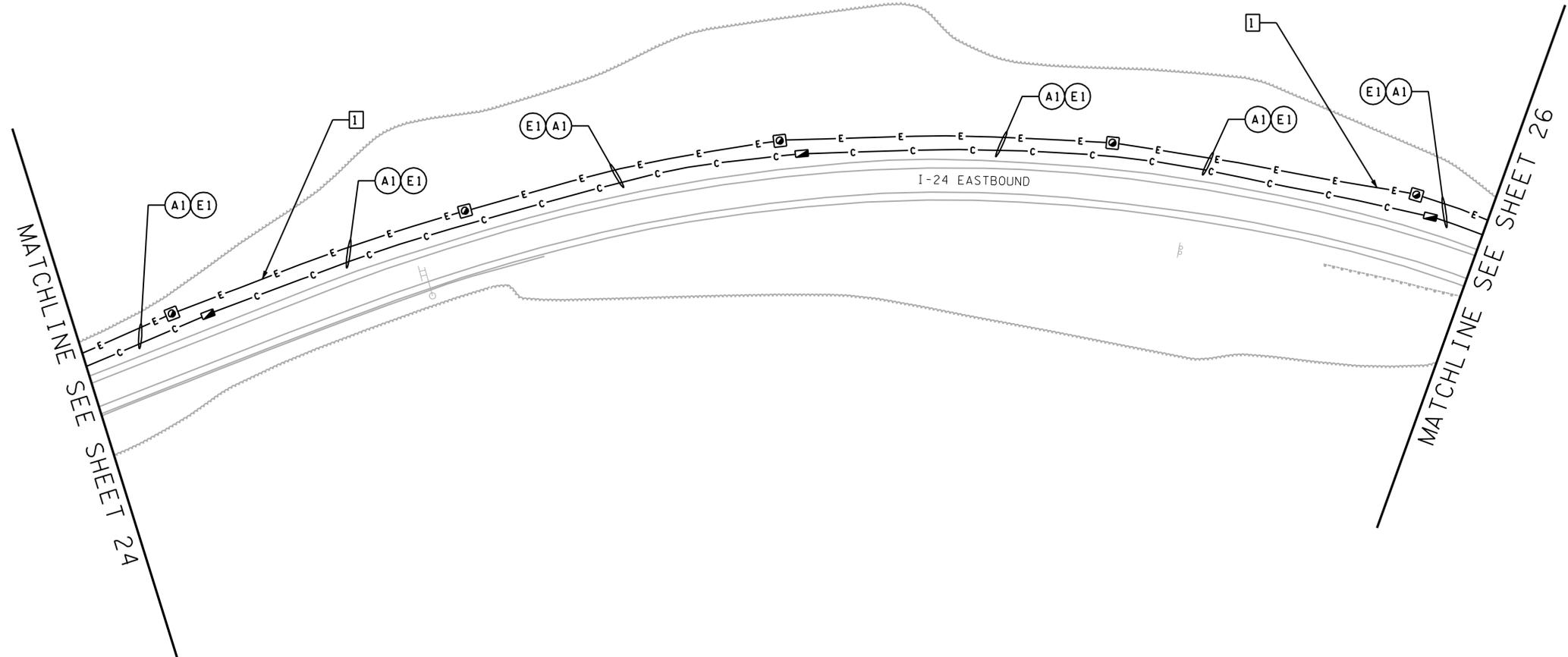
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TENNESSEE D.O.T.					
DESIGN DIVISION					
FILE NO.					
CONDUIT AND CABLE SCHEDULE					
ITEM	RUN				
	A1				E1
	O	B	W	BR	
25KV #1/0 AWG CBL					2
600V 1/C #4 AWG CBL					1
48 SMFO CBL	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				4" CONDUIT

NOTES:

- 1 EXISTING PULLBOXES (APPROXIMATE 250 FEET SPACING) AND ELECTRICAL CONDUIT TO BE REMOVED. PROPOSED CONDUIT ROUTE SHALL BE INSTALLED IN EXISTING TRENCH ONCE EXISTING CONDUIT ROUTE HAS BEEN REMOVED. NO SEPARATE PAYMENT IS PROVIDED FOR REMOVAL AND DISPOSAL OF EXISTING CONDUIT, CABLE, AND PULL BOXES ALONG THIS ROUTE. THE COST OF REMOVAL SHALL BE INCLUDED AS PART OF THE 725-22.24 PAY ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	25

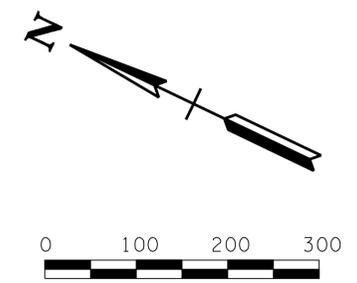


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ITS LAYOUT
I-24
MP 137.8
CONDUIT
1" = 100'



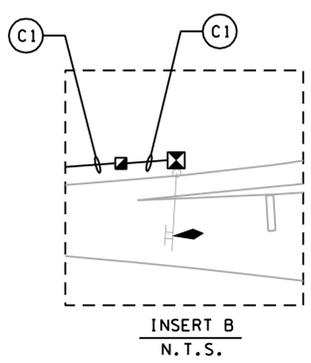
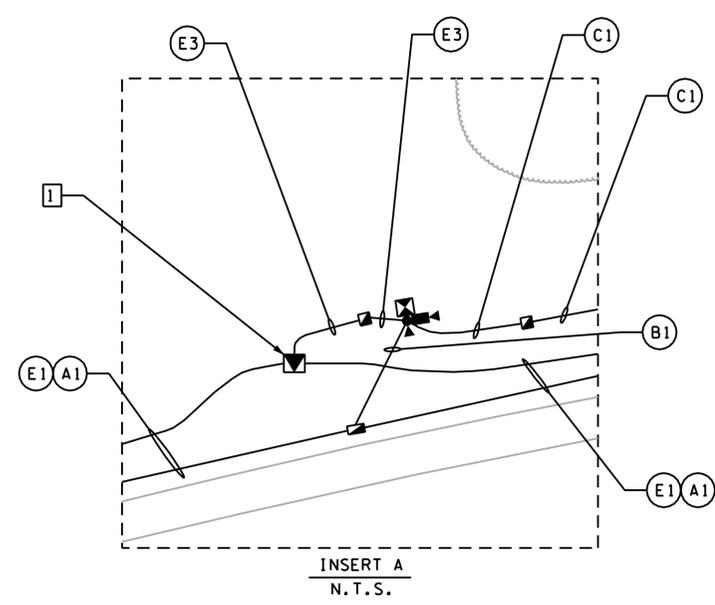
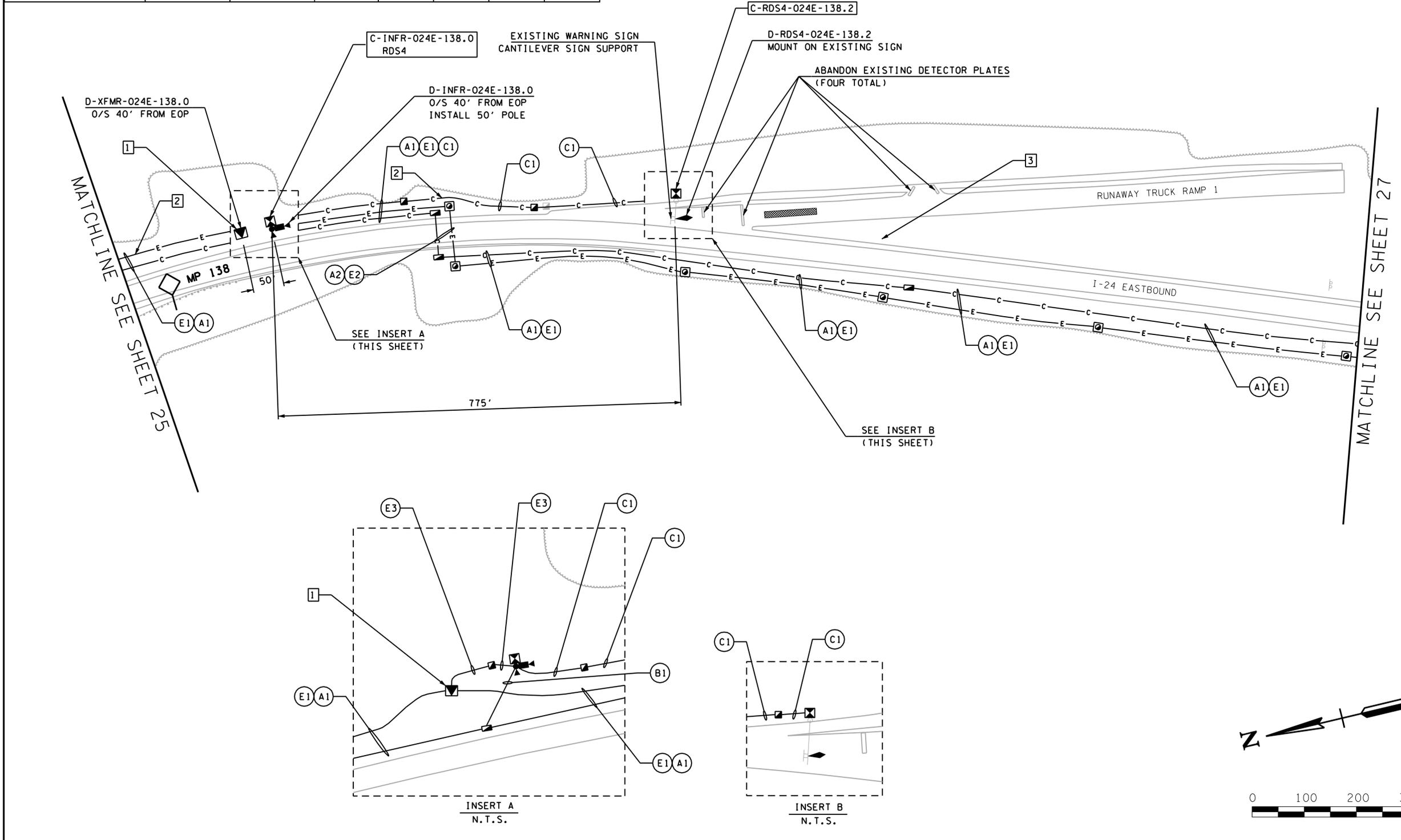
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ITEM	CONDUIT AND CABLE SCHEDULE												E1	E2	E3	
	RUN															
	A1				A2				B1			C1				
	O	B	W	BR	O	B	W	BR	G	B	W	GR				
25KV #1/0 AWG CBL														2	2	
600V 1/C #4 AWG CBL														1	1	
#8 AWG CBL																4
48 SMFO CBL	1				1											
12 SMFO CBL									1							
RDS CBL												1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				TYPE 4 CONDUIT BANK (BORED)				TYPE 3 CONDUIT BANK			TYPE 1 CONDUIT BANK	4" CONDUIT	4" CONDUIT (BORED)	2" CONDUIT	

NOTES:

- 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL 120V/240V MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET AS REQUIRED BY THE SPECIFICATIONS.
- EXISTING PULLBOXES (APPROXIMATE 250 FEET SPACING) AND ELECTRICAL CONDUIT TO BE REMOVED. PROPOSED CONDUIT ROUTE SHALL BE INSTALLED IN EXISTING TRENCH ONCE EXISTING CONDUIT ROUTE HAS BEEN REMOVED. NO SEPARATE PAYMENT IS PROVIDED FOR REMOVAL AND DISPOSAL OF EXISTING CONDUIT, CABLE, AND PULL BOXES ALONG THIS ROUTE. THE COST OF REMOVAL SHALL BE INCLUDED AS PART OF THE 725-22.24 PAY ITEM.
- ABANDON EXISTING PULLBOXES AND ELECTRICAL CONDUIT IN THIS VICINITY.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	26

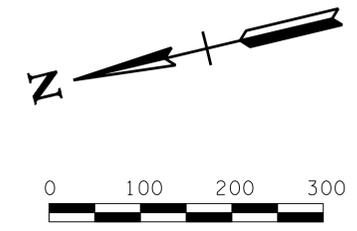


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ITS LAYOUT
I-24
MP 138.0
INFR
1" = 100'



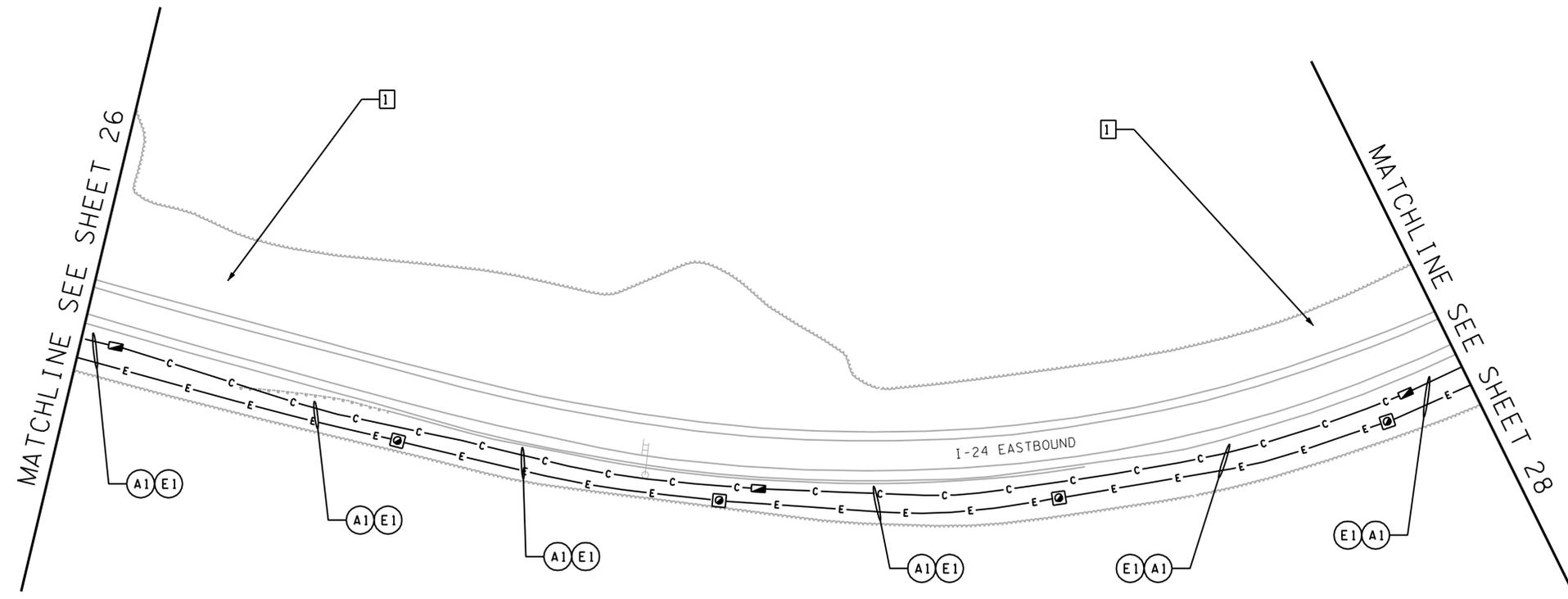
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TENNESSEE D.O.T.					
DESIGN DIVISION					
FILE NO.					
CONDUIT AND CABLE SCHEDULE					
ITEM	RUN				
	A1				E1
	O	B	W	BR	
25KV #1/0 AWG CBL					2
600V 1/C #4 AWG CBL					1
48 SMFO CBL	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				4" CONDUIT

NOTES:

1 ABANDON EXISTING PULLBOXES AND ELECTRICAL CONDUIT IN THIS VICINITY.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	27

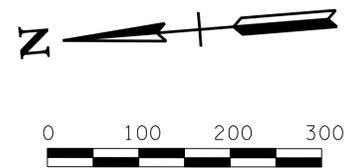


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ITS LAYOUT
I-24
MP 138.5
CONDUIT
1" = 100'



Plotted on Friday, July 25, 2014 at 04:00 PM
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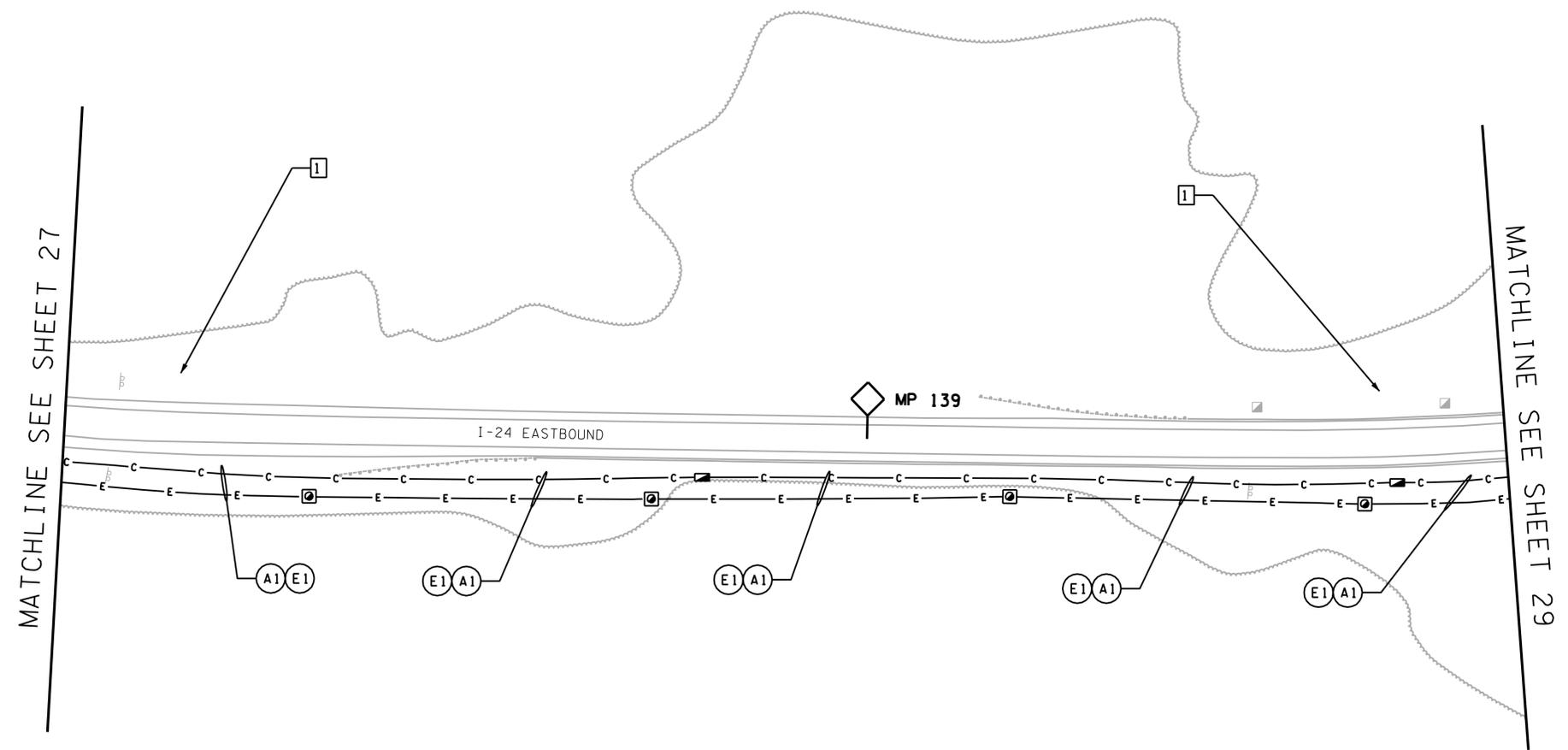
CONDUIT AND CABLE SCHEDULE					
ITEM	RUN				E1
	A1				
	O	B	W	BR	
25KV #1/0 AWG CBL					2
600V 1/C #4 AWG CBL					1
48 SMFO CBL	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				4" CONDUIT

NOTES:

- 1 ABANDON EXISTING PULLBOXES AND ELECTRICAL CONDUIT IN THIS VICINITY.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	28

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

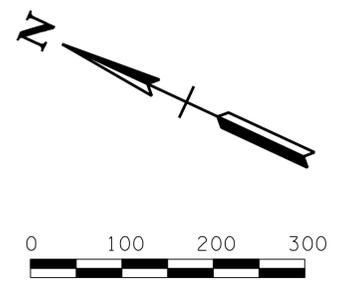


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ITS LAYOUT
I-24
MP 139.0
CONDUIT
1" = 100'



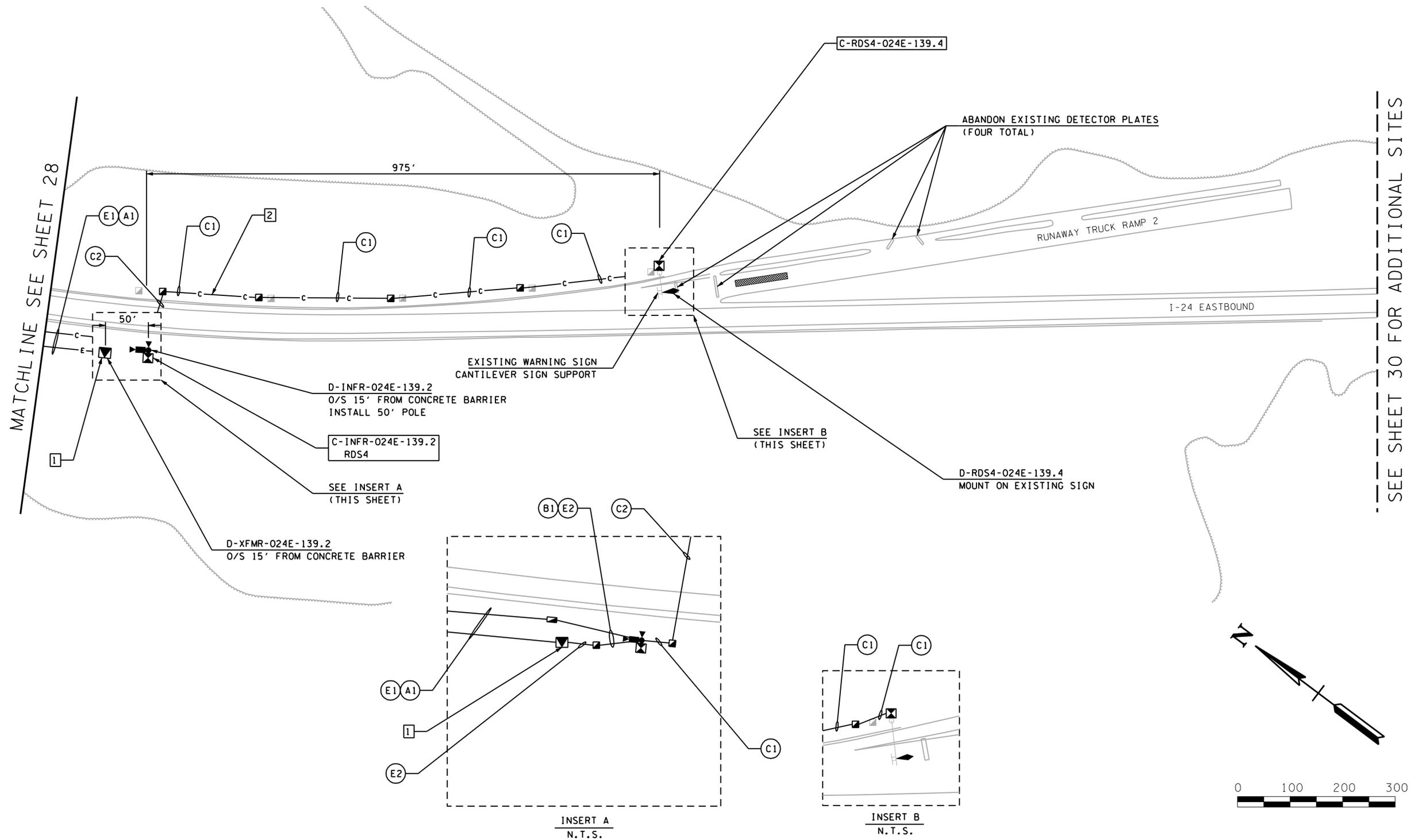
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ITEM	CONDUIT AND CABLE SCHEDULE											
	RUN											
	A1				B1			C1	C2	E1	E2	
O	B	W	BR	G	B	W	GR	GR				
25KV #1/0 AWG CBL										2		
600V 1/C #4 AWG CBL										1		
#8 AWG CBL											4	
48 SMFO CBL	1											
12 SMFO CBL					1							
RDS CBL							1	1				
CONDUIT SIZE AND TYPE	TYPE 4 CONDUIT BANK				TYPE 3 CONDUIT BANK			TYPE 1 CONDUIT BANK	TYPE 1 CONDUIT BANK (BORED)	4" CONDUIT	2" CONDUIT	

NOTES:

- 15KVA, 14.4KV X 7.2KV - 120V/240V DUAL VOLTAGE PAD-MOUNTED TRANSFORMER. CONTRACTOR SHALL INSTALL 120V/240V MAIN CIRCUIT BREAKER PANEL IN DEVICE CABINET AS REQUIRED BY THE SPECIFICATIONS.
- EXISTING PULLBOXES (APPROXIMATE 250 FEET SPACING) AND ELECTRICAL CONDUIT TO BE REMOVED. PROPOSED CONDUIT ROUTE SHALL BE INSTALLED IN EXISTING TRENCH ONCE EXISTING CONDUIT ROUTE HAS BEEN REMOVED. NO SEPARATE PAYMENT IS PROVIDED FOR REMOVAL AND DISPOSAL OF EXISTING CONDUIT, CABLE, AND PULL BOXES ALONG THIS ROUTE. THE COST OF REMOVAL SHALL BE INCLUDED AS PART OF THE 725-22.21 PAY ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	29

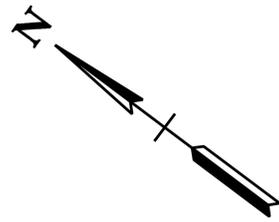


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ITS LAYOUT
I-24
MP 139.2
INFR
1" = 100'

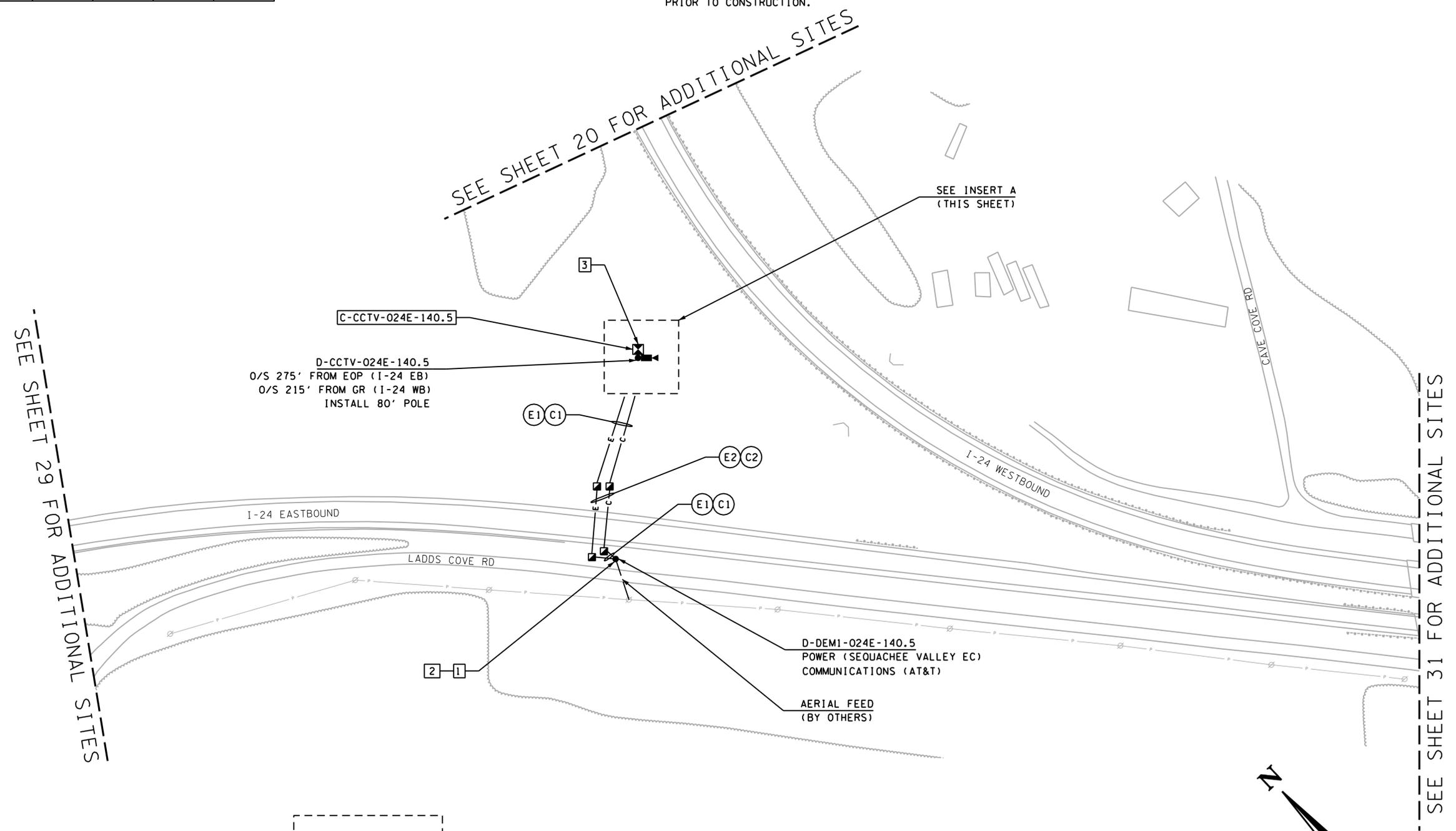


CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			3	3
CAT 6 CBL	1	1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT (BORED)	2" CONDUIT	2" CONDUIT (BORED)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	30

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 120V, 15A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 2-WIRE 120V, 30A RATED FUSED DISCONNECT FUSED AT 15A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR T1 COMMUNICATION SERVICE (ONE T1 DROP REQUIRED) AT THIS LOCATION.
- 3 COORDINATE PLACEMENT OF THIS CCTV WITH THE ENGINEER PRIOR TO CONSTRUCTION.



SEE SHEET 29 FOR ADDITIONAL SITES

SEE SHEET 20 FOR ADDITIONAL SITES

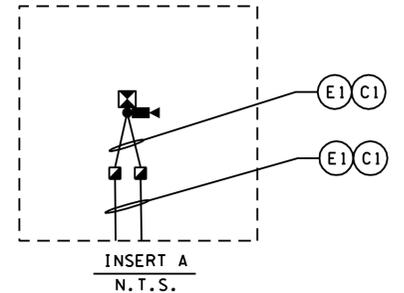
SEE SHEET 31 FOR ADDITIONAL SITES

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ITS LAYOUT
I-24
MP 140.5
CCTV
1" = 100'

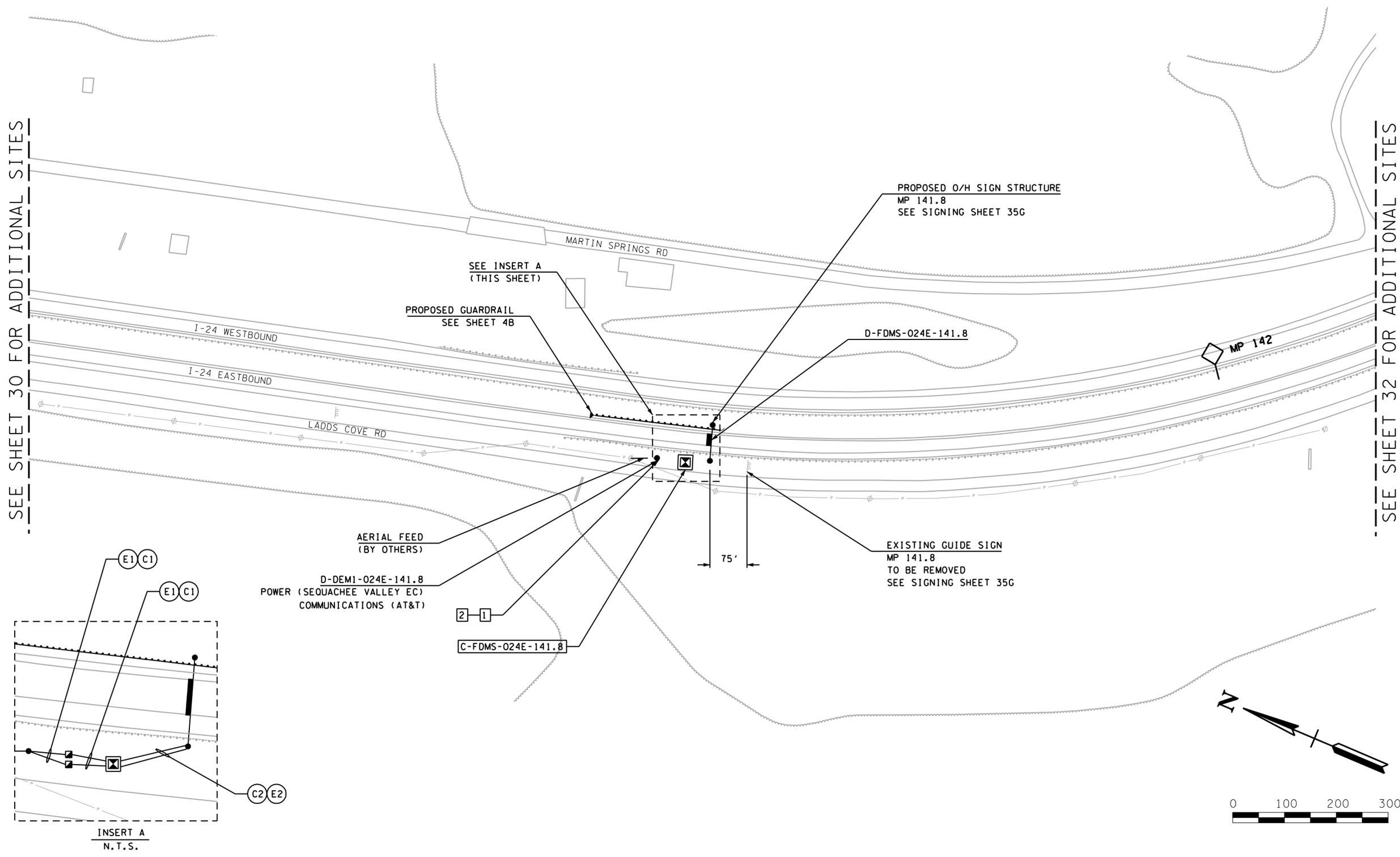


CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			4	
CAT 6 CBL	1			
DMS PWR CBL				1
DMS COMM CBL		1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	2" CONDUIT	2" CONDUIT

NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 240/120V, 70A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 3-WIRE 240V, 100A RATED FUSED DISCONNECT FUSED AT 70A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 240/120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR POTS COMMUNICATION SERVICE (ONE POTS DROP REQUIRED) AT THIS LOCATION.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	31



SEE SHEET 30 FOR ADDITIONAL SITES

SEE SHEET 32 FOR ADDITIONAL SITES

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ITS LAYOUT
I-24
MP 141.8
FDMS
1" = 100'

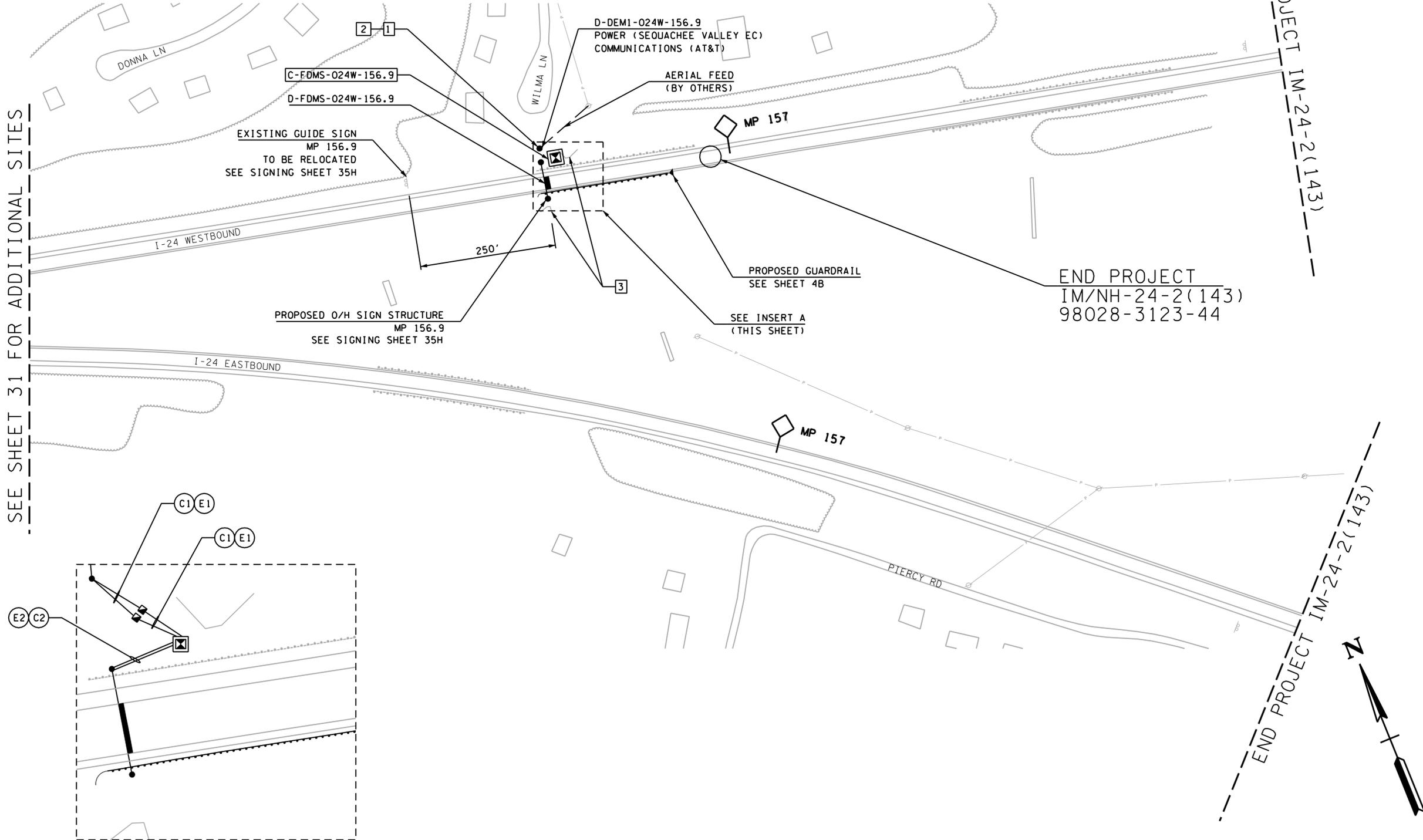
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CONDUIT AND CABLE SCHEDULE				
ITEM	RUN			
	C1	C2	E1	E2
#4 AWG CBL			4	
CAT 6 CBL	1			
DMS PWR CBL				1
DMS COMM CBL		1		
CONDUIT SIZE AND TYPE	2" CONDUIT	2" CONDUIT	2" CONDUIT	2" CONDUIT

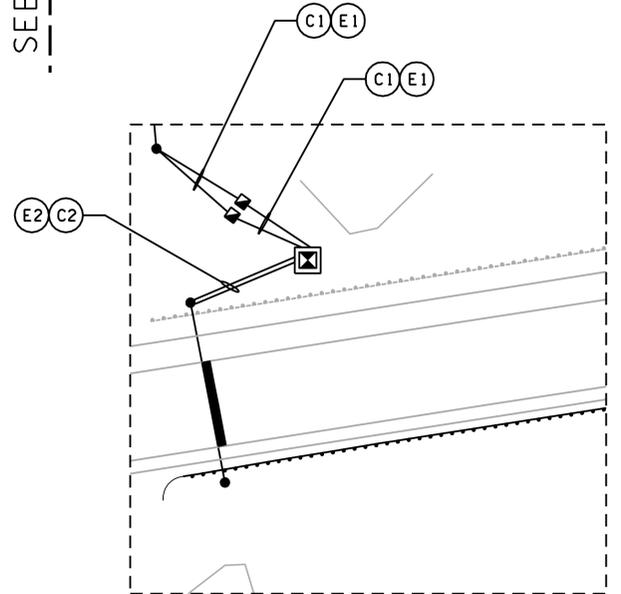
NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR 240/120V, 70A SINGLE PHASE ELECTRICAL SERVICE. CONTRACTOR TO PROVIDE A 3-WIRE 240V, 100A RATED FUSED DISCONNECT FUSED AT 70A ON DEMARCATION POLE. CONTRACTOR TO PROVIDE A 240/120V METER BASE PER SEQUACHEE VALLEY EC REQUIREMENTS.
- 2 CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR POTS COMMUNICATION SERVICE (ONE POTS DROP REQUIRED) AT THIS LOCATION.
- 3 AVOID DRAINAGE STRUCTURE ON BOTH SIDES OF ROADWAY.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	32



SEE SHEET 31 FOR ADDITIONAL SITES

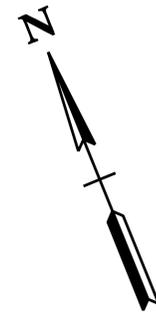


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ITS LAYOUT
I-24
MP 156.9
FDMS
1" = 100'



GENERAL NOTES FOR EROSION PREVENTION AND SEDIMENT CONTROL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	33

GENERAL NOTES FOR EPSC

DISTURBED AREA

- AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

SEDIMENT CONTROL

- EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

- SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

- NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

- EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.
- INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.
- OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

MATERIALS

- WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

SWPPP, PERMITS, PLANS, RECORDS

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.

- ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER, AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.
- IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS OR MODIFICATIONS OF THE SWPPP ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.
- PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORM WATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
- THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

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GENERAL NOTES
FOR EROSION
PREVENTION AND
SEDIMENT CONTROL

SPECIAL NOTES FOR EROSION PREVENTION AND SEDIMENT CONTROL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	33A

SPECIAL NOTES FOR EPSC

- (1) EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS ARE PROVIDED ON SHEETS 33C-33D. SEE SHEET 33B FOR TYPICAL EPSC DETAILS. THESE TYPICAL DETAILS SHALL BE USED AT LOCATIONS AS SPECIFIED BY THE ENGINEER BASED ON THE LOCATION, SIZE AND DURATION OF ANY DISTURBED AREA. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE EFFECTIVE AND CONTINUOUS EPSC IN ALL PHASES OF CONSTRUCTION.
- (2) SEPARATE PAYMENT WILL ONLY BE MADE FOR THE EPSC ITEMS LISTED IN THE ESTIMATED QUANTITIES. ANY ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL ITEMS NEEDED TO PROVIDE EFFECTIVE EPSC SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (3) UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DISTURB OR CROSS ANY STREAM OR WETLAND DURING CONSTRUCTION WITHOUT PROPER TDEC PERMIT. ALL STREAMS ARE TO BE CROSSED EITHER BY ATTACHING CONDUIT TO BRIDGES OR BY CROSSING OVER OR UNDER EXISTING CULVERTS.
- (4) ALL DISTURBED AREAS INCLUDING POLE AND STRUCTURE FOUNDATION LOCATIONS SHALL BE DRESSED AND EITHER SODDED, SEEDED WITH MULCH, OR SEEDED WITH EROSION CONTROL BLANKET. SPECIFIC TYPE OF VEGETATIVE MEASURES SHALL BE APPROVED BY THE ENGINEER.
- (5) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (6) THE CONTRACTOR SHALL NOT HAVE ANY TRENCH OPEN FOR A PERIOD EXCEEDING 24 HOURS.
- (7) ALL STREAMS OR SPRINGS WILL BE CROSSED BY EITHER ATTACHING CONDUIT TO BRIDGES OR BY CROSSING OVER OR UNDER EXISTING CULVERTS. NO OPEN CUTTING OF STREAMS WILL OCCUR BASED ON THE CURRENT DESIGN. ADDITIONALLY NO CLEARING OF THE STREAM BANKS SHOULD OCCUR.
- (8) A BUFFER ALONG WETLANDS AND SINKHOLES WILL BE MAINTAINED SO AS TO NOT DISTURB THESE AREAS.
- (9) BEFORE CONSTRUCTION BEGINS, COORDINATION WITH TDOT ECOLOGY STAFF IS REQUIRED TO FENCE AND/OR MARK OFF ALL ENVIRONMENTALLY SENSITIVE AREAS TO ENSURE ALL ENVIRONMENTAL FEATURES ARE PROPERLY PROTECTED DURING CONSTRUCTION. THE ENVIRONMENTAL FEATURES ARE NOT TO BE IMPACTED OR DISTURBED.
- (10) DUE TO THE NATURE OF THIS PROJECT, IT IS IMPRACTICAL TO INSTALL A RAIN GAUGE AT EVERY MILE OF THIS PROJECT. THEREFORE, THE RAIN GAUGE SHALL BE A FLOATING RAIN GAUGE THAT MOVES AS THE PROJECT PROGRESSES. THE RAINFALL AMOUNT, ESTIMATED DURATION AND FORECASTED PERCENTAGE OF PRECIPITATION WILL BE BASED ON THE INFORMATION AVAILABLE FROM THIS FLOATING RAIN GAUGE. THIS INFORMATION WILL BE RECORDED DAILY AND PROVIDED TO THE ENGINEER ON A MONTHLY BASIS.
- (11) CATCH BASIN PROTECTION TYPES D AND E SHALL BE USED AT THE ENGINEER'S DISCRETION WHERE RUNOFF FROM A FOUNDATION OR TRENCH LOCATION MAY BE NEAR AN EXISTING CATCH BASIN.

NPDES

- (1) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
- (2) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.

- (3) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
 - A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - C. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
- (4) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.
- (5) STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
- (6) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE "WASTE AND BORROW" MANUAL PER THE SSWMP.
- (7) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.
- (8) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN ON SHEET 33B, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

UTILITY RELOCATION

- (1) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
- (2) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
- (3) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTATION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).
- (4) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
- (5) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.

- (6) IN REGARD TO EROSION PREVENTATION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.
- (7) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

ECOLOGY

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.
- (2) THE CONTRACTOR SHALL USE EXTREME MEASURES TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF WATER QUALITY FEATURES.
- (3) IF PROPOSED CONSTRUCTION OCCURS NEAR OR WITHIN THE IMPACT AREA OF ANY ENVIRONMENTAL OR DRAINAGE FEATURE, THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO INITIATING CONSTRUCTION TO ENSURE THAT ENVIRONMENTAL OR DRAINAGE FEATURES ARE NOT STREAMS OR WETLANDS. IF THE CONTRACTOR OR TDOT INSPECTOR ARE UNSURE OF THE PRESENCE OF STREAMS OR WETLANDS, THE TDOT ENVIRONMENTAL DIVISION ECOLOGY AND PERMITS SECTIONS MUST BE CONTACTED.
- (4) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING STRUCTURES ALONG THE ROADWAY AND MEDIAN PRIOR TO INITIATING CONSTRUCTION.
- (5) ALL WATER QUALITY FEATURES WILL BE CROSSED BY EITHER ATTACHING CONDUIT TO BRIDGES OR INSTALLING CONDUIT OVER OR UNDER EXISTING CULVERTS.
- (6) NO OPEN CUTTING OR DISTURBANCE OF STREAMS OR OTHER WATER QUALITY FEATURES SHALL OCCUR.
- (7) NO CLEARING OF VEGETATION ALONG WATER QUALITY FEATURES SHALL OCCUR.
- (8) NO DETAILED ECOLOGY REVIEW HAS BEEN CONDUCTED FOR THIS PROJECT. THEREFORE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE NO IMPACTS OR DISTURBANCE OF WATER QUALITY FEATURES. IF THE CONTRACTOR OR TDOT INSPECTOR ARE UNSURE OF THE PRESENCE OF WATER QUALITY FEATURES, THE TDOT ENVIRONMENTAL DIVISION ECOLOGY AND PERMITS SECTIONS MUST BE CONTACTED.
- (9) REMOVAL OF EXISTING VEGETATION MAY BE REQUIRED DURING CONSTRUCTION ACTIVITIES (E.G. CONSTRUCTION OF EARTH PADS FOR TYPE 38 TERMINALS). IN CONSIDERATION OF THE INDIANA BAT, NO TREES WITH A DIAMETER AT BREST HEIGHT (DBH) OF 5 INCHES OR GREATER SHOULD BE REMOVED WITHOUT CLEARANCE FROM THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION.

ESTIMATED QUANTITIES FOR EPSC

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
209-03.21	FILTER SOCK (12 INCH)	L.F.	2,780
209-05	SEDIMENT REMOVAL	C.Y.	10
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	8,340
209-09.01	SANDBAGS	BAG	330
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	2,420
209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	5
209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	5
303-01	MINERAL AGGREGATE, TY A BASE, GRADING D	TON	10
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	5
621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	80
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	170
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	290
740-11.02	TEMPORARY SEDIMENT TUBE 12IN (EPSC)	L.F.	2,780
801-01	SEEDING (WITH MULCH)	UNIT	20
801-02	SEEDING (WITHOUT MULCH)	UNIT	16
801-02.15	FERTILIZER	TON	1
801-03	WATER (SEEDING AND SOD)	M.G.	39
803-01	SODDING (NEW SOD)	S.Y.	3,660
805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	1,830

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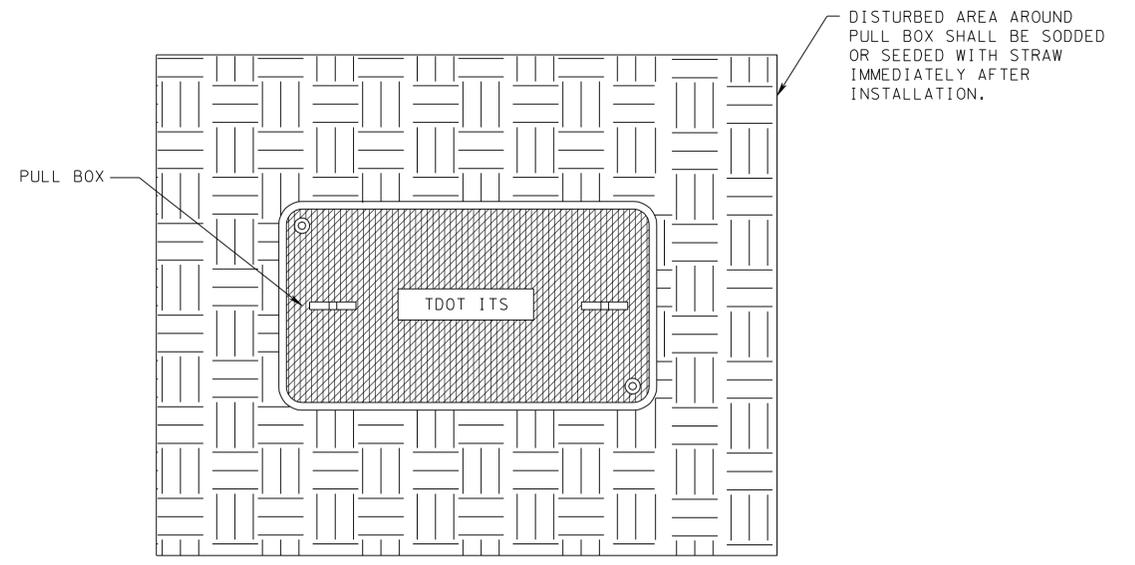
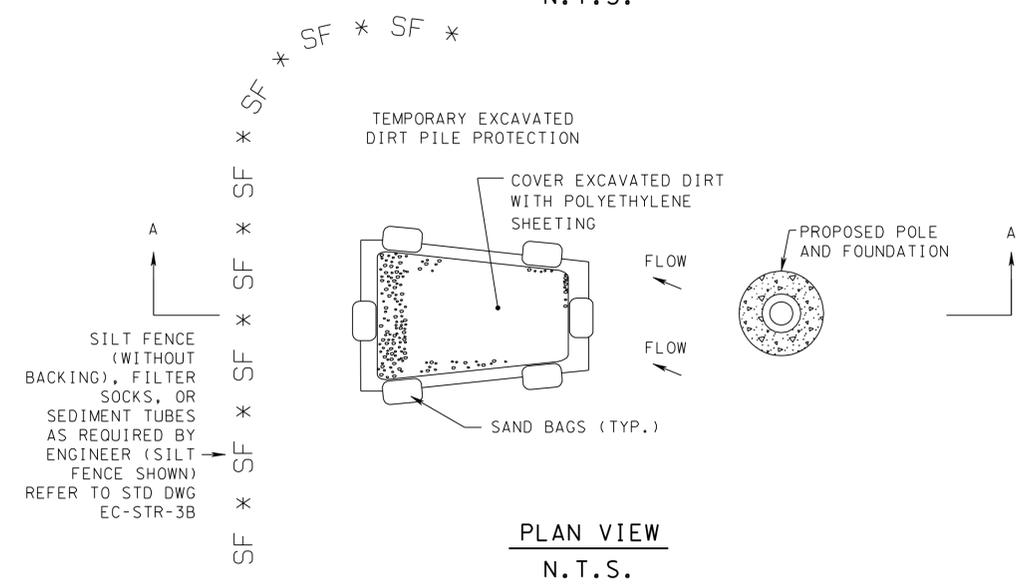
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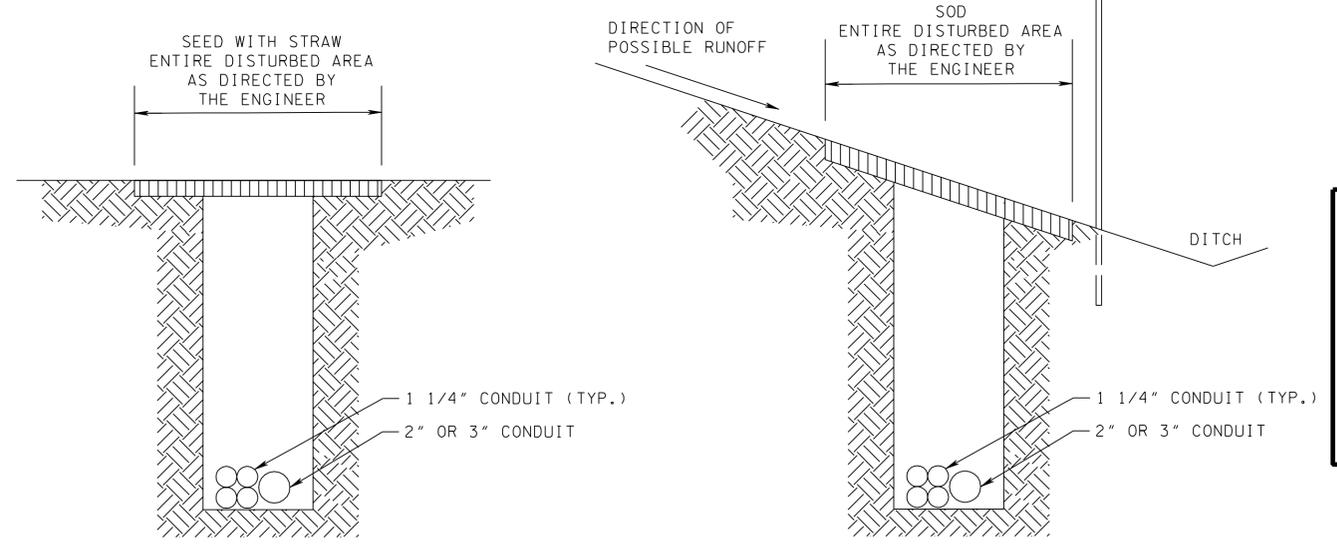
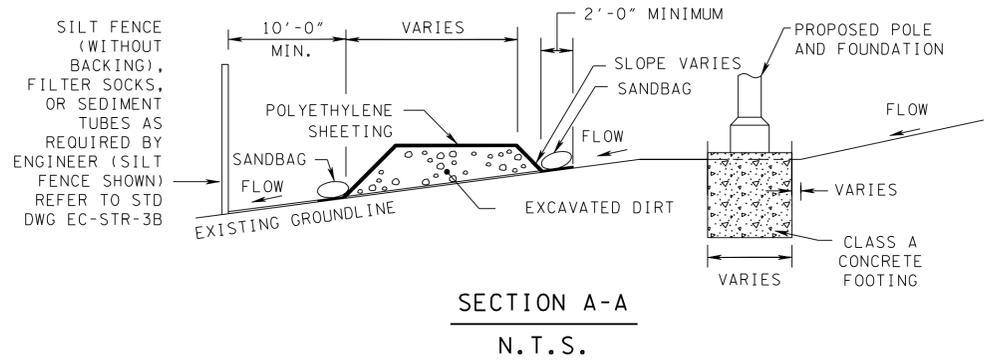
SPECIAL NOTES
FOR EROSION
PREVENTION AND
SEDIMENT CONTROL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	33B

**DETAIL A:
POLE FOUNDATION EROSION PREVENTION AND SEDIMENT CONTROL**
N.T.S.



**DETAIL B:
EROSION PREVENTION AND SEDIMENT CONTROL AT PULL BOX (TYPICAL)**
N.T.S.



**DETAIL C:
EROSION PREVENTION AND SEDIMENT CONTROL FOR TYPICAL TRENCH CONFIGURATION FOR COMMUNICATION AND POWER CONDUITS LEVEL CONDITION (4:1 H:V OR FLATTER)**
N.T.S.

**DETAIL D:
EROSION PREVENTION AND SEDIMENT CONTROL FOR TYPICAL TRENCH CONFIGURATION FOR COMMUNICATION AND POWER CONDUITS SLOPE CONDITION (4:1 H:V OR STEEPER)**
N.T.S.

APPROXIMATE QUANTITIES (PER EACH POLE)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
*209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	LINEAR FEET	20
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE FEET	225

APPROXIMATE QUANTITIES (PER EACH DMS SIGN FOUNDATION)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
*209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	LINEAR FEET	45
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE FEET	800

*12" FILTER SOCKS (209-03.21) OR 12" TEMPORARY SEDIMENT TUBES (740-11.02) MAY BE USED AS AN ALTERNATE AT THE DISCRETION OF THE ENGINEER. SEE STD. DWG. EC-STR-8 OR EC-STR-37 FOR FURTHER DETAILS.

- NOTES:**
- EPSC DEVICES SHALL BE PLACED IMMEDIATELY AFTER AREA IS DISTURBED AND SHALL REMAIN IN PLACE UNTIL LOCATION IS STABILIZED WITH VEGETATION.
 - THESE TYPICAL DETAILS WILL BE USED AT THE DISCRETION OF THE ENGINEER BASED ON THE LOCATION AND DURATION OF THE DISTURBED AREAS. IF THE FOUNDATION IS IN A LOCATION WHERE RUNOFF IS NOT AN ISSUE, THE LOCATION MAY NOT REQUIRE THE USE OF THESE EPSC MEASURES, BUT WILL STILL REQUIRE SEEDING WITH STRAW OR SODDING.
 - EPSC DEVICES SHALL BE PLACED TO PREVENT DISCHARGE OF SEDIMENT-LADEN RUN-OFF BEYOND THE RIGHT-OF-WAY.
 - EXCAVATED DIRT THAT IS NOT NEEDED FOR BACKFILL SHALL BE REMOVED IMMEDIATELY AFTER EXCAVATION.
 - ALL OPEN TRENCHES SHALL BE BACKFILLED IMMEDIATELY AFTER CONDUIT INSTALLATION AND HAVE NEW SEED WITH STRAW OR SOD PLACED OVER THE TRENCHED AREA.

- IF CONDUIT IS PLOWED, THE NEED FOR SEED/SOD WILL BE DETERMINED BY THE ENGINEER BASED ON THE AMOUNT OF DISTURBED SOIL.
- SILT FENCE (WITH BACKING) SHOULD BE UTILIZED ADJACENT TO STREAMS, SPRINGS, WETLANDS OR SINKHOLES. REFER TO STD. DWG. EC-STR-3C.
- FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES FOR TYPICAL TRENCH CONFIGURATIONS, 12" FILTER SOCKS OR 12" TEMPORARY SEDIMENT TUBES SHALL BE USED ONLY ON STEEP SLOPES WHERE THE INSTALLATION OF SILT FENCING IS IMPRACTICAL. THE USE OF THESE ALTERNATIVES SHALL BE APPROVED BY THE ENGINEER.
- THE CHOICE OF SOD, SEEDING WITH EROSION CONTROL BLANKET, OR SEEDING WITH STRAW SHALL BE AT THE DISCRETION OF THE TDOT ENGINEER FOR ALL CASES NOT SPECIFIED IN DETAILS.

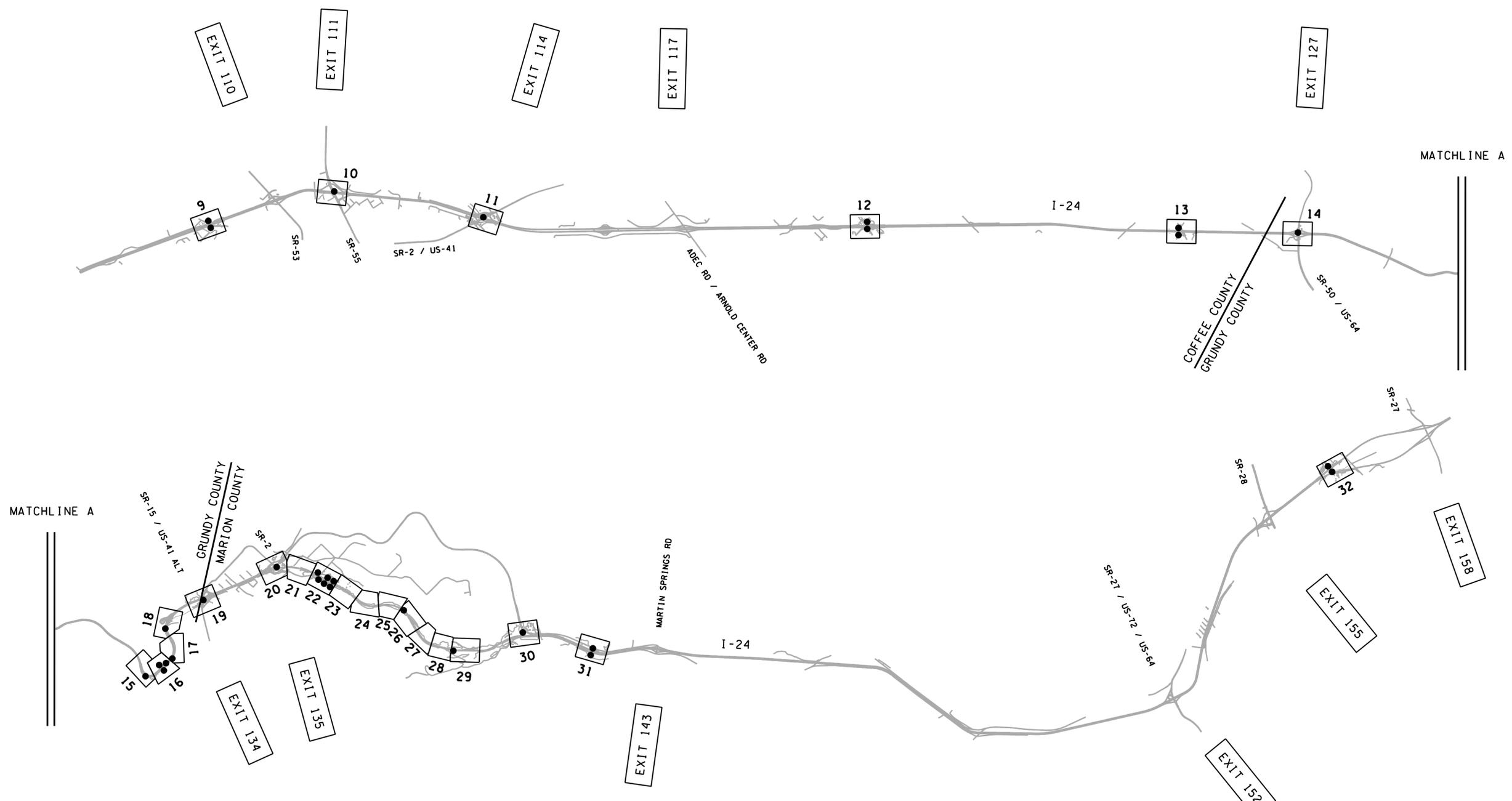
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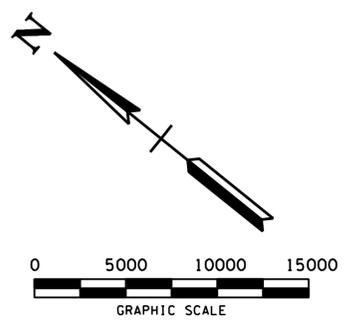
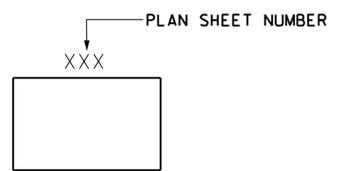
TYPICAL EROSION
PREVENTION AND
SEDIMENT CONTROL
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	33C



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LEGEND
 DENOTES LOCATION OF
 ITS DEVICE FOUNDATIONS WHERE
 EPSC DETAIL A (SEE SHEET 33B)
 MAY BE REQUIRED



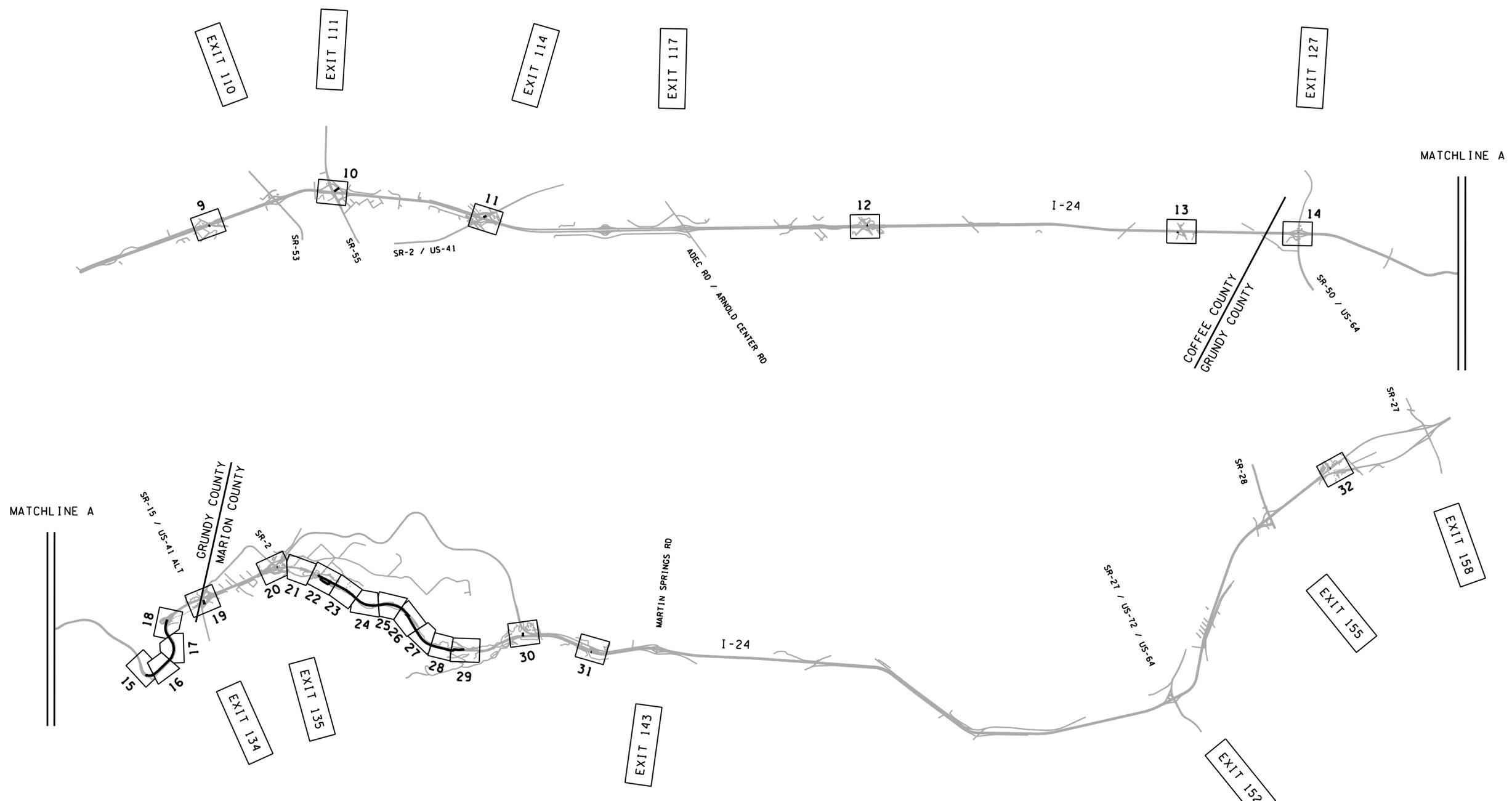
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**EROSION
 PREVENTION AND
 SEDIMENT CONTROL
 PLAN**

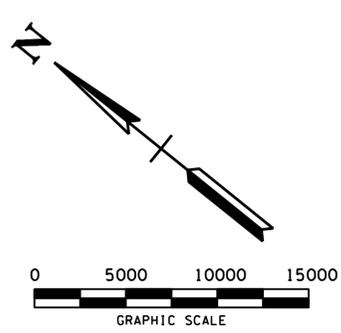
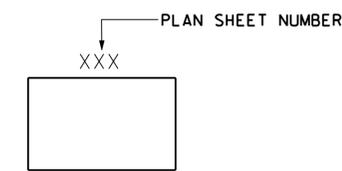
1" = 5000'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	33D



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LEGEND
 DENOTES LOCATION OF
 ITS TRENCHING WHERE
 EPSC DETAILS B, C, OR D (SEE SHEET 33B)
 MAY BE REQUIRED



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**EROSION
 PREVENTION AND
 SEDIMENT CONTROL
 PLAN**

1" = 5000'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(1 43)	34

TRAFFIC CONTROL NOTES

SPECIAL NOTES FOR TRAFFIC CONTROL

INTRODUCTION

THIS PROJECT SHOULD BE CONSTRUCTED IN A MANNER TO LIMIT THE IMPACT ON TRAFFIC. MUCH OF THE WORK IN THIS PROJECT CAN BE PERFORMED BEYOND THE SHOULDERS OF THE ROADWAY. HOWEVER, SOME WORK WILL REQUIRE SHOULDER CLOSURES AND/OR LANE CLOSURES.

THIS PROJECT WILL CONSIST OF A LARGE NUMBER OF SHORT TERM WORK LOCATIONS WITHIN THE OVERALL PROJECT LIMITS. THE CONTRACTOR WILL BE ALLOWED TO WORK AT DIFFERENT LOCATIONS WITHIN THE PROJECT LIMITS; THEREFORE, EACH WORK LOCATION SHOULD BE SIGNED AS A SEPARATE WORK ZONE. ADVANCED SIGNING SHOULD BE PLACED AS NEEDED FOR EACH WORK ZONE WHEN WORKING CONDITIONS ARE PRESENT. ADVANCE SIGNING IS NOT NEEDED FOR THE OVERALL PROJECT LIMITS.

FOR THE PURPOSE OF THIS PROJECT, ANY WORK LOCATIONS (THIS PROJECT OR OTHER ROADWAY PROJECTS) THAT ARE UNDER CONSTRUCTION DURING THE SAME TIME PERIOD AND ARE WITHIN TWO (2) MILES OF EACH OTHER AND IN THE SAME DIRECTION OF TRAFFIC SHALL BE TREATED AND SIGNED AS ONE WORK ZONE.

EXCEPT AS NOTED IN THIS PLAN, THE PHASING OF WORK IS AT THE CONTRACTOR'S DISCRETION. THE CONTRACTOR IS RESPONSIBLE FOR PHASING THE WORK IN A MANNER THAT FITS THE SCHEDULE AND ALSO LIMITS THE DURATION OF IMPACT ON TRAFFIC. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AT THE PRE-CONSTRUCTION MEETING, WHICH OUTLINES THE PROPOSED PHASING, SCHEDULE OF WORK, AND TRAFFIC CONTROL PROCEDURES THROUGHOUT THE PROJECT. THIS TRAFFIC CONTROL PLAN IS NOT INTENDED TO SUPERCEDE OR RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

ALL TRAFFIC CONTROL ACTIVITIES SHALL BE APPROVED BY THE ENGINEER.

TRAFFIC CONTROL - SPECIAL NOTES

- TRAFFIC SHALL BE MAINTAINED AND DEVICES INSTALLED IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE TENNESSEE STANDARD ROADWAY DRAWINGS.
- ANY ADDITIONAL TRAFFIC CONTROL DEVICE DEEMED NECESSARY BY THE ENGINEER SHALL BE FURNISHED, INSTALLED, AND PAID FOR UNDER THE APPROPRIATE BID ITEM.
- THE CONTRACTOR IS CAUTIONED THAT THERE MAY BE ACTIVE CONSTRUCTION PROJECTS IN THE AREA. COORDINATION WILL BE REQUIRED WITH THE ADJOINING CONTRACTOR THROUGH THE ENGINEER TO AVOID CONFLICTS IN MAINTAINING TRAFFIC AND SIGNING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL TEMPORARY CROSSEOVERS, DETOURS, PAVEMENTS, PAVEMENT MARKINGS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES CALLED FOR IN THESE PLANS, TWENTY-FOUR (24) HOURS A DAY, SEVEN (7) DAYS A WEEK, UNTIL COMPLETION OF THE PROJECT TO INSURE PROPER OPERATION. THE CONTRACTOR SHALL ASSIGN A MINIMUM OF ONE PERSON AS TRAFFIC CONTROL REPRESENTATIVE. THESE PEOPLE SHALL BE IN CHARGE OF THE PROJECT FOR CONTINUOUS MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES. THESE PEOPLE SHALL BE ON THE PROJECT AND BE CAPABLE OF BEING CONTACTED TWENTY-FOUR (24) HOURS A DAY, SEVEN (7) DAYS A WEEK AND SHALL HAVE SUFFICIENT AUTHORITY TO ORDER WORK STOPPAGES AND IMMEDIATE REVISIONS TO SIGNING AND OTHER NECESSARY TRAFFIC CONTROL DEVICES AS APPROVED BY THE ENGINEER. THESE PEOPLE SHALL BE IDENTIFIED, VIA CONTACT INFORMATION, AT THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL PROVIDE PORTABLE BARRIER RAIL AND CRASH CUSHIONS AS CONDITIONS WARRANT. THE LOCATIONS OF ALL BARRIER RAILS AS PRESENTED ON THE PLANS ARE SUBJECT TO CHANGE IN THE FIELD AS DIRECTED AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL BLASTING ZONE SIGNS AS NECESSARY IN ACCORDANCE WITH THE MUTCD, PART 6. BLASTING WITHIN THE PROJECT LIMITS SHALL NOT OCCUR ON SUNDAYS OR DURING PEAK HOURS.
- PORTABLE BARRIER RAIL DELINEATORS SHALL BE MOUNTED ON PORTABLE BARRIER RAIL IN ACCORDANCE WITH TDOT STANDARD ROADWAY DRAWINGS.
- THE CONTRACTOR SHALL FULLY AND COMPLETELY COVER ANY SIGNS, EITHER EXISTING, PERMANENT, OR TEMPORARY, WHICH DO NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING, AND SHALL MAINTAIN THE COVERING UNTIL THE SIGNS ARE APPLICABLE OR ARE REMOVED.
- THE CONTRACTOR SHALL RELOCATE ANY SIGNS, EITHER EXISTING OR TEMPORARY, AS NECESSARY TO PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING. NO INDIVIDUAL PAYMENT SHALL BE MADE FOR THE TEMPORARY RELOCATION OF EXISTING SIGNS AS THESE WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TRAFFIC CONTROL (712-01).

- THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST THE FLOW OF TRAFFIC. VEHICLES SHALL LEAVE WORK AREAS IN A MANNER THAT WILL NOT BE HAZARDOUS TO OR INTERFERE WITH NORMAL TRAFFIC. VEHICLES SHALL NOT PARK OR STOP EXCEPT WITHIN WORK AREAS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE PORTABLE MESSAGE SIGNS FOR TRAFFIC CONTROL PURPOSES. PLACEMENT DURING CONSTRUCTION SHALL BE APPROVED BY THE ENGINEER. THE MESSAGE SIGN SHALL BE OPERABLE AT ALL TIMES. IN THE EVENT OF MECHANICAL AND/OR ELECTRICAL FAILURE IN THE MESSAGE BOARD, IT SHALL BE REPAIRED OR REPLACED WITHIN TWENTY-FOUR (24) HOURS.
- TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN PROPER CONDITION THROUGHOUT THE LENGTH OF THE PROJECT.
- TRAFFIC CONES AND "SHOULDER WORK AHEAD"/"ROAD WORK AHEAD" SIGNS CAN BE USED FOR ALL SHORT DURATION AND SHORT TERM SHOULDER CLOSURES.
- ALL SIGNING FOR SHORT DURATION (LESS THAN SIXTY (60) MINUTES) AND SHORT TERM (ONE (1) TO TWELVE (12) DAYLIGHT HOURS) WORK SHALL BE INSTALLED IN A TEMPORARY MANNER AND SHALL ONLY BE IN PLACE WHILE CONSTRUCTION ACTIVITIES ARE OCCURRING. THIS TEMPORARY SIGNING CANNOT REMAIN IN PLACE OVERNIGHT.
- FOR SHORT-TERM, SHORT DURATION, OR MOBILE OPERATIONS WHERE NON-CONSTRUCTION RELATED ACTIVITIES OCCUR AT DEVICES OR DEVICE CABINETS, TRAFFIC CONTROL SIGNS MAY BE ELIMINATED IF A VEHICLE WITH ACTIVATED ROTATING LIGHTS OR STROBE LIGHTS IS USED.
- SHOULD TRAFFIC QUEUES EXCEED THE FIRST ADVANCE WARNING LOCATION, ADDITIONAL DEVICES SHALL BE LOCATED 1000 FEET IN ADVANCE OF TRAFFIC QUEUES.

ROAD CLOSURES

- MOMENTARY STOPPING OF TRAFFIC ON THE INTERSTATE WILL ONLY BE PERMITTED DURING SIGN STRUCTURE INSTALLATIONS. WITHIN ONE (1) WEEK OF THESE ACTIVITIES, TRAFFIC CONTROL DEVICES SHALL BE INSTALLED AS STIPULATED IN PART 6 OF THE CURRENT MUTCD.
- ALL MOMENTARY TRAFFIC HALTS AND ROLLING ROAD BLOCKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. PLANS SHALL BE SUBMITTED TWO (2) WEEKS IN ADVANCE OF SCHEDULED ACTIVITY FOR REVIEW AND APPROVAL.
- A MINIMUM OF TWO (2) UNIFORMED POLICE OFFICERS SHALL BE PRESENT DURING THE ACTIVITIES TO GRADUALLY SLOW TRAFFIC TO A STOP AS APPROVED BY THE ENGINEER. ADDITIONAL OFFICERS SHALL BE IN POSITION TO HALT TRAFFIC AT RAMP INTERSECTIONS WHEN NECESSARY. CLOSURES SHALL BE LIMITED TO A 15-MINUTE MAXIMUM PERIOD WITHIN ANY ONE-HOUR BETWEEN 11:00 PM AND 5:00 AM MONDAY THRU THURSDAY ONLY.

LANE CLOSURES

LANE CLOSURES WILL BE ALLOWED WHENEVER ENCROACHMENT INTO THE TRAVEL LANE (I.E. WITHIN TWO (2) FEET OF TRAVEL LANE) IS NECESSARY. LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE APPROPRIATE TRAFFIC CONTROL PLAN DETAIL OR STANDARD DRAWING.

- LANE CLOSURE REQUESTS SHALL BE SUBMITTED TO THE PROJECT ENGINEER AT LEAST TEN (10) DAYS PRIOR TO REQUIRED LANE CLOSURE DATE.
- NO LANES MAY BE CLOSED BETWEEN 6:00 A.M. – 8:00 P.M. ON WEEKDAYS FOR CONSTRUCTION WORK WITHIN THE STATE OF TENNESSEE.
- THE CONTRACTOR SHALL NOT BE ALLOWED TO INTERRUPT TRAFFIC FLOW ON ANY INTERSTATE AND SHALL MAINTAIN THE EXISTING NUMBER OF LANES OF TRAFFIC IN EACH DIRECTION ON THE FOLLOWING DAYS:
 - OFFICIAL STATE HOLIDAYS
 - WEEKENDS FROM FRIDAY AT 6:00 AM UNTIL SUNDAY AT 7:00 PM OR AS DIRECTED BY THE TDOT PROJECT SUPERVISOR.
 - FRIDAY AT 6:00 PM UNTIL TUESDAY AT 7:00 AM IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON MONDAY.
 - THURSDAY AT 6:00 PM UNTIL MONDAY AT 7:00 AM IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON FRIDAY.
 - FRIDAY AT 6:00 AM UNTIL SUNDAY AT 7:00 PM OR AS DIRECTED BY THE TDOT PROJECT SUPERVISOR, ON WEEKENDS OF THE UNIVERSITY OF TENNESSEE, KNOXVILLE HOME FOOTBALL GAMES.
 - WEDNESDAY AT 6:00 AM UNTIL TUESDAY 7:00 PM OR AS DIRECTED BY THE TDOT PROJECT SUPERVISOR, DURING BONNAROO MUSIC FESTIVAL.

- THE THIRD SATURDAY IN SEPTEMBER AS DIRECTED BY THE TDOT PROJECT SUPERVISOR, DURING THE TRAIL OF TEARS REMEMBRANCE MOTORCYCLE RIDE.
- DURING THE EVENT CALLED "THE WORLDS LONGEST YARD SALE" AS DIRECTED BY THE TDOT PROJECT SUPERVISOR.

- ALL LANE CLOSURES SHALL BE APPROVED BY THE ENGINEER.
- LANE CLOSURE WITH LEFT LANE MERGE AND LANE SHIFT TRAFFIC CONTROL (STD. DRWG. T-WZ-21) IS TO BE USED ON ALL LANE CLOSURES.
- A UNIFORMED POLICE OFFICER IS TO BE PRESENT ON PROJECT DURING ALL LANE CLOSURES AND LANE SHIFTS.

SHOULDER CLOSURES

- IN AREAS OF CONSTRUCTION WITHIN FIFTEEN (15) FEET OF THE EDGE OF THE TRAVEL LANE, THE SHOULDER SHALL BE CLOSED.

TRAFFIC CONTROL DURING DMS SIGN WORK

- EACH OF THE DYNAMIC MESSAGE SIGNS WILL REQUIRE THE CONSTRUCTION OF SIGN FOOTINGS IN THE MEDIAN. THE CONSTRUCTION OF THESE FOOTINGS MAY REQUIRE LANE CLOSURES. ALL LANE CLOSURES SHALL CONFORM TO THE APPROPRIATE TDOT STANDARD DRAWING AND THE CURRENT EDITION OF THE MUTCD.
- SIGN FOUNDATIONS SHALL BE CONSTRUCTED IN A MANNER TO MINIMIZE THE DISRUPTION OF TRAFFIC. SHORT-TERM SINGLE LANE CLOSURES WILL BE PERMITTED AS DESCRIBED ABOVE. HOWEVER, THE FOOTINGS SHOULD BE INSTALLED UTILIZING ONLY A SHOULDER CLOSURE WHERE POSSIBLE, ALL LANE CLOSURES SHALL CONFORM TO THE APPROPRIATE TDOT STD. DWG. AND THE CURRENT EDITION OF THE MUTCD.

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TRAFFIC CONTROL NOTES

GENERAL NOTES, SPECIAL NOTES, AND DETAILS FOR SIGN SUPPORTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35

GENERAL NOTES FOR SIGN SUPPORTS

DESIGN SPECIFICATIONS:

STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION AND TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

CONCRETE:
TO BE CLASS "A" (CAST IN PLACE) $f_c = 3000$ psi. SEE SPECIAL PROVISIONS.

REINFORCING STEEL:
TO BE ASTM A615, GRADE 60. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY.

WELDING:
SHALL CONFORM TO AWS D1.1 LATEST REVISION.

MATERIAL SPECIFICATIONS - BOLTS:

- ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55 ksi WITH THREADS CONFORMING TO THE REQUIREMENTS OF ASTM A563.
- NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563.
- HARDENED STEEL WASHERS SHALL BE ASTM F436.
- U-BOLTS MAY BE FABRICATED FROM ASTM F1554 GRADE 36 ksi MATERIAL OR CONFORM TO THE REQUIREMENTS OF ASTM F708.
- STRUCTURAL BOLTS SHALL BE ASTM A325.
- STAINLESS STEEL NUTS, BOLTS, U-BOLTS AND WASHERS MAY BE SUBSTITUTED FOR ANY OF THE ABOVE REFERENCED MATERIALS.
- ALL HARDWARE, EXCEPT STAINLESS STEEL, SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A153 OR MECHANICALLY GALVANIZED ACCORDING TO ASTM B695.

MATERIAL SPECIFICATIONS - ALUMINUM:
SHALL CONFORM TO THE REQUIREMENTS OF SECTION 5 OF THE DESIGN SPECIFICATIONS.

MATERIAL SPECIFICATIONS - STEEL:

- MATERIAL FOR POST, CHORDS AND BRACING MEMBERS TO BE ASTM A36 STEEL OR ASTM A53 GRADE B PIPE.
- MATERIAL FOR STRUCTURAL SHAPES AND PLATES TO BE ASTM A36 STEEL.
- MATERIAL FOR POST CAPS AND CHORD CAPS SHALL BE ASTM A27 STEEL.
- ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH THE REQUIREMENTS OF ASTM A123. DAMAGE TO THE COATING SHALL BE REPAIRED.

BASE INSTALLATION:

THE ANCHOR BOLT SHALL BE THREADED OVER THE ENTIRE PROJECTING LENGTH. ONE HEX LEVELING NUT SHALL BE USED ON BOTTOM SIDE OF BASE PLATE WITH THE CLEARANCE BETWEEN THE NUT AND CONCRETE NOT TO EXCEED ONE INCH. ONE HEX NUT WITH ONE HARDENED WASHER SHALL BE USED ON TOP AND BOTTOM SIDE OF BASE PLATE. THE TOP NUT SHALL BE TORQUED TO PRODUCE A CLAMPING FORCE EQUAL TO 60% OF THE ANCHOR BOLT YIELD CAPACITY. THE SPACE BETWEEN THE BASE PLATE AND TOP OF CONCRETE SHALL NOT BE FILLED WITH GROUT. AN ANCHOR BOLT ALIGNMENT CAGE WITH A TOP BOLT TEMPLATE SHALL BE USED AND WELDING OF ANCHOR BOLT TO CAGE WILL NOT BE PERMITTED. THE TOP TEMPLATE SHALL BE HELD LEVEL AND THE ALIGNMENT CAGE SHALL BE SIDE BLOCKED TO REMAIN CENTERED DURING CONCRETE PLACEMENT. BASE INSTALLATIONS THAT REQUIRE ELECTRICAL CONDUITS SHALL BE GROUNDED IN ACCORDANCE WITH THE DETAILS SHOWN ON TENNESSEE DOT STANDARD T-L-1A.

BASE MOUNT AS DETAILED ON THIS SHEET SHALL APPLY ONLY TO THE FOLLOWING STRUCTURES:

- OVERHEAD SIGN STRUCTURES
- STRAIN POLES

NOTE: SEE FIGURE 1.1.3C THROUGH 1.1.4E(4) OF THE ABOVE REFERENCED SPECIFICATIONS FOR DETAILS REGARDING ITEMS 1 AND 2, ABOVE.

SUPPORT STRUCTURE DESIGN:

- THE MEMBERS MUST BE DESIGNED ACCORDING TO THE PROVISIONS OF THE REFERENCED SPECIFICATIONS. THESE PROVISIONS INCLUDE BUT ARE NOT LIMITED TO MOMENT, SHEAR, TORSION AND FATIGUE ANALYSIS FOR THE DESIGNATED CONFIGURATION. THE DESIGN WIND VELOCITY SHALL BE 90 mph APPLIED TO MAXIMUM PLANS SURFACE EXPOSURE AREA MULTIPLIED BY A FACTOR OF 1.5 FOR FUTURE SIGN SURFACE ADDITIONS. STRUCTURE ACTUAL AND DESIGN SURFACE AREA SHALL BE EXPLICITLY INDICATED IN THE DESIGN CALCULATIONS AND ON THE SHOP DRAWINGS.
- EACH DESIGN AND SHOP DRAWING MUST BE STAMPED BY A STATE OF TENNESSEE REGISTERED PROFESSIONAL ENGINEER. THE DESIGN AND SHOP DRAWING FOR EACH STRUCTURE IS TO BE SUBMITTED TO THE TDOT DIVISION OF STRUCTURES INSPECTION AND REPAIR.

SHOP DRAWINGS:

- ALL SHOP DRAWINGS FOR OVERHEAD, CANTILEVER AND BUTTERFLY SIGN STRUCTURES SHALL CONTAIN SIGN STRUCTURE ID NUMBERS FOR EACH STRUCTURE.
- THE CONTRACTOR SHALL ELECTRONICALLY SUBMIT DESIGN AND SHOP DRAWINGS ON CD'S. THE DRAWINGS MUST BE PDF OR TIF FORMAT. INFORMATION TO BE PRINTED ON THE CD AND THE CASE LABEL TO INCLUDE PROJECT NUMBER, COUNTY NUMBER, CONTRACT NUMBER, SIGN STRUCTURE ID NUMBER, DATE OF FABRICATION, NAME OF FABRICATOR AND STATION.

SOIL FOUNDATION DESIGN:

- DESIGN OF SUPPORT STRUCTURAL FOUNDATION INCLUDING PROCUREMENT OF SITE SPECIFIC GEOTECHNICAL DATA AND GENERATION OF SOIL ANALYSIS REQUISITE FOR THE FOUNDATION DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL COSTS ASSOCIATED WITH THE FOUNDATION INCLUDING DESIGN AND SOIL ANALYSIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE.
- FOUNDATION SHALL BE DESIGNED FOR SOIL OR ROCK. COMBINED SOIL/ROCK FOUNDATIONS ARE DISALLOWED. A SOIL ANALYSIS SHALL BE PERFORMED FOR EACH FOUNDATION LOCATION. THE MANDATORY TEST BORING RECORD PROVIDED FOR EACH FOUNDATION LOCATION SHALL REPORT THE TYPES AND DEPTHS OF EACH SOIL STRATA. THE "N" VALUES (NUMBER OF BLOWS PER FOOT USING A SPLIT SPOON SAMPLER), AND P_p (PASSIVE PRESSURE) VALUES IN ksf FOR EACH SOIL STRATA. THE SOIL ANALYSIS SHALL BE PERFORMED AFTER FINAL FILL COMPACTION FOR FOUNDATIONS LOCATED IN NEW EMBANKMENTS.
- CONTRACTOR SHALL SUBMIT FOUNDATION DESIGN, DRAWINGS, SOIL ANALYSIS AND TEST BORING RECORDS TO THE DIRECTOR OF THE DIVISION OF STRUCTURES FOR APPROVAL. CONTRACTOR SHALL ENSURE THAT A REGISTERED PROFESSIONAL ENGINEER STAMPS EACH DOCUMENT.

SPECIAL NOTES FOR SIGN SUPPORTS

BASIS OF PAYMENT:

THE STRUCTURE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE VARIOUS TYPES AND SIZES SHOWN ON PLANS, COMPLETE IN PLACE AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS IN THE STRUCTURE AND THE FOUNDATIONS, INCLUDING ALL STEEL SECTIONS, CONNECTING UNITS, HARDWARE FOR THE SIGN CONNECTION ON THE OVERHEAD SIGN STRUCTURES, CONCRETE, REINFORCING STEEL, ETC., FOR THE FOUNDATION AND FOR ALL LOADING, HAULING, UNLOADING, ERECTING, THE FINAL CLEANUP, THE COMPLETION OF ALL INCIDENTALS THERE TO (INCLUDING ANY REQUIRED REPAVING AROUND THE MEDIAN FOUNDATIONS), AND ALL OTHER MATERIALS, TOOLS, SUPPLIES, LABOR EQUIPMENT AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE ITEMS.

CATWALK DESIGN:

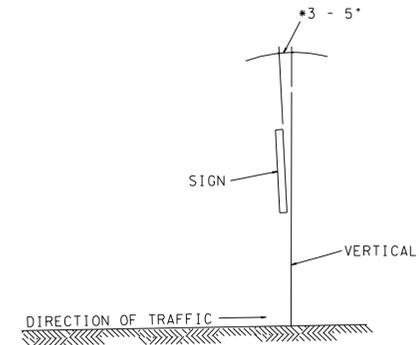
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CATWALK DESIGN AND SHALL SUBMIT THE DESIGN CALCULATIONS TO THE STRUCTURES DIVISION FOR THE ENGINEER'S APPROVAL. THE CATWALK SHALL SPAN FROM THE OUTSIDE EDGE OF THE SHOULDER TO THE DOOR ON THE DMS STRUCTURE. THE BOTTOM OF THE CATWALK SHALL BE COVERED WITH A HEAVY GALVANIZED WIRE MESH WHICH SHALL HAVE OPENINGS NO LARGER THAN 1/4".

DESIGN DATA:

THE STRUCTURES SHALL BE DESIGNED USING A WIND VELOCITY = 90 MPH. THE SIGN DESIGN AREA FOR WIND LOAD SHALL BE THE WIDTH OF THE ENTIRE ROADWAY x HEIGHT OF THE DMS SIGN x 1.5.

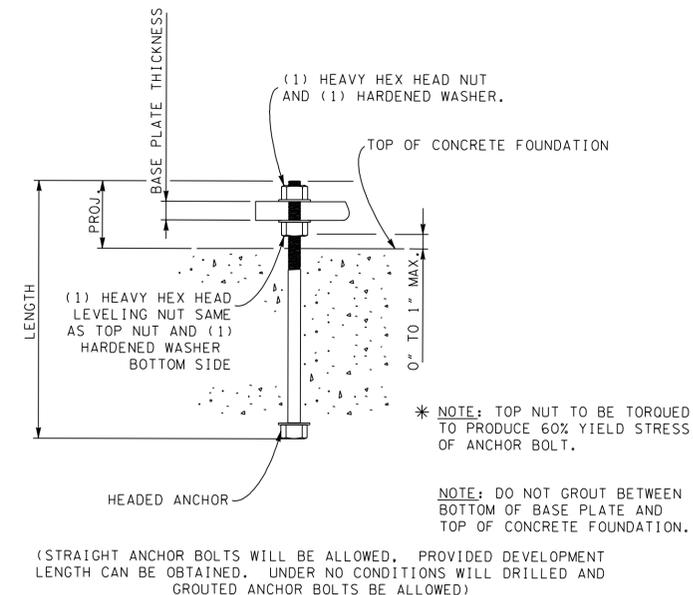
LABELING OF OVERHEAD SIGN SUPPORTS:

THE SIGN STRUCTURE ID NUMBERS, DATE OF FABRICATION, AND NAME OF THE FABRICATOR SHALL BE PERMANENTLY ATTACHED TO THE SIDE OF ONE OF THE UPRIGHTS ON THE SIDE ADJACENT TO THE ROADWAYS, THEY SHALL BE LOCATED A MINIMUM OF 4'-0" AND A MAXIMUM OF 6'-0" ABOVE THE BASE PLATE. THE LETTERS SHALL BE A MINIMUM OF 3/4" TALL. THE LETTERS SHALL BE DIE CUT OR ENGRAVED INTO THE THE METAL BEFORE GALVANIZING AND SHALL BE READABLE AFTER GALVANIZING. ALL EXCESS GALVANIZING SHALL BE BRUSHED OFF. THE LOCATION AND DESCRIPTION OF THE DATA MUST BE SHOWN ON THE SHOP PLANS. STENCILING WITH PAINT WILL NOT BE ALLOWED. IF A FABRICATOR ELECTS TO PLACE THE REQUIRED INFORMATION ON STEEL PLATE, BEFORE GALVANIZING. STRUCTURE ID NUMBERS ARE LOCATED ON EACH DMS STRUCTURE LAYOUT SHEET.



*THE ANGULAR ALIGNMENT OF THE SIGN HOUSING SHALL BE ADJUSTABLE IN THE VERTICAL DIRECTION FROM THREE (3) DEGREES TO FIVE (5) DEGREES DOWN IN 1 DEGREE INCREMENTS TO OPTIMIZE THE VIEWING ANGLE.

OVERHEAD SIGN ORIENTATION
N.T.S.



ANCHOR BOLT DETAIL
N.T.S.

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GENERAL NOTES,
SPECIAL NOTES,
AND DETAILS FOR
SIGN SUPPORTS

SIGN NO.	LEGEND	SHEET NO.	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN				MINIMUM VERTICAL CLEARANCE	REMARKS	
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.			REIN STEEL LBS.
1		9/35B	**	**	**	**	**	**	**	**	-	-	**	**	**	O/H SIGN SUPPORT	58.0'	*	*	*	19'-6"	RELOCATE DUAL-POST SIGN FROM EXISTING STRUCTURE AND CO-LOCATE WITH SIGN NO. 2
2		9/35B	*	*	*	*	*	*	*	*	-	-	*	*	*	O/H SIGN SUPPORT	58.0'	*	*	*	19'-6"	D-FDMS-024E-109.1
3		12/35C	*	*	*	*	*	*	*	*	-	-	*	*	*	O/H SIGN SUPPORT	87.0'	*	*	*	19'-6"	D-FDMS-024W-120.2
4		13/35D	*	*	*	*	*	*	*	*	-	-	*	*	*	O/H SIGN SUPPORT	58.0'	*	*	*	19'-6"	D-FDMS-024E-125.6
5, 6		16/35E	10'-0"	11'-0"	12"	2"	*	*	*	*	-	-	BLACK	YELLOW	REFL.	O/H SIGN SUPPORT	60.0'	*	*	*	19'-6"	D-FDBK-024W-132.7 WITH FLASHING BEACONS
7, 8		22/35F	*	*	*	*	*	*	*	*	-	-	*	*	*	GROUND MOUNTED	-	*	*	*	7'-0"	D-FDMS-024E-136.6 MULTI-COLOR
9		31/35G	*	*	*	*	*	*	*	*	-	-	*	*	*	O/H SIGN SUPPORT	57.0'	*	*	*	19'-6"	D-FDMS-024E-141.8
10		31/35G	15'-0"	11'-0"	12"	2"	16" 16" 16" 10"	12"	15"	"E" (MOD)	-	-	WHITE	GREEN	REFL.	O/H SIGN SUPPORT	57.0'	*	*	*	19'-6"	CO-LOCATE WITH SIGNS NO. 9 AND 11
11		31/35G	10'-0"	2'-0"	6"	2"	10"	-	15	"E" (MOD)	-	-	WHITE	GREEN	REFL.	O/H SIGN SUPPORT	57.0'	*	*	*	19'-6"	CO-LOCATE WITH SIGNS NO. 10 AND 11
12		32/35H	*	*	*	*	*	*	*	*	-	-	*	*	*	O/H SIGN SUPPORT	57.0'	*	*	*	19'-6"	D-FDMS-024W-156.9
13		32/35H	**	**	**	**	**	**	**	**	-	-	**	**	**	O/H SIGN SUPPORT	57.0'	*	*	*	19'-6"	RELOCATE DUAL-POST SIGN FROM EXISTING STRUCTURE AND CO-LOCATE WITH SIGN NO. 12

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	1M/NH-24-2(143)	35A

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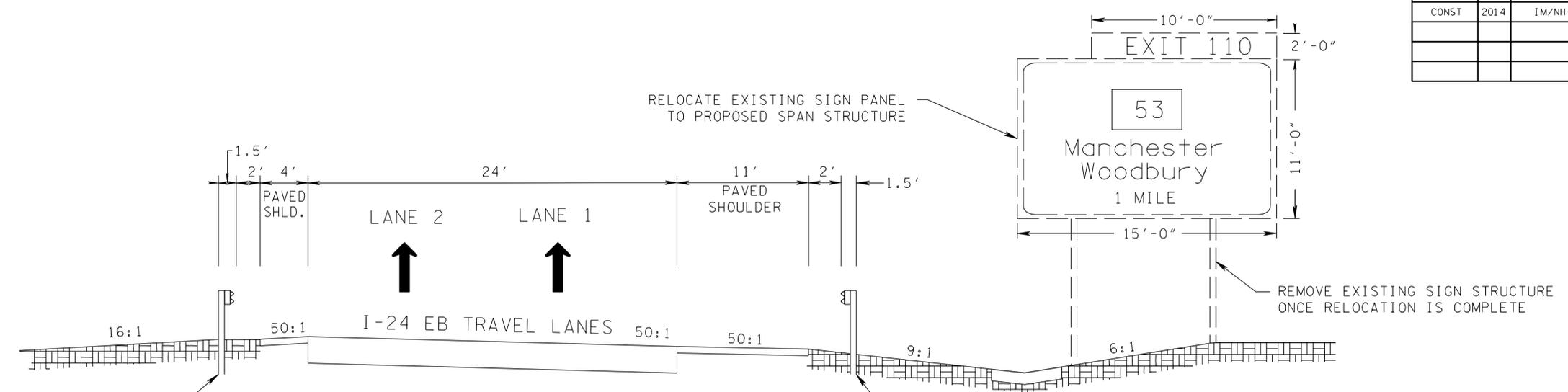
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING
SCHEDULE

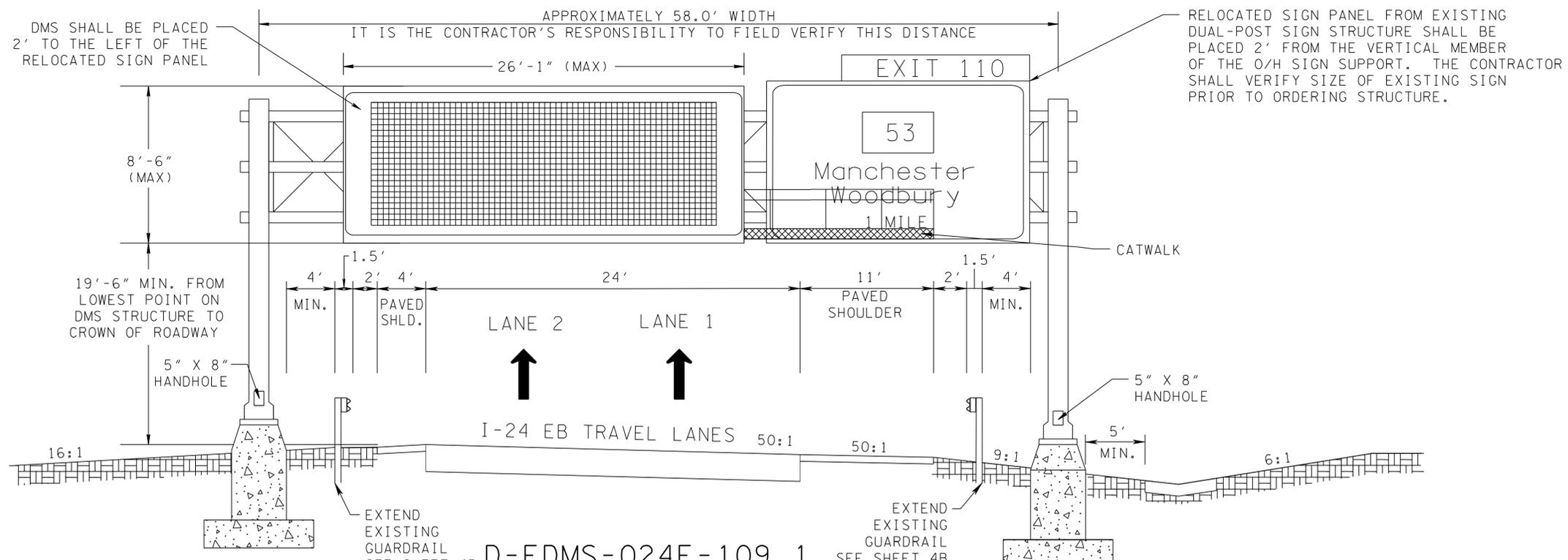
SHEET 1 OF 1

* DESIGN TO BE PROVIDED BY CONTRACTOR / VENDOR
** RELOCATE EXISTING SIGN

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35B



EXISTING DUAL-POST GROUND-MOUNTED SIGN STRUCTURE
COFFEE COUNTY
ITS LAYOUT SHEET 9



D-FDMS-024E-109.1
COFFEE COUNTY
ITS LAYOUT SHEET 9
SIGN SCHEDULE SHEET 35A

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
DMS STRUCTURE
LAYOUT
D-FDMS-024E-109.1

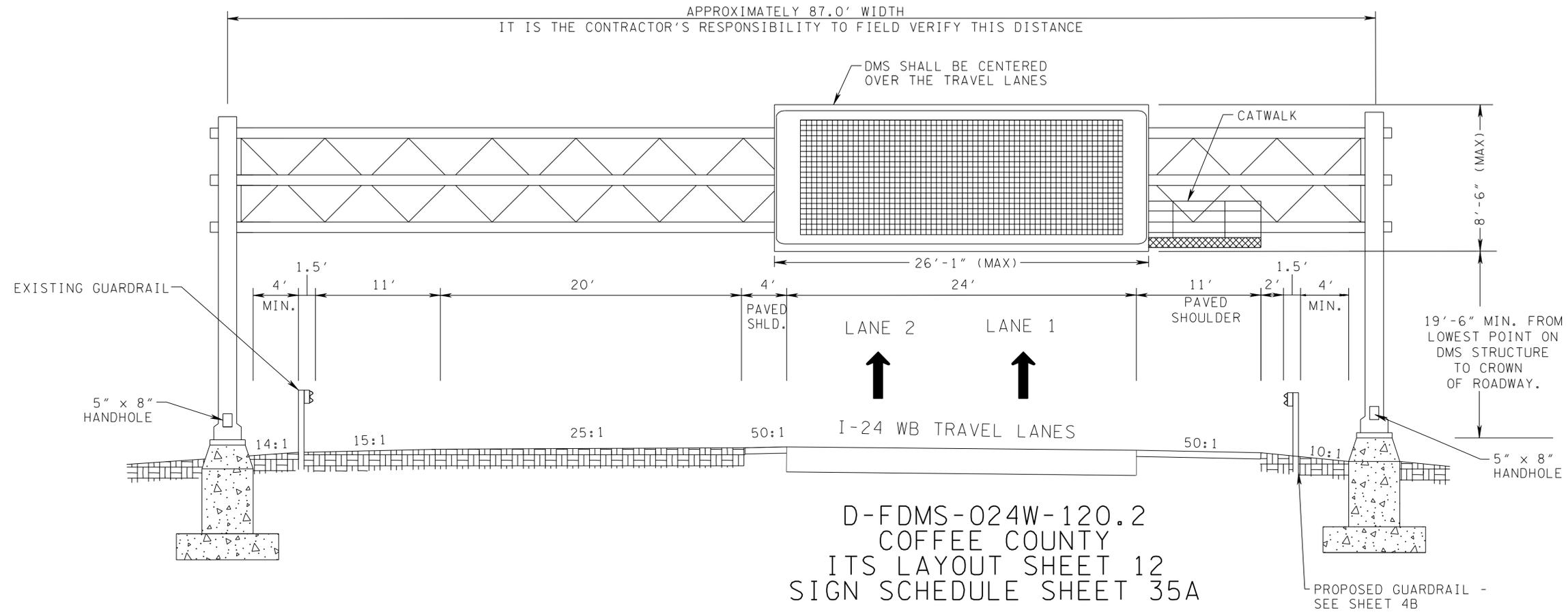
N. T. S.

NOTES:
SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY, CONTRACTOR SHALL DESIGN ALL STRUCTURAL ELEMENTS.

THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS ASSOCIATED WITH THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF THE STRUCTURE, ATTACHMENTS, AND FOUNDATION. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF TENNESSEE.

Plotted on Friday, July 25, 2014 at 04:00 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35C



D-FDMS-024W-120.2
 COFFEE COUNTY
 ITS LAYOUT SHEET 12
 SIGN SCHEDULE SHEET 35A

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SIGNING PLAN
 DMS STRUCTURE
 LAYOUT
 D-FDMS-024W-120.2

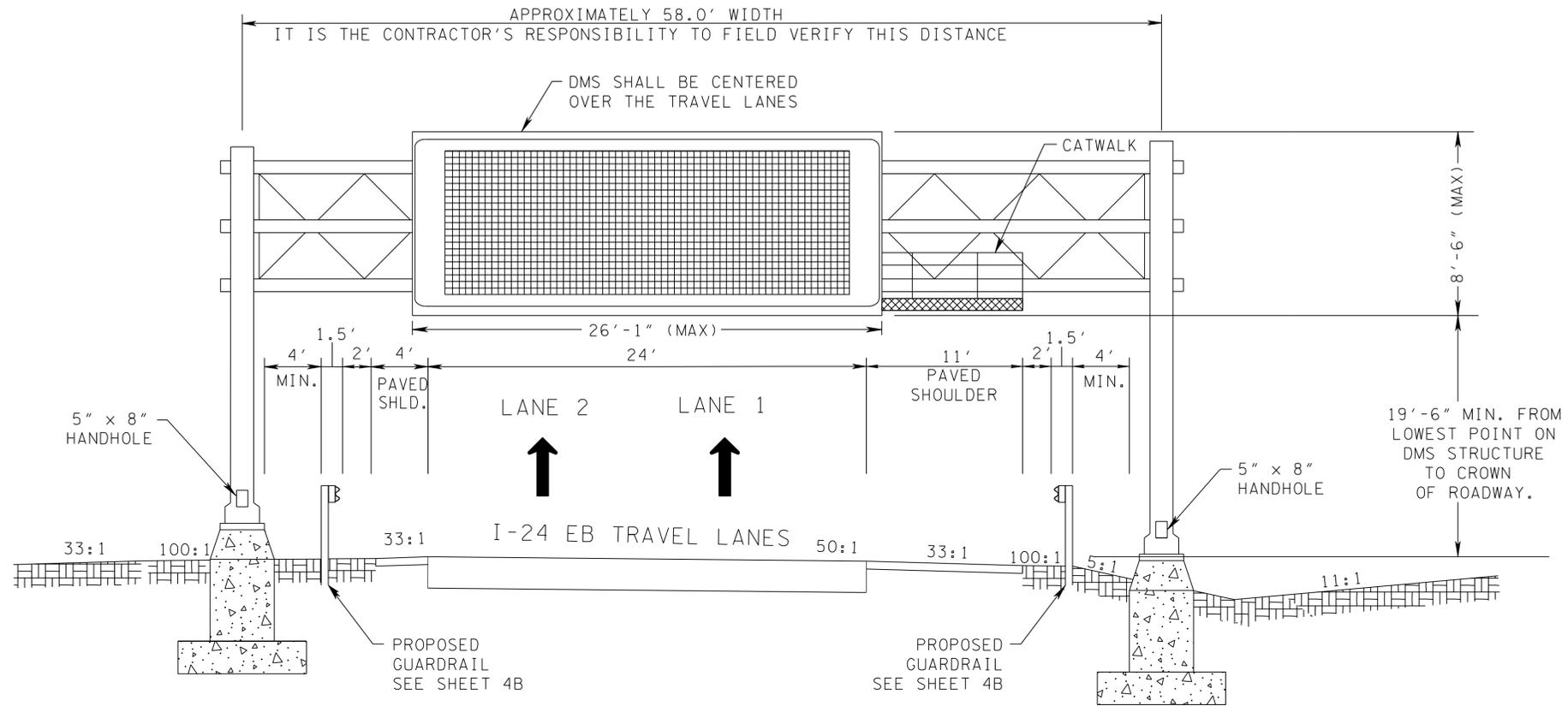
N. T. S.

NOTES:
 SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY, CONTRACTOR SHALL DESIGN ALL STRUCTURAL ELEMENTS.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35D



D-FDMS-024E-125.6
 COFFEE COUNTY
 ITS LAYOUT SHEET 13
 SIGN SCHEDULE SHEET 35A

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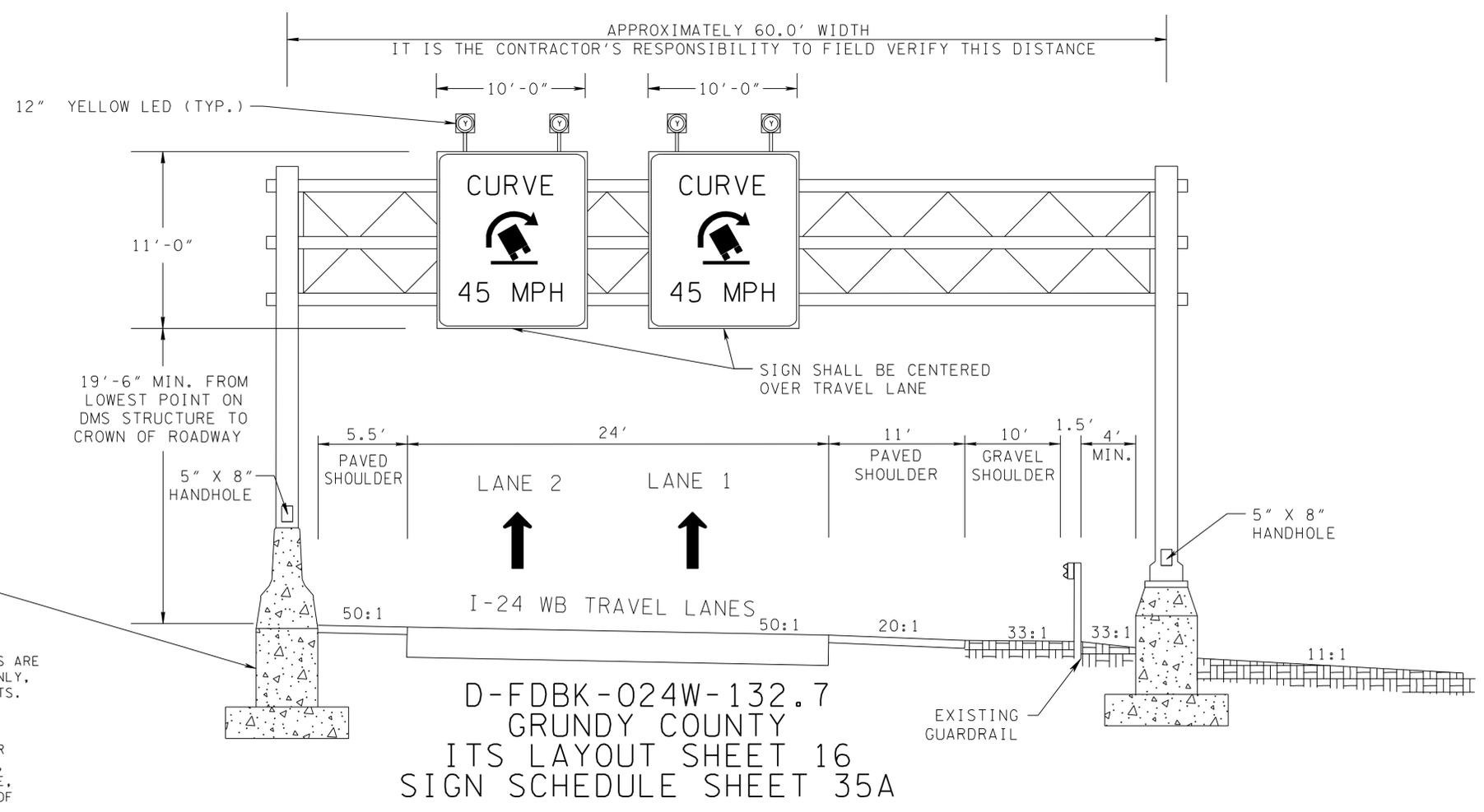
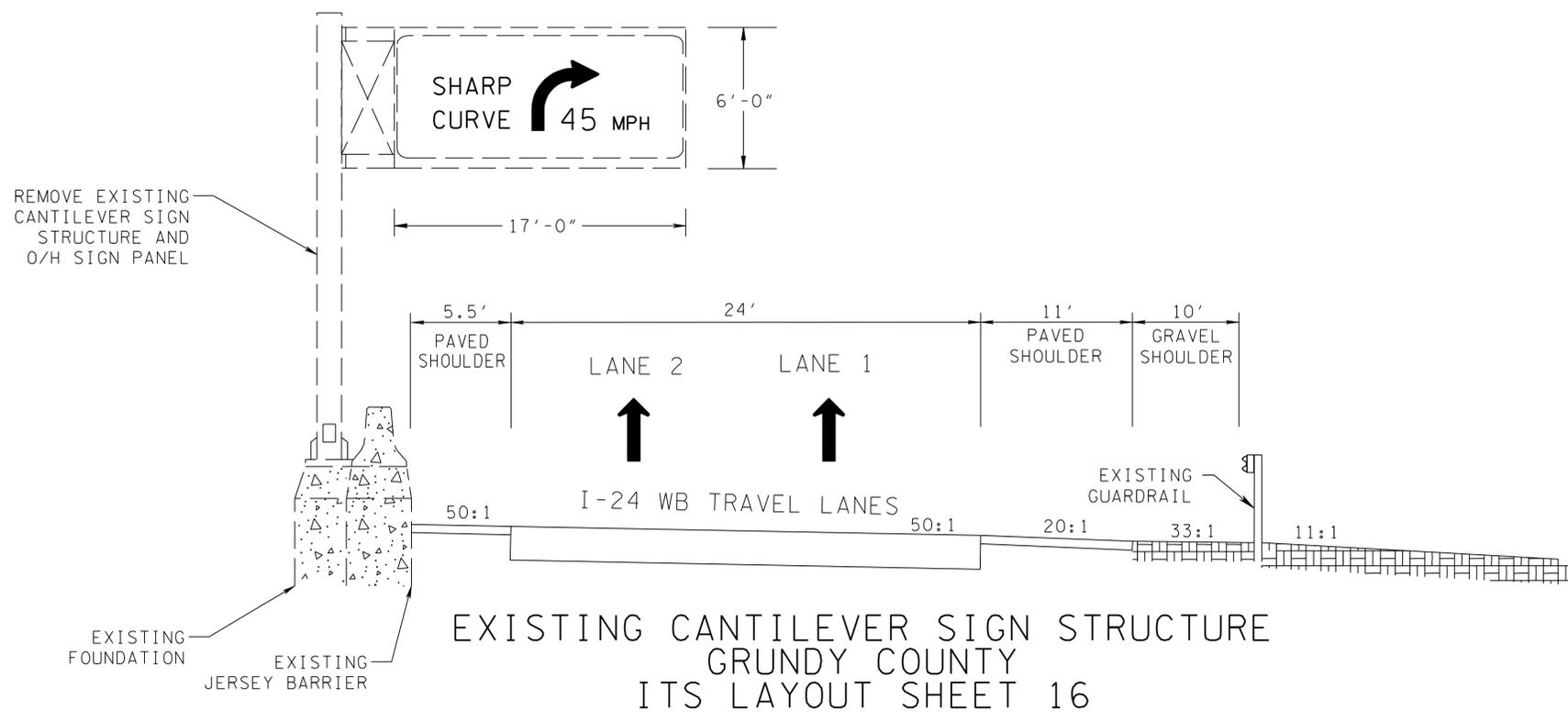
SIGNING PLAN
 DMS STRUCTURE
 LAYOUT
 D-FDMS-024E-125.6

N. T. S.

NOTES:
 SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY, CONTRACTOR SHALL DESIGN ALL STRUCTURAL ELEMENTS.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35E



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SIGNING PLAN
DMS STRUCTURE
LAYOUT
D-FDBK-024W-132.7

N.T.S.

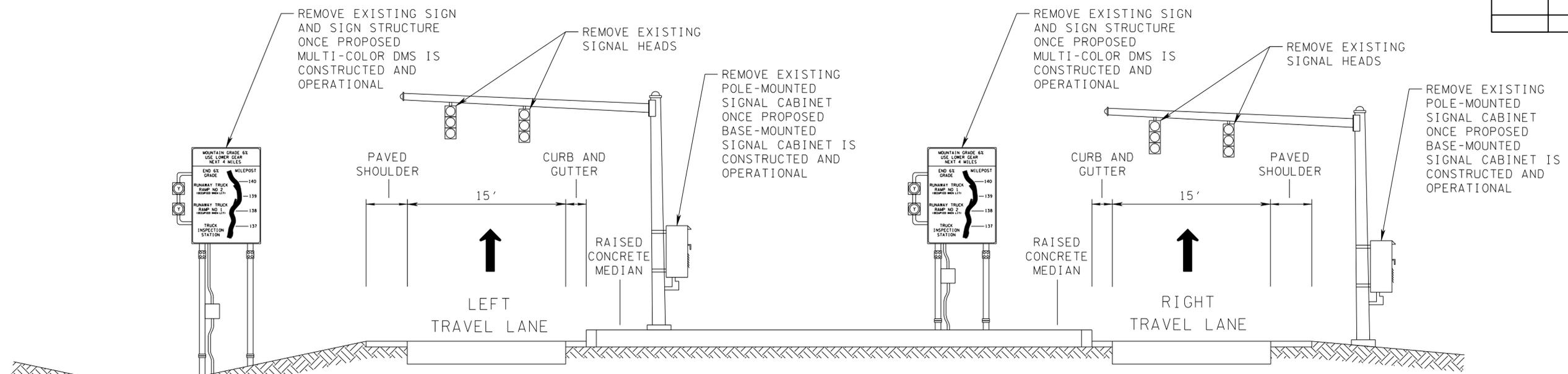
NOTES:
SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY, CONTRACTOR SHALL DESIGN ALL STRUCTURAL ELEMENTS.

THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS ASSOCIATED WITH THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF THE STRUCTURE, ATTACHMENTS, AND FOUNDATION. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF TENNESSEE.

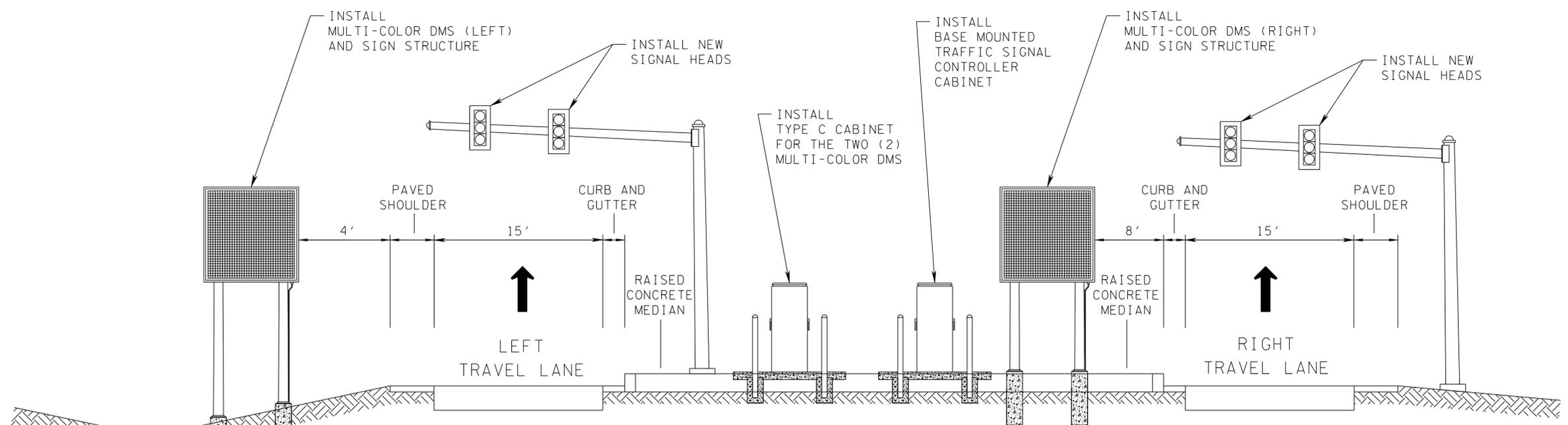
MEDIAN REPLACEMENT REQUIRED FOR SIGN FOUNDATION CONSTRUCTION SEE SHEET 35A FOR MEDIAN BARRIER MODIFICATION DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	IM/NH-24-2(143)	35F



EXISTING DUAL-POST SIGN STRUCTURES
 TRUCK INSPECTION STATION
 MARION COUNTY
 ITS LAYOUT SHEET 22



PROPOSED MULTI-COLOR DMS SIGN STRUCTURES
 TRUCK INSPECTION STATION
 MARION COUNTY
 ITS LAYOUT SHEET 22
 SIGN SCHEDULE SHEET 35A

NOTES:
 THE CONTRACTOR SHALL REMOVE EXISTING SIGN PANEL AND FLASHING BEACON ASSEMBLIES FROM BOTH LANE 1 AND LANE 2 SIGN STRUCTURES. THIS INCLUDES THE SIGN POSTS, FOUNDATIONS, AND RIGID CONDUIT SYSTEM ATTACHED TO THE SIGN POSTS.
 THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF CALCULATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS ASSOCIATED WITH THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF THE NEW MULTI-COLOR DMS SYSTEM AND STRUCTURE. THE FIRST PAGE OF EACH SET OF DESIGN CALCULATIONS AND EACH PAGE OF THE SHOP DRAWINGS SHALL BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF TENNESSEE.

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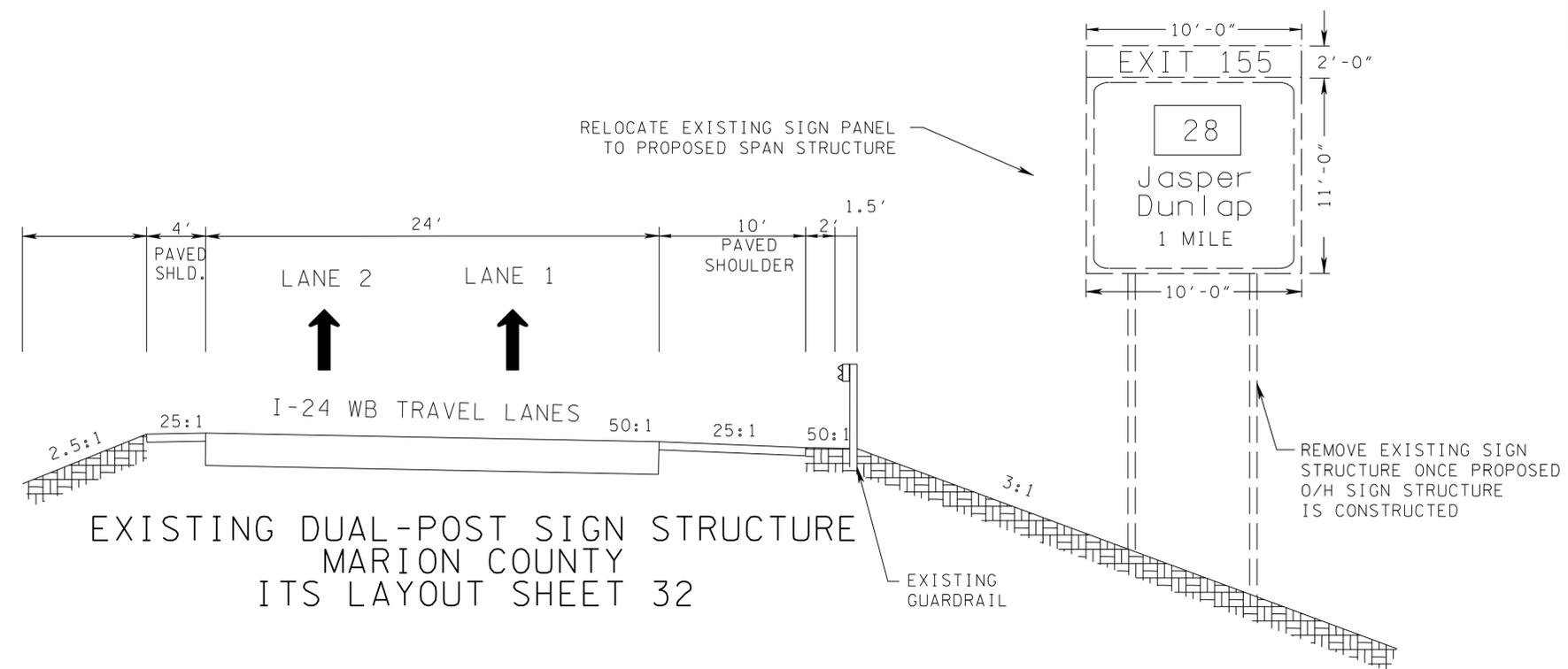
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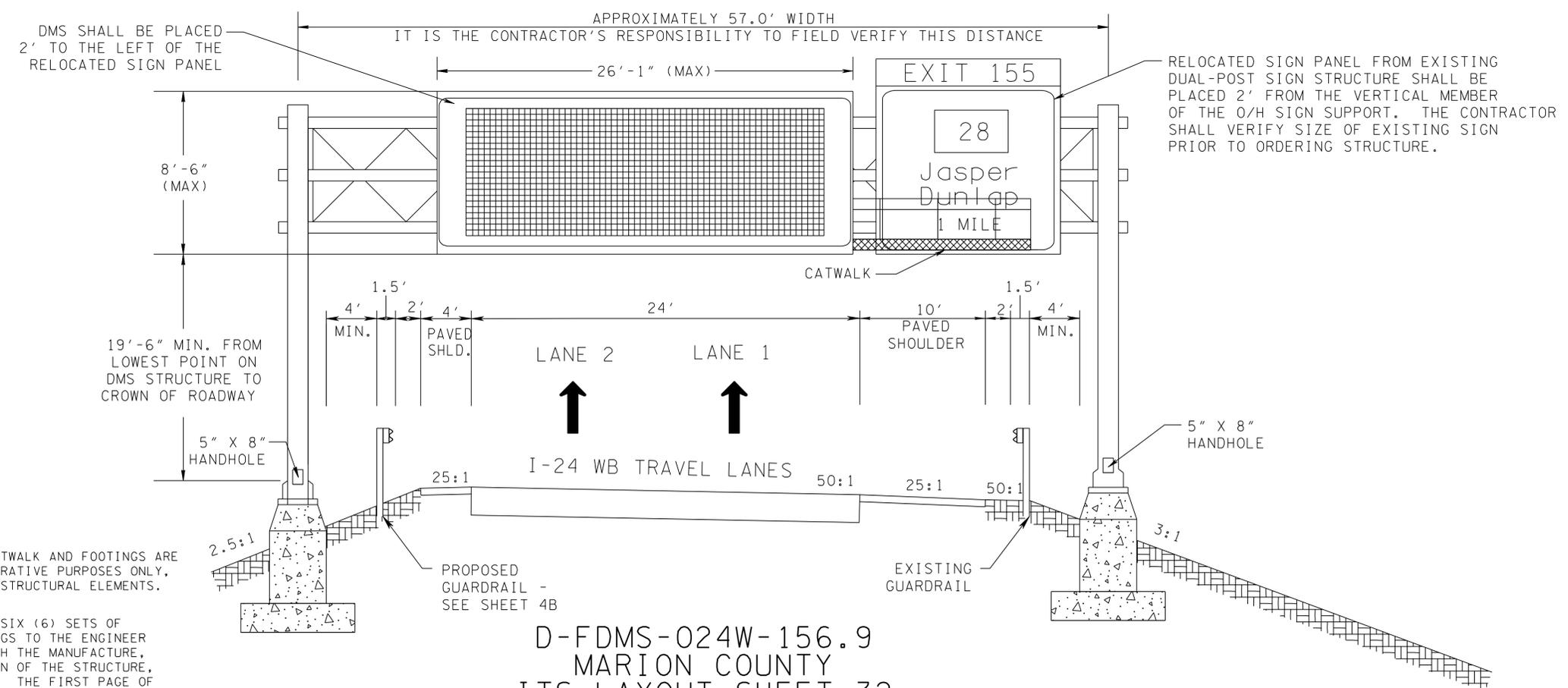
SIGNING PLAN
 MULTI-COLOR DMS
 STRUCTURE LAYOUT
 D-FDMS-024E-136.6

N. T. S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	1M/NH-24-2(143)	35H



EXISTING DUAL-POST SIGN STRUCTURE
MARION COUNTY
ITS LAYOUT SHEET 32



D-FDMS-024W-156.9
MARION COUNTY
ITS LAYOUT SHEET 32
SIGN SCHEDULE SHEET 35A

NOTES:
SIGN STRUCTURE, SUPPORTS, CATWALK AND FOOTINGS ARE ALL SCHEMATIC AND FOR ILLUSTRATIVE PURPOSES ONLY, CONTRACTOR SHALL DESIGN ALL STRUCTURAL ELEMENTS.

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SIGNING PLAN
DMS STRUCTURE
LAYOUT
D-FDMS-024W-156.9

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