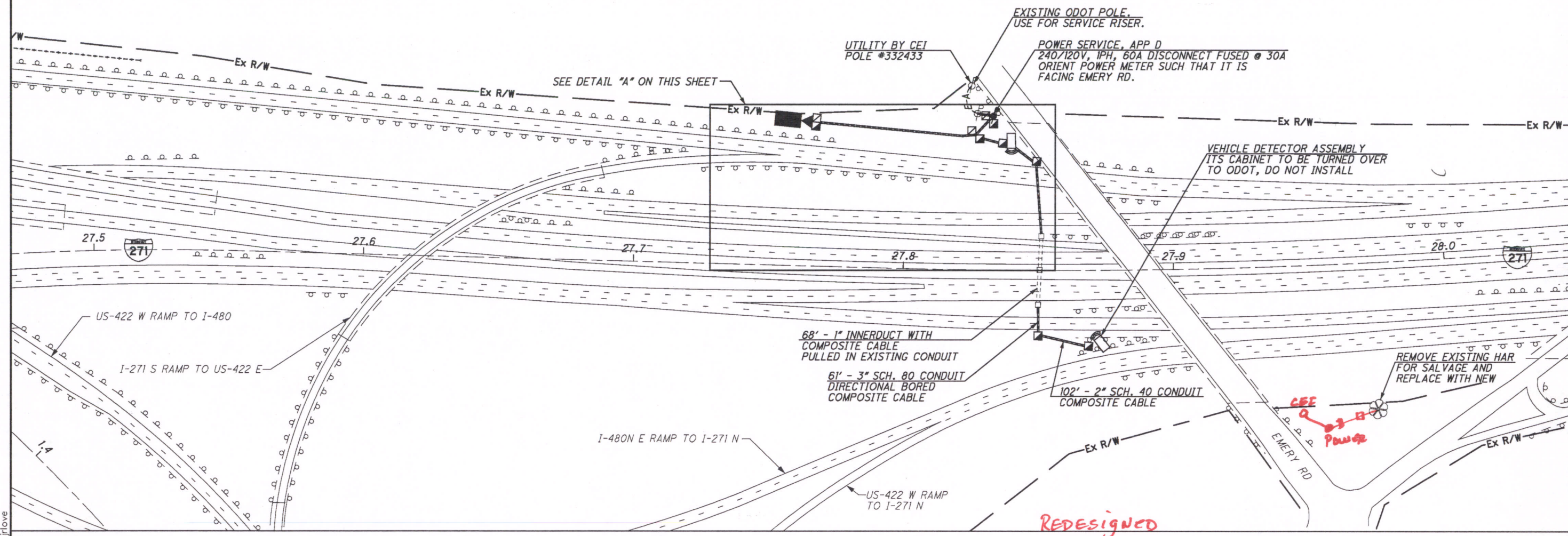


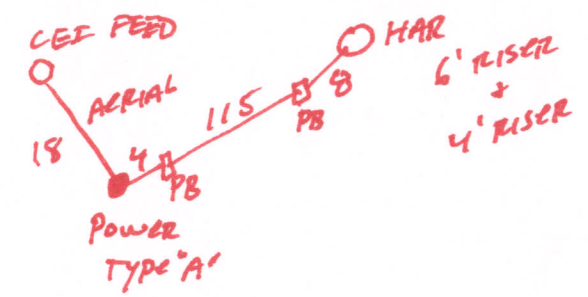
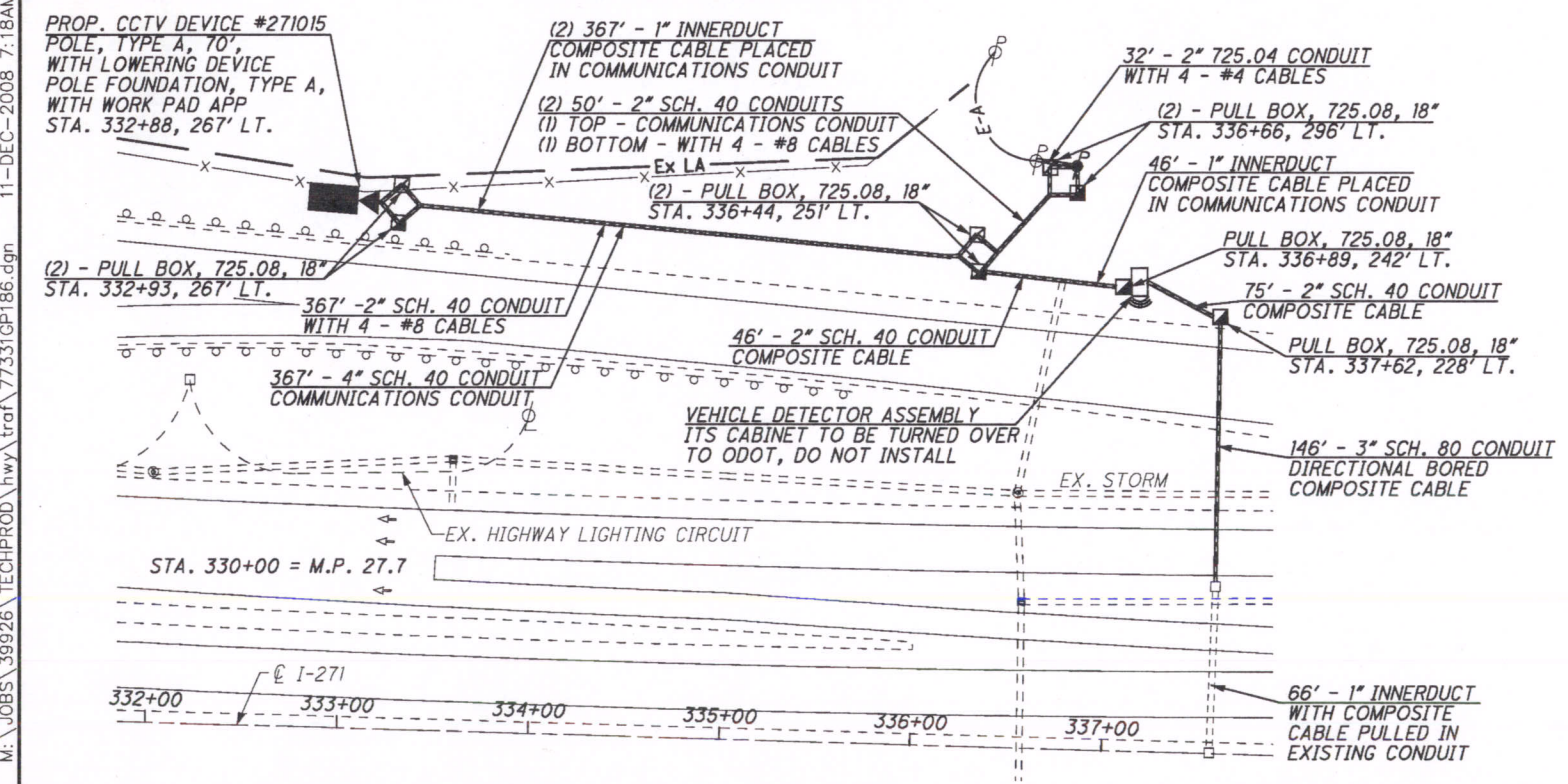
CALCULATED STS CHECKED JUDG

I-271 AT EMERY RD. (MP 27.47 TO MP 28.05)
CITY OF WARRENSVILLE HTS, CUYAHOGA CTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



DETAIL "A" - NOT TO SCALE

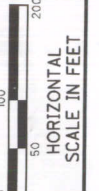


- REFER TO SHEET 8 FOR MEDIAN BARRIER WITH EXISTING PULLBOX DETAILS
- REFER TO SHEET 10 FOR CONDUIT AND PULL BOX IN BARRIER WALL DETAILS
- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 21 FOR TYPICAL HAR DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 43 FOR TYPICAL VEHICLE DETECTOR ASSEMBLY DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 195 AND 189 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS
- REFER TO SHEET 203 FOR TYPICAL HAR WIRELESS COMMUNICATIONS DETAILS

CCTV 271015
EXISTING HAR 271-1

M:\JOBS\39926\TECHPROD\hwy\traf\77331\GP186.dgn 11-DEC-2008 7:18AM jlove

\\Clew00\PMWork\JOBS\42430\TECHPROD\13311\traffic\sheets\13311CP054.dgn 12-DEC-2008 9:22AM jrlove

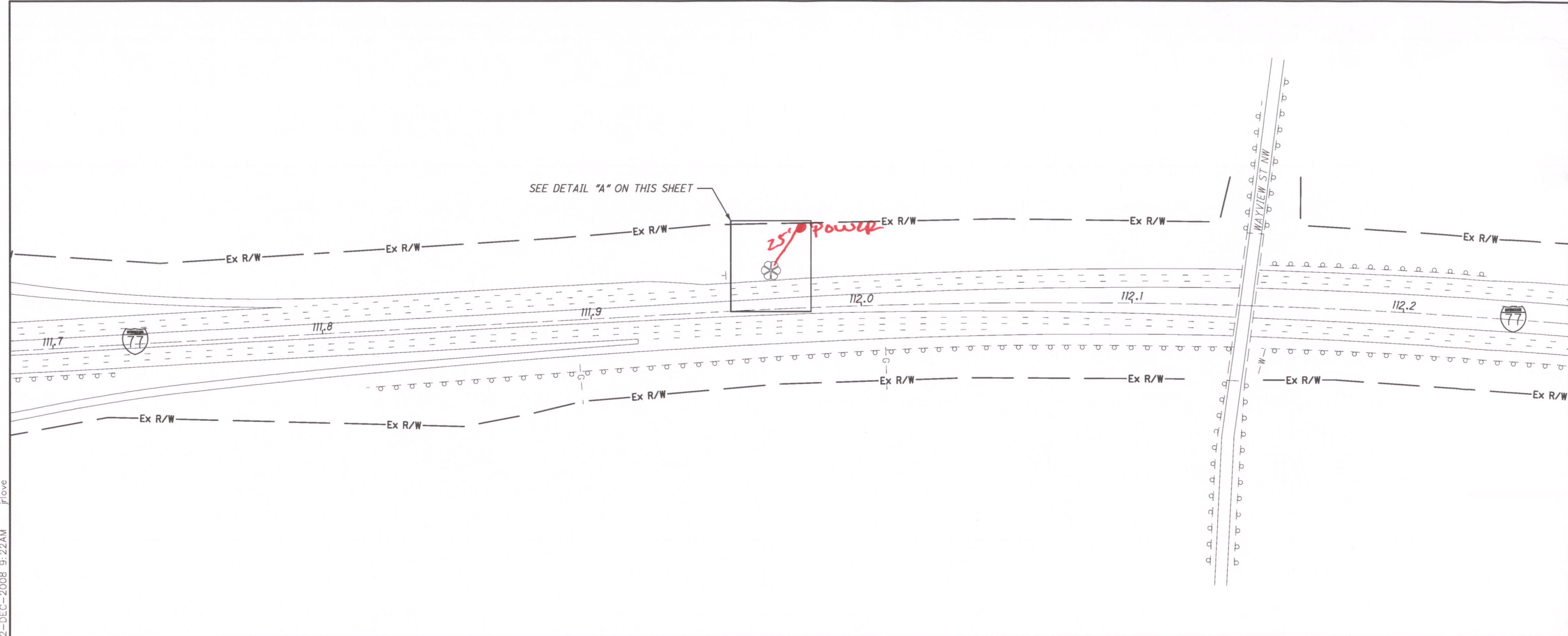


CALCULATED STS
CHECKED JDG

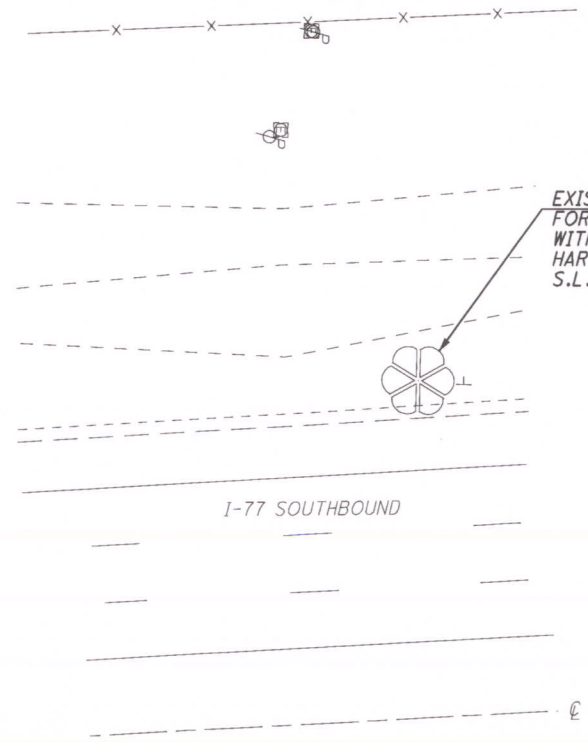
I-77 AT WAYVIEW ST. (MP 111.68 TO MP 112.26)
JACKSON TOWNSHIP, STARK COUNTY

STA-SUM ITS

84
154



DETAIL "A" - NOT TO SCALE



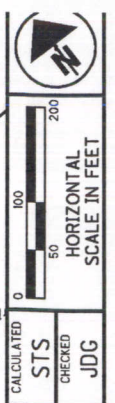
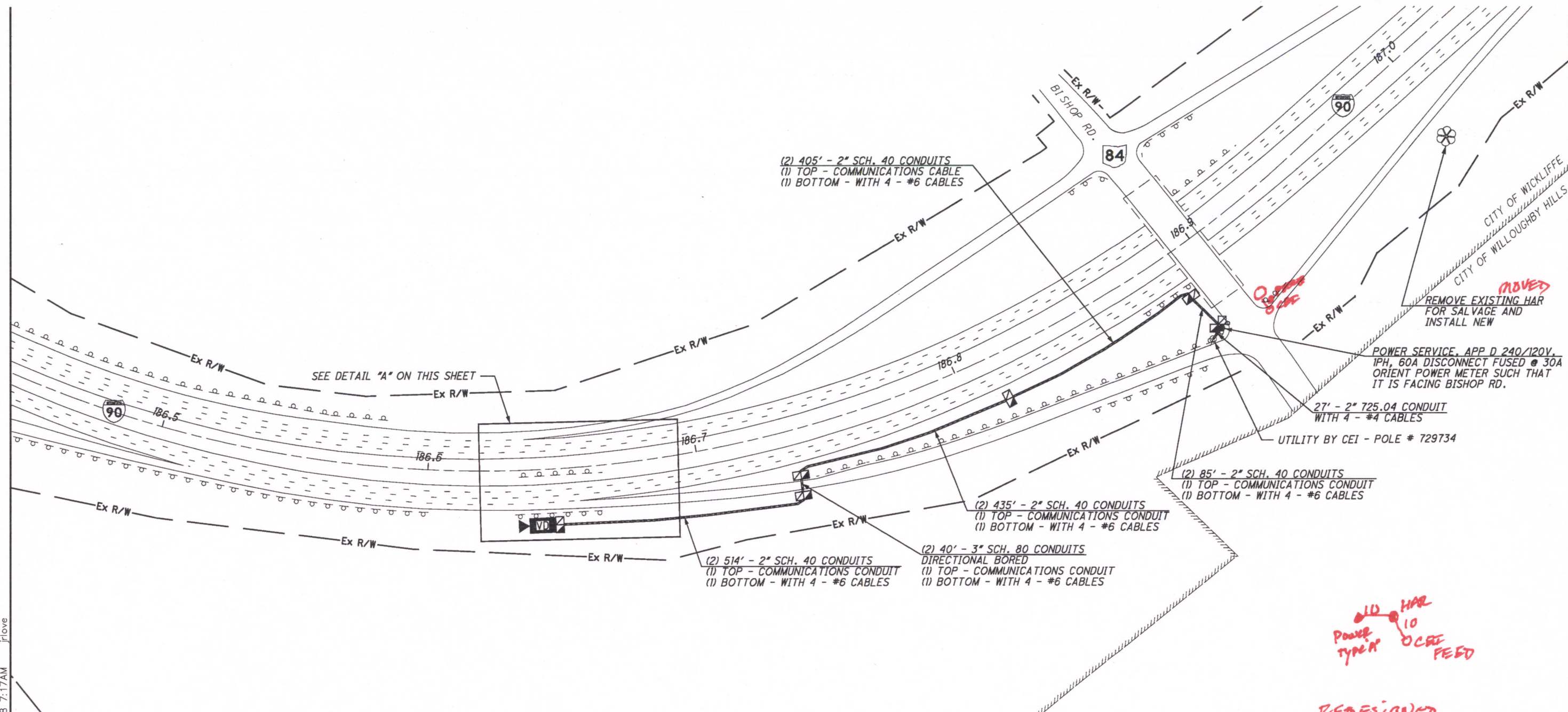
REFER TO SHEET 18 FOR TYPICAL HAR DETAILS

REFER TO SHEET 135 FOR TYPICAL COMMUNICATIONS PLANS

REFER TO SHEET 148 FOR TYPICAL HAR WIRELESS COMMUNICATIONS PLANS

STARK HAR

M:\JOBS\39926\TECHPROD\hwy\trcf\77331GP159.dgn 11-DEC-2008 7:17AM jrllove



CITY OF WICKLIFFE
CITY OF WILLOUGHBY HILLS

REMOVE EXISTING HAR FOR SALVAGE AND INSTALL NEW

POWER SERVICE, APP D 240/120V, 1PH, 60A DISCONNECT FUSED @ 30A ORIENT POWER METER SUCH THAT IT IS FACING BISHOP RD.

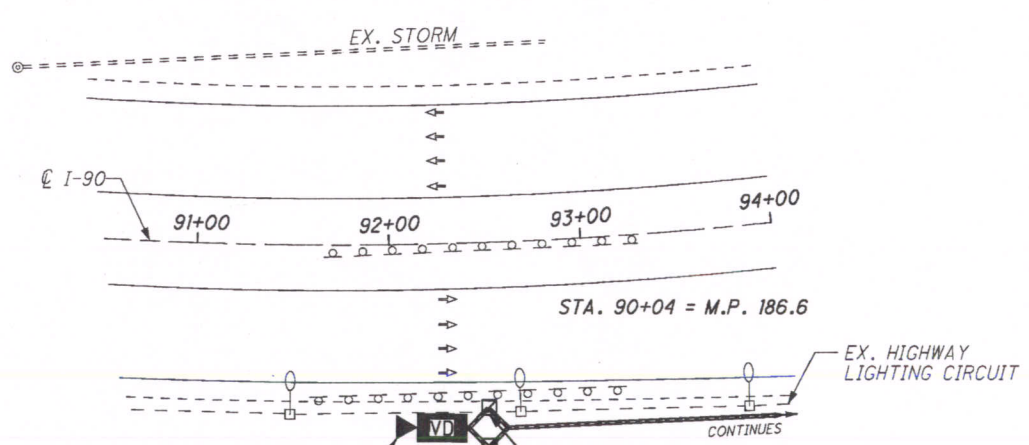
UTILITY BY CEI - POLE # 729734

REDESIGNED

OLD HAR POWER TYPE A 10' OCCE FEED

1-90 AT SR-84 (MP 186.45 TO MP 187.03)
CITY OF WICKLIFFE, LAKE COUNTY

DETAIL "A" - NOT TO SCALE



PROP. CCTV WITH VEHICLE DETECTOR DEVICE #090056
POLE, TYPE A, 70', WITH LOWERING DEVICE
POLE FOUNDATION, TYPE A, WITH WORK PAD APP
STA. 92+26, 95' RT.

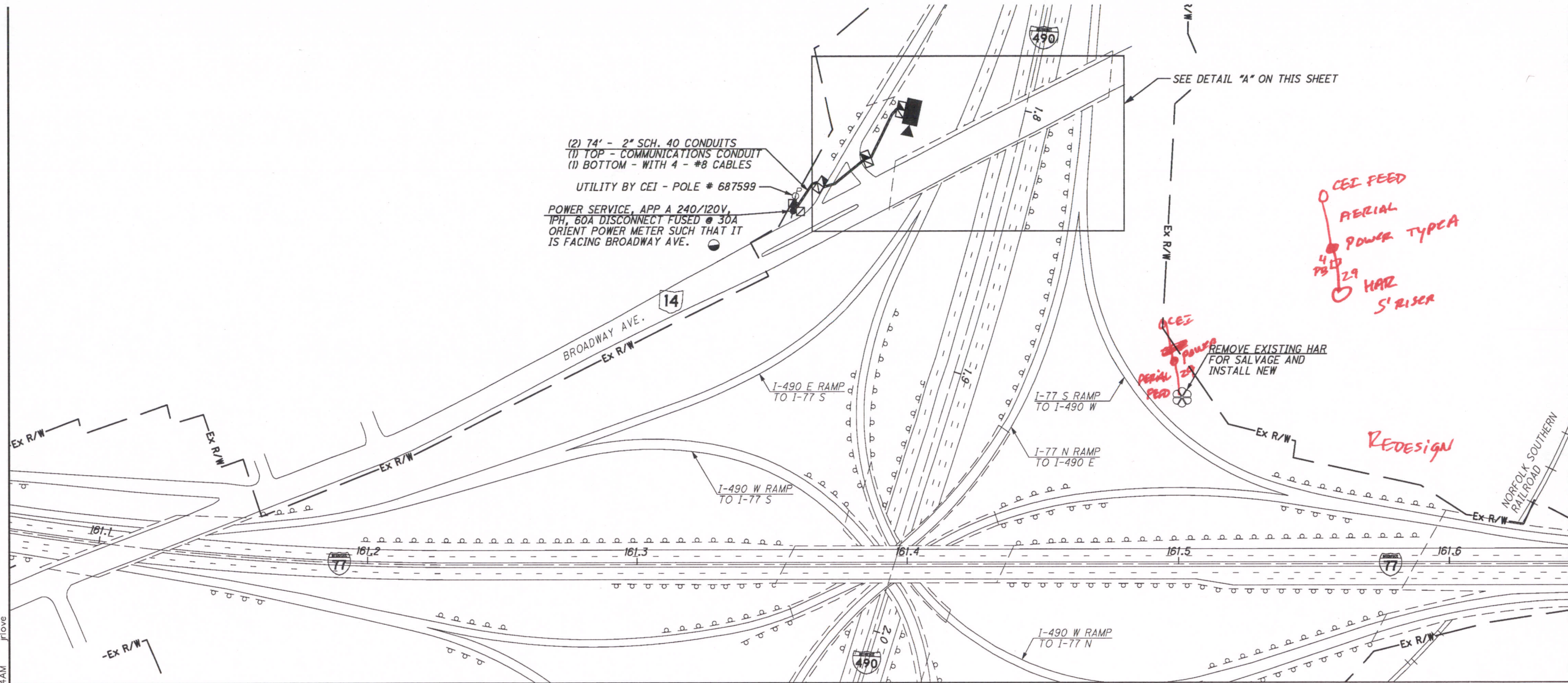
(2) - PULL BOX, 725.08, 18"
STA. 92+31, 95' RT.

- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 21 FOR TYPICAL HAR DETAILS
- REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 194 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS
- REFER TO SHEET 203 FOR TYPICAL HAR WIRELESS COMMUNICATIONS DETAILS

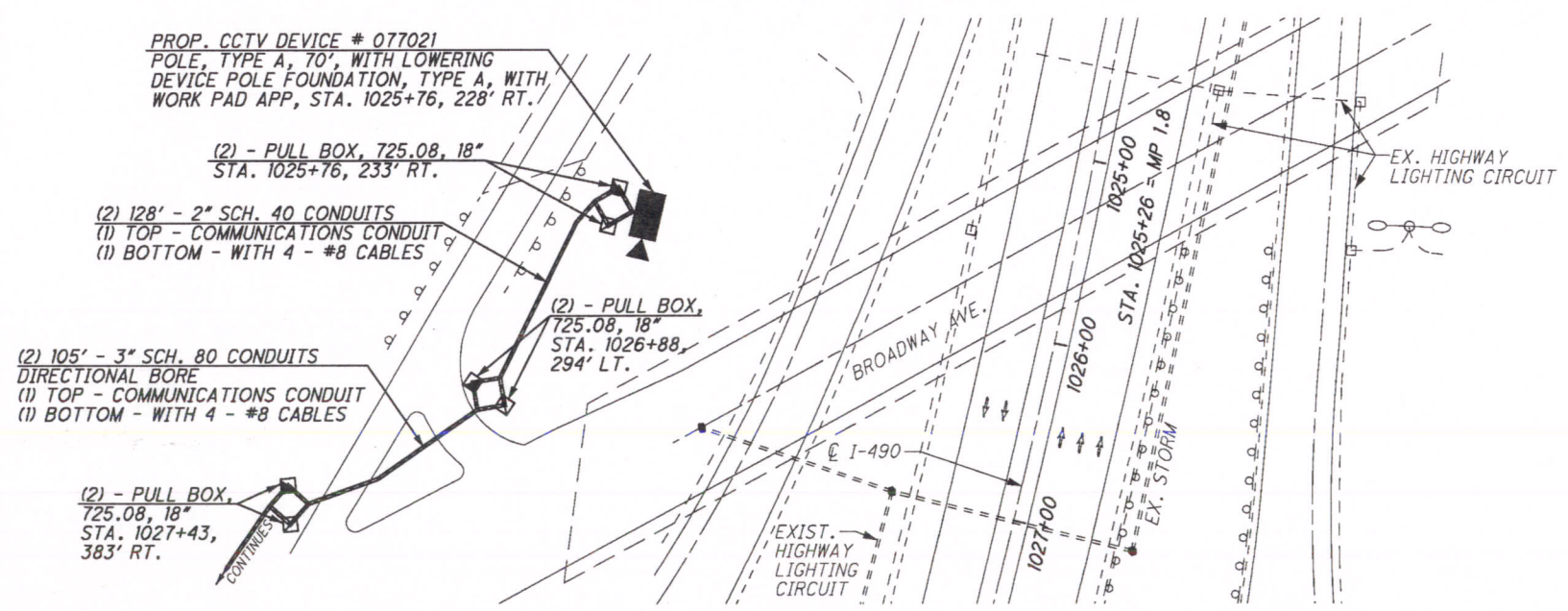
CCTV 090056
EXISTING HAR 90-1

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

M:\JOBS\39926\TECHPROD\hwy\traf\77331GP097.dgn 11-DEC-2008 7:14AM jrlvne



DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 21 FOR TYPICAL HAR DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 191 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS
- REFER TO SHEET 203 FOR TYPICAL HAR WIRELESS COMMUNICATIONS DETAILS

CCTV 077021
EXISTING 77-1 HAR

N

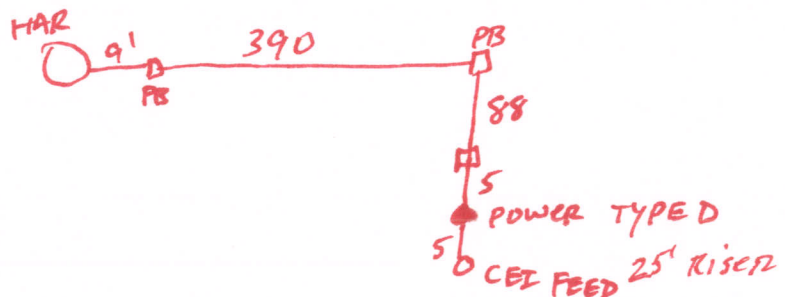
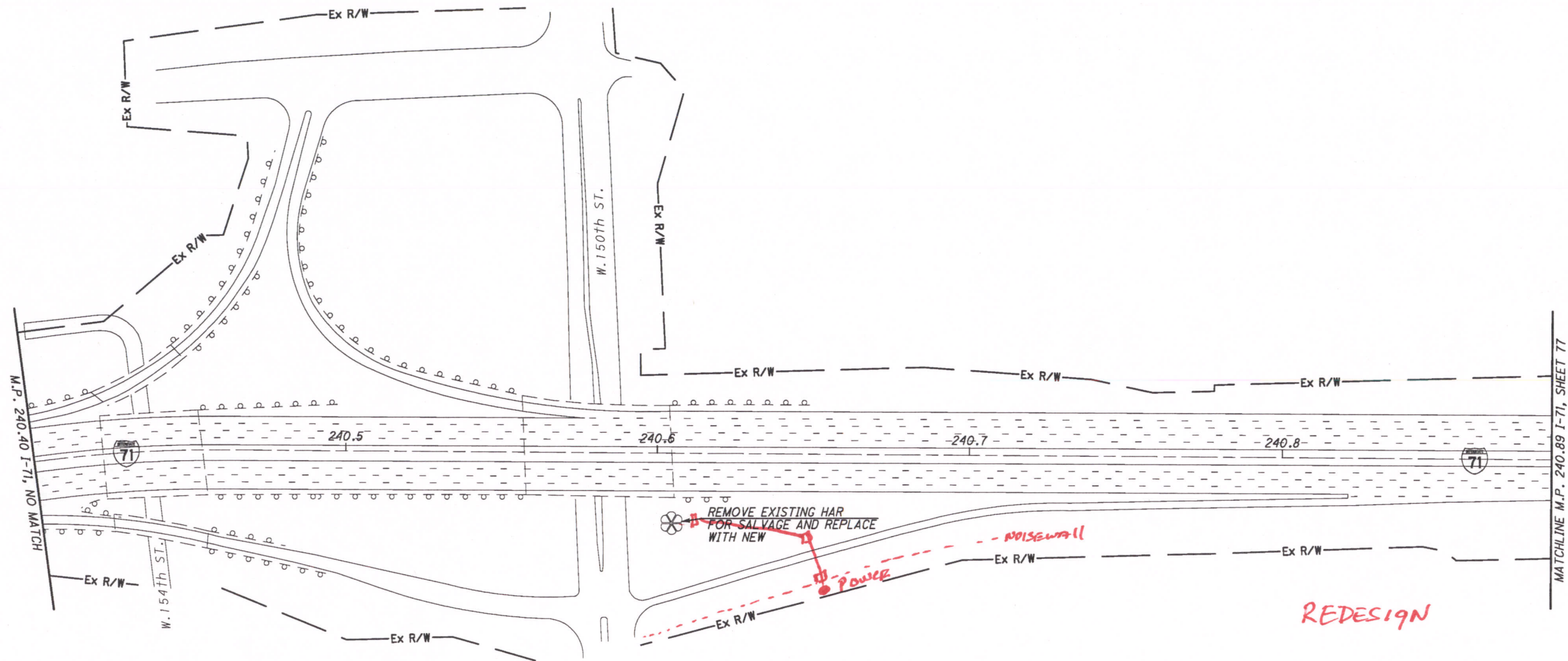
0 100 200
HORIZONTAL SCALE IN FEET

CALCULATED	STS	CHECKED	JDG
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I-77 AT I-490 (MP 161.07 TO MP 161.64)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

97
207



REDESIGN

REFER TO SHEET 21 FOR TYPICAL HAR DETAILS
 REFER TO SHEET 189 FOR COMMUNICATIONS PLANS
 REFER TO SHEET 203 FOR TYPICAL HAR WIRELESS COMMUNICATIONS DETAILS

EXISTING HAR 71-2

VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM

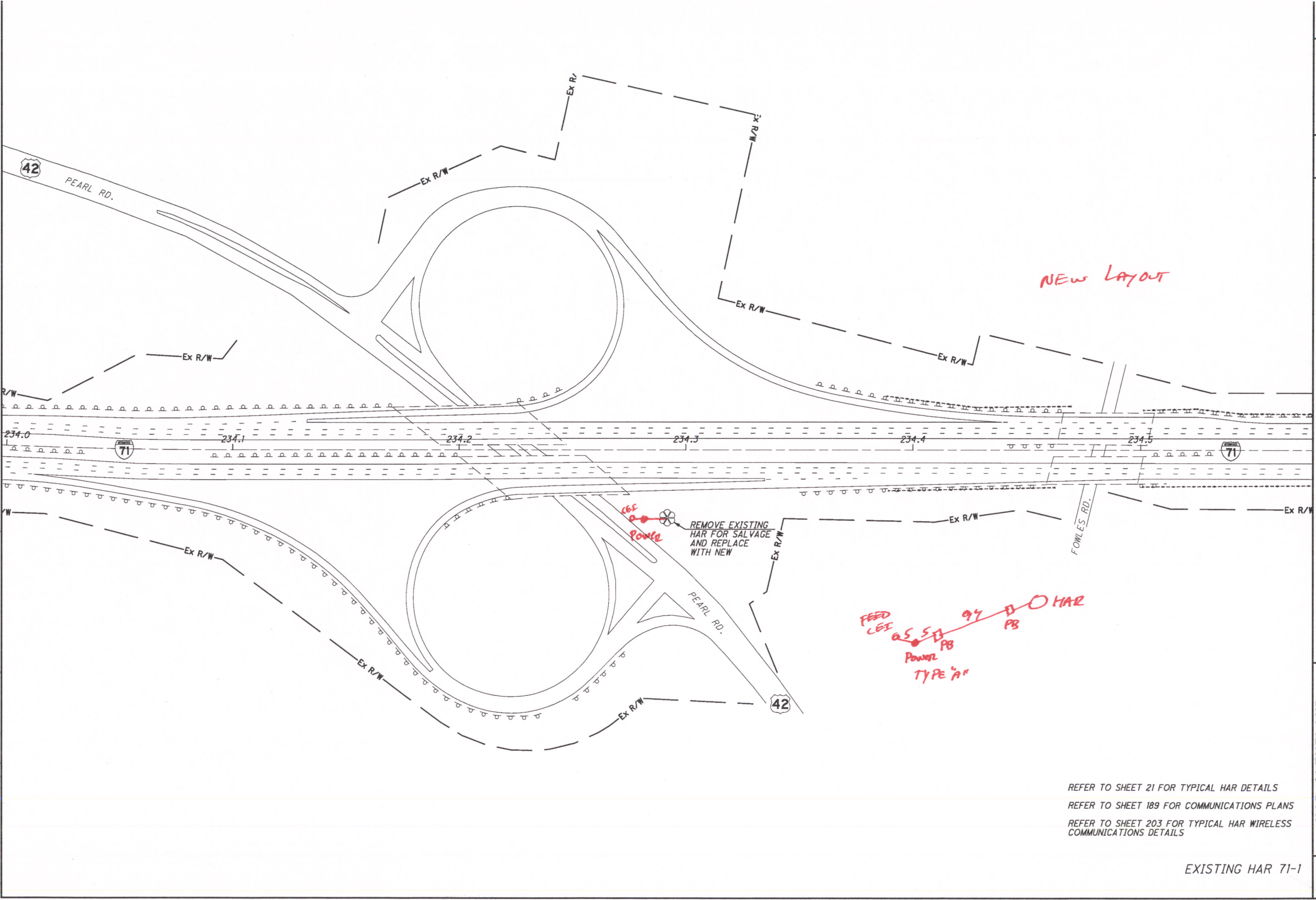
I-71 AT W.150TH ST. (MP 240.40 TO MP 240.89)
 CITY OF CLEVELAND, CUYAHOGA COUNTY

CALCULATED STS
 CHECKED JDG

HORIZONTAL SCALE IN FEET
 0 50 100 200

76
 207

M:\JOBS\39926\TECHPROD\hwy\traf\77331GP032.dgn 11-DEC-2008 7:09AM jrlove

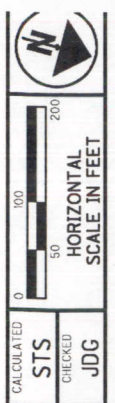
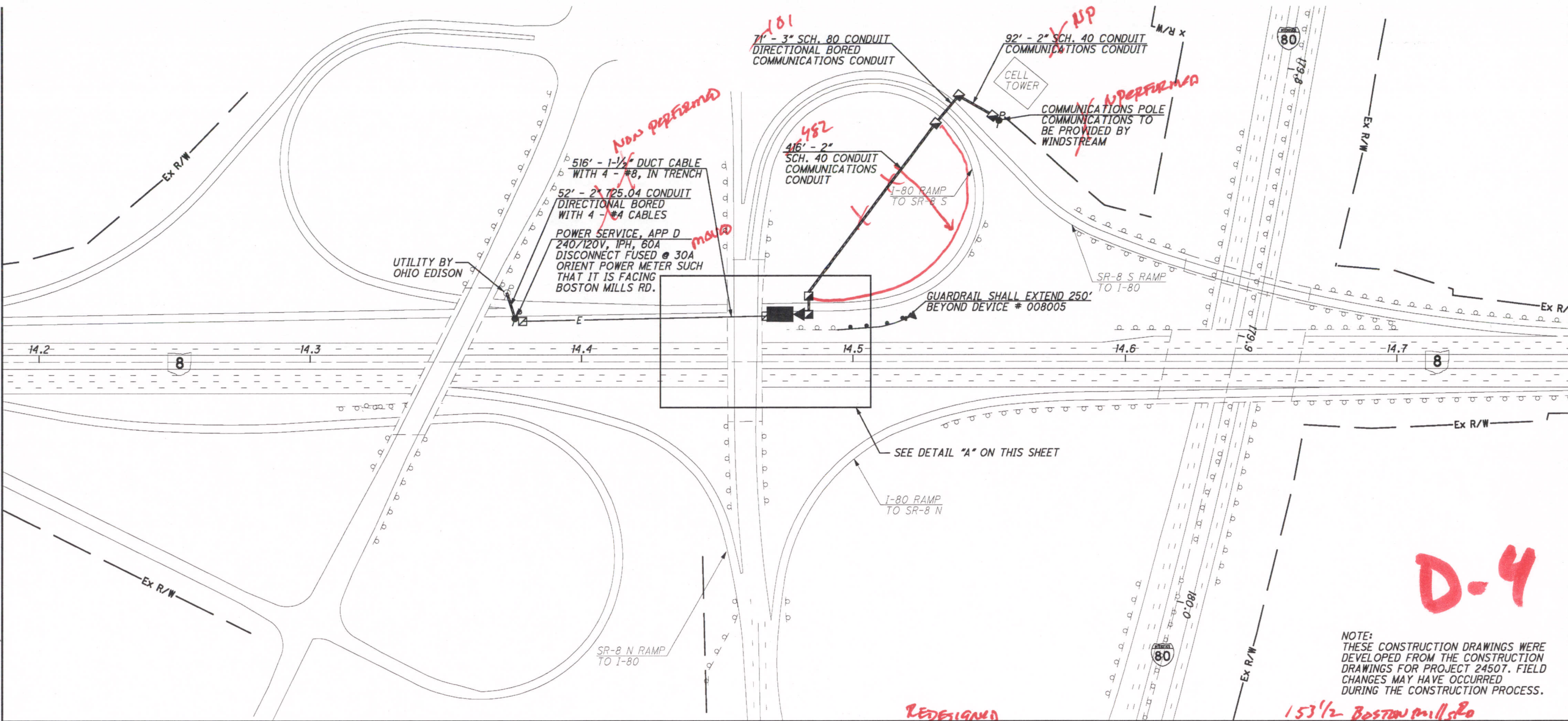


REFER TO SHEET 21 FOR TYPICAL HAR DETAILS
 REFER TO SHEET 189 FOR COMMUNICATIONS PLANS
 REFER TO SHEET 203 FOR TYPICAL HAR WIRELESS COMMUNICATIONS DETAILS

EXISTING HAR 71-1

VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM	I-71 AT US-42 (MP 233.99 TO MP 234.58) CITY OF MIDDLEBURG HTS, CUYAHOGA COUNTY	STS CHECKED JDG	
	70 207		

M:\JOBS\39926\TECHPROD\hwy\trf\77331GF267.dgn 08-APR-2009 2:14PM jrllove

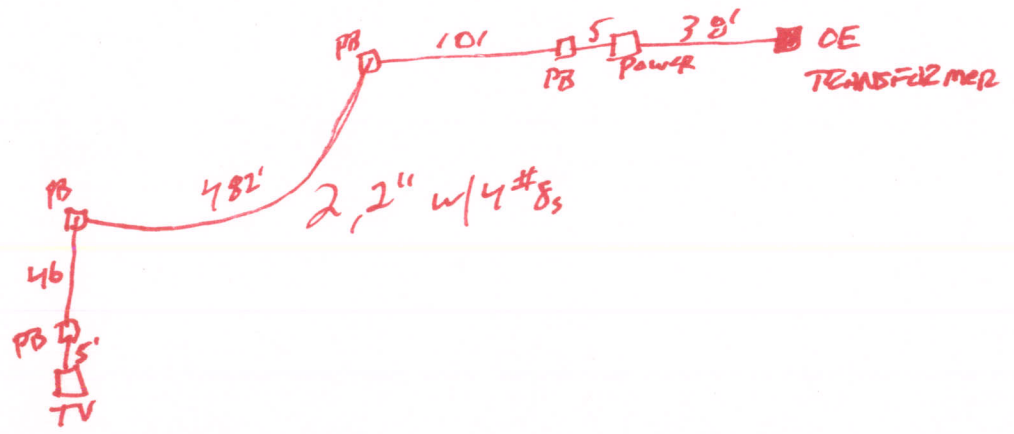
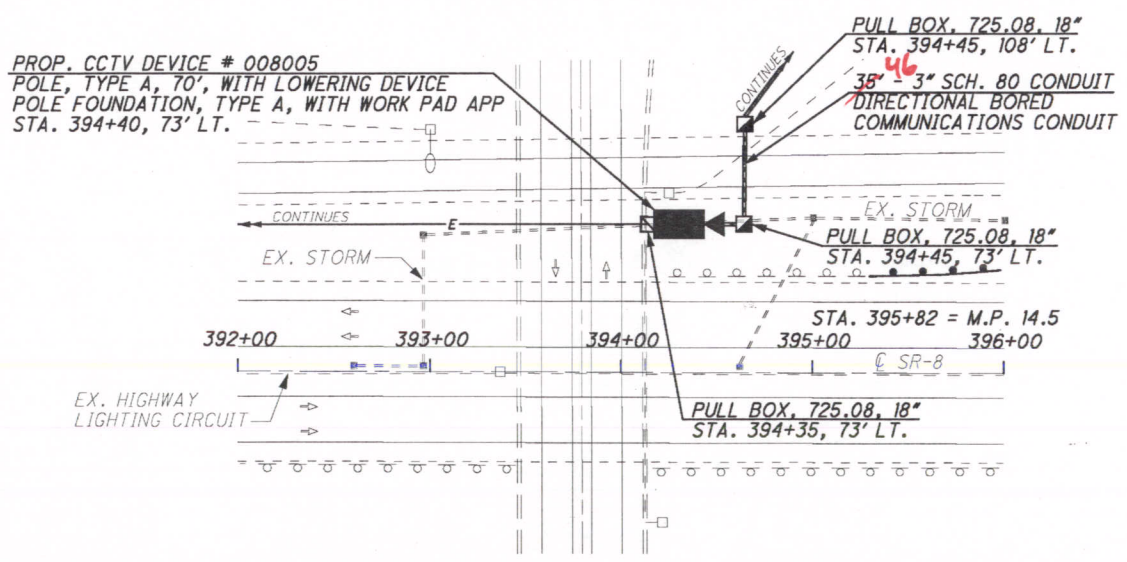


SR-8 AT I-80 (MP 14.26 TO MP 14.84)
VILLAGE OF BOSTON HTS, SUMMIT COUNTY

D-4

NOTE:
THESE CONSTRUCTION DRAWINGS WERE DEVELOPED FROM THE CONSTRUCTION DRAWINGS FOR PROJECT 24507. FIELD CHANGES MAY HAVE OCCURRED DURING THE CONSTRUCTION PROCESS.

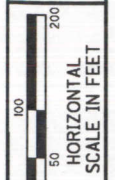
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 197 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

CCTV 008005

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

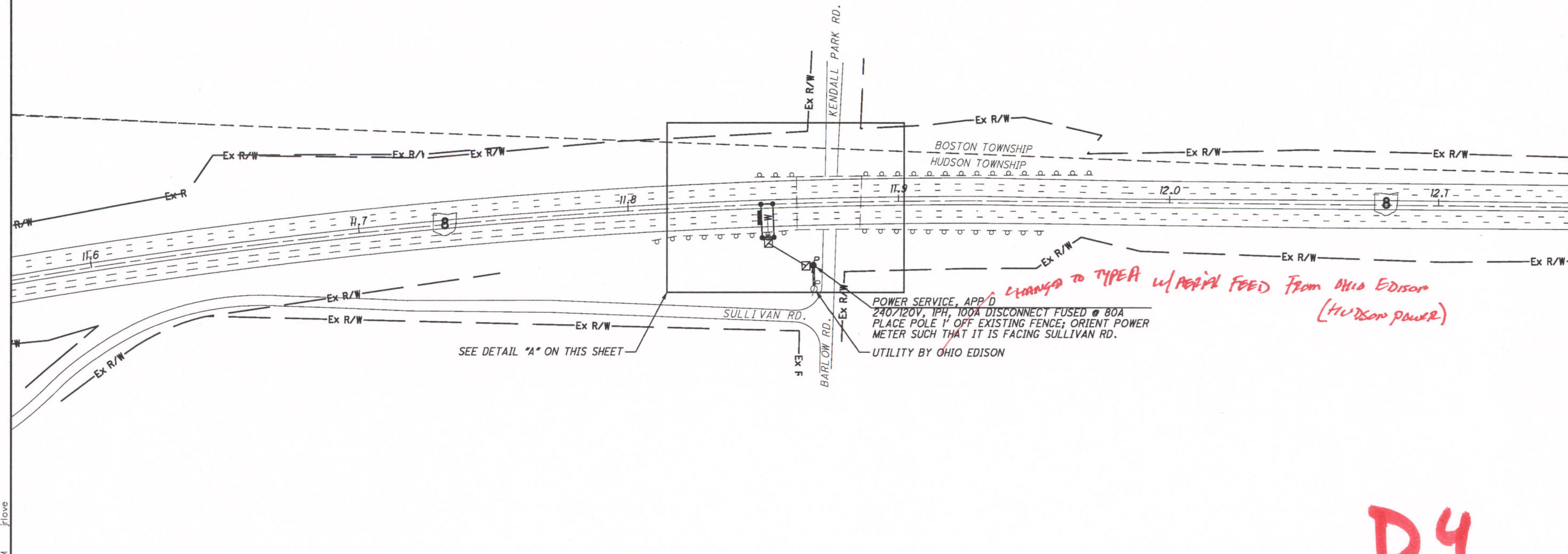


CALCULATED
STS
CHECKED
JDG

SR-8 S. AT BARLOW RD. (MP 11.54 TO MP 12.14)
BOSTON TOWNSHIP, SUMMIT COUNTY

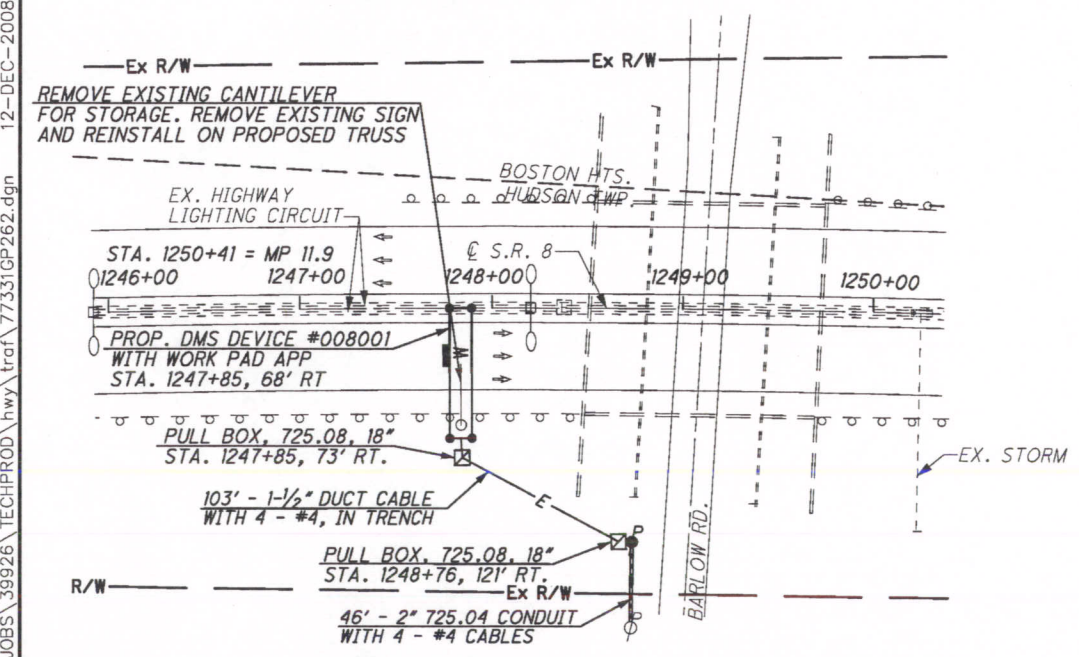
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

170
207



D4

DETAIL "A" - NOT TO SCALE

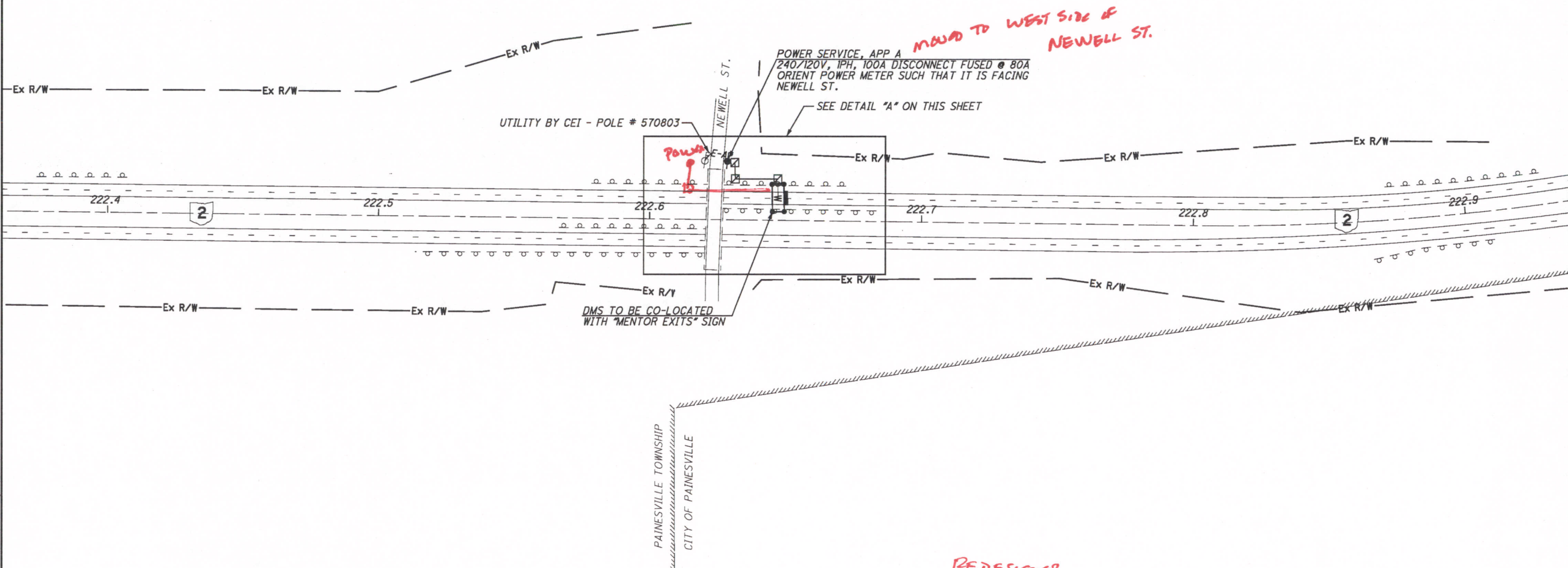


- REFER TO SHEET 11 FOR CONCRETE BARRIER REPLACEMENT DETAILS
- REFER TO SHEET 11B FOR BARRIER TRANSITION DETAILS
- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO CONCRETE BARRIER MEDIAN TRUSS AND PEDESTAL SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 183 FOR DMS PROFILE
- REFER TO SHEET 197 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 008001

M:\JOBS\39926\TECHPROD\hwy\trf\77331GP262.dgn 12-DEC-2008 7:34AM jrllove

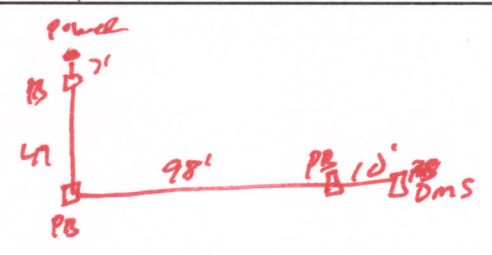
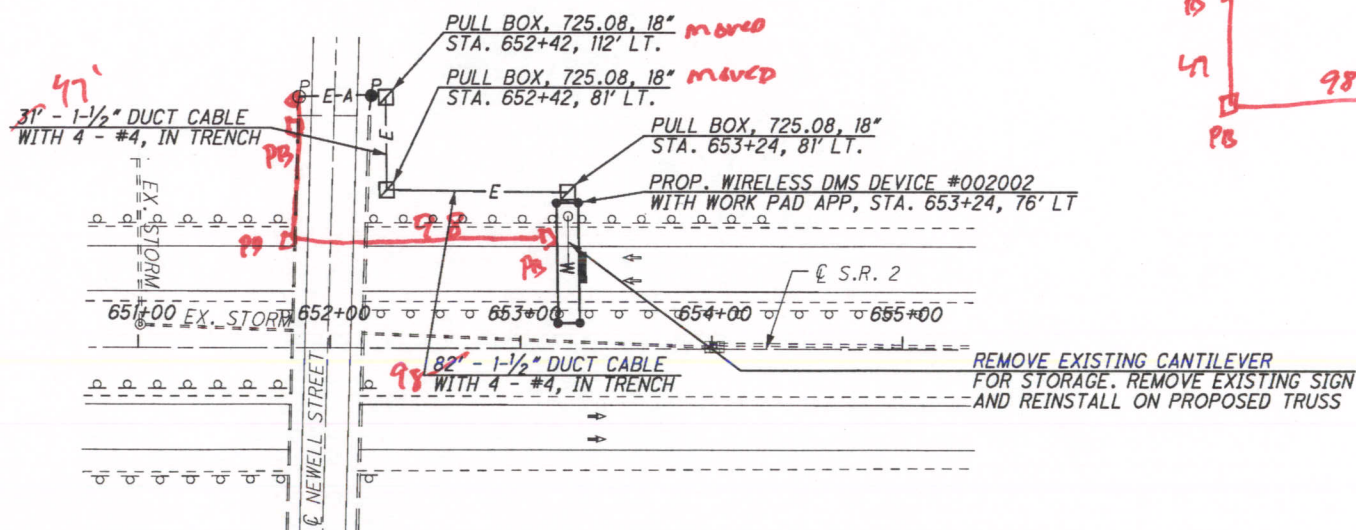
M:\JOBS\39926\TECHPROD\hwy\trac\77331GP261.dgn 12-DEC-2008 7:33AM jrlove



MOVED TO WEST SIDE OF NEWELL ST.

REDESIGNED

DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 183 FOR DMS PROFILE
- REFER TO SHEET 197 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 002002

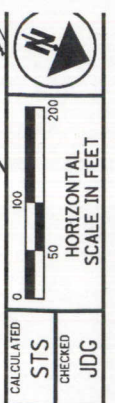
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

SR-2 AT NEWELL ST. (MP 222.36 TO MP 222.94)
PAINESVILLE TOWNSHIP, LAKE COUNTY

CALCULATED STS
CHECKED JDG

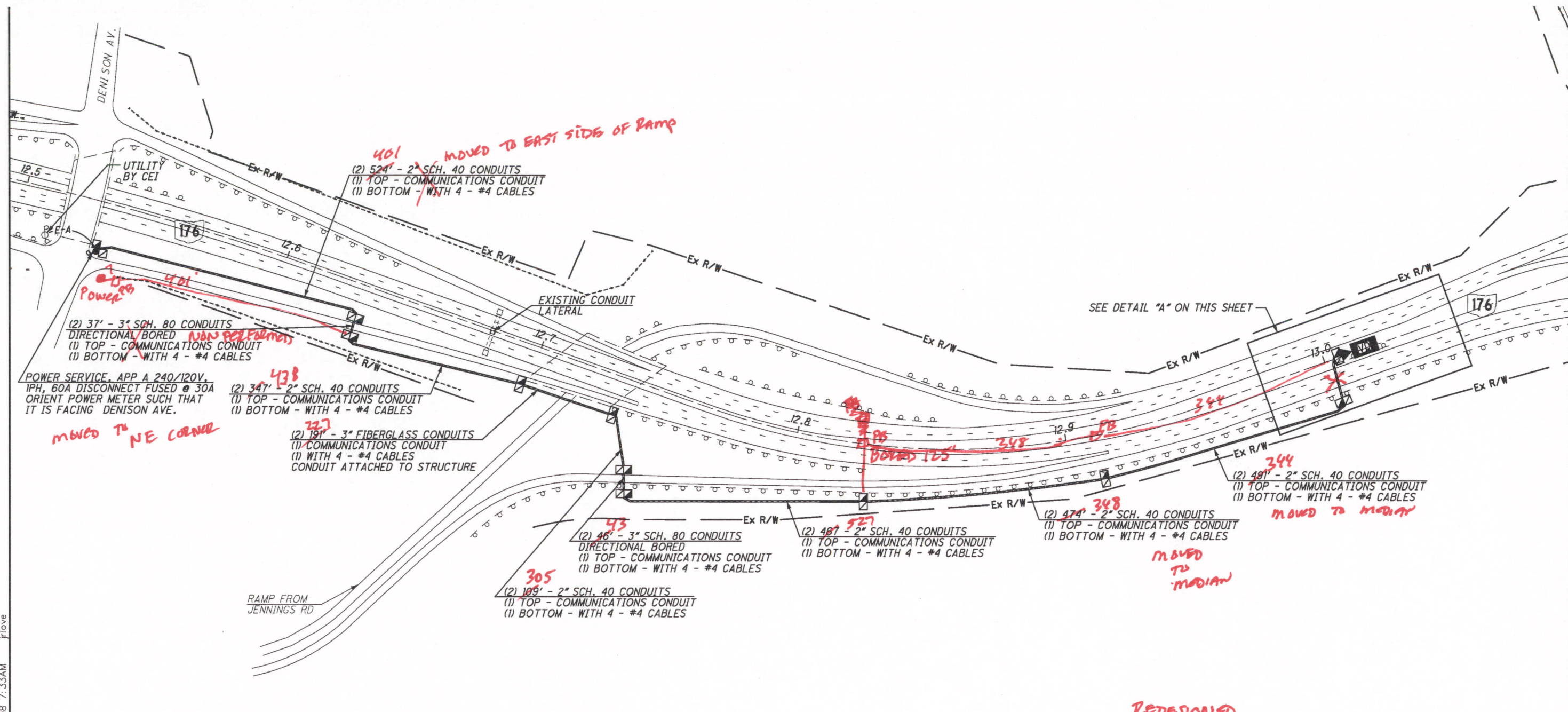
0 50 100 200
HORIZONTAL SCALE IN FEET

169
207

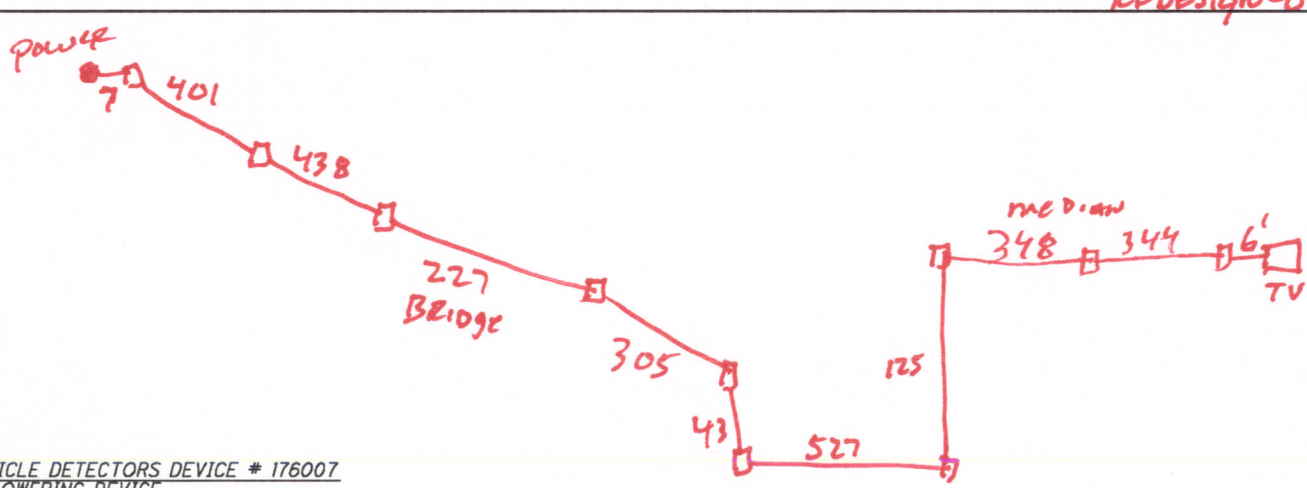
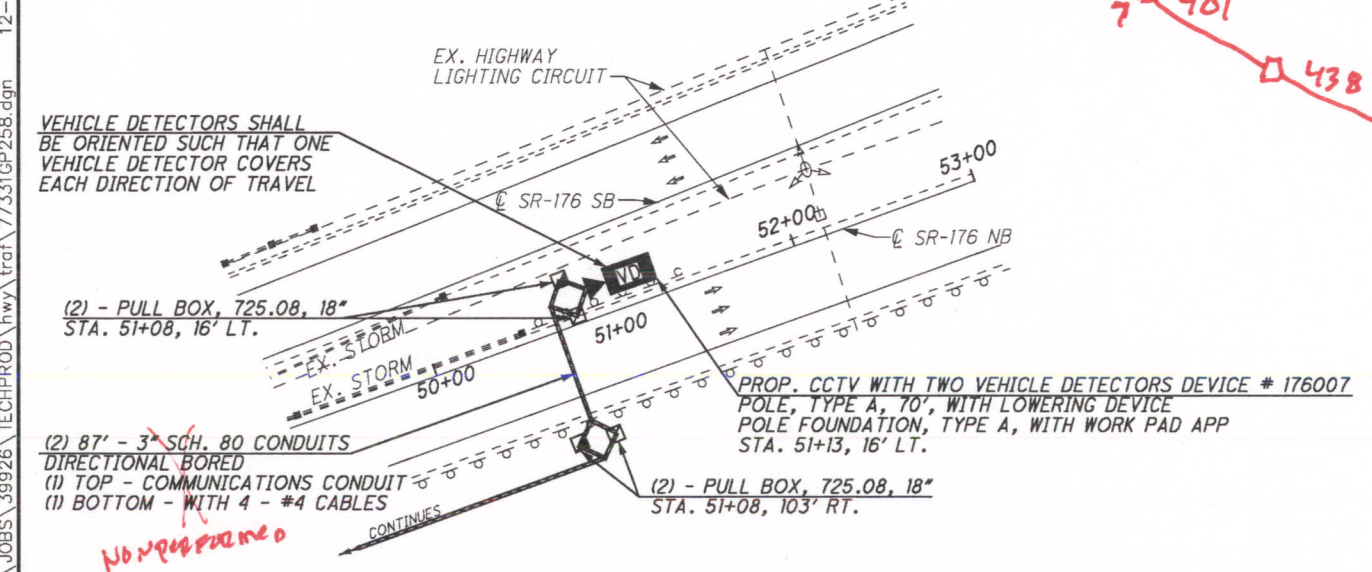


SR-176 S. OF I-71 (MP 12.90 TO MP 13.10)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



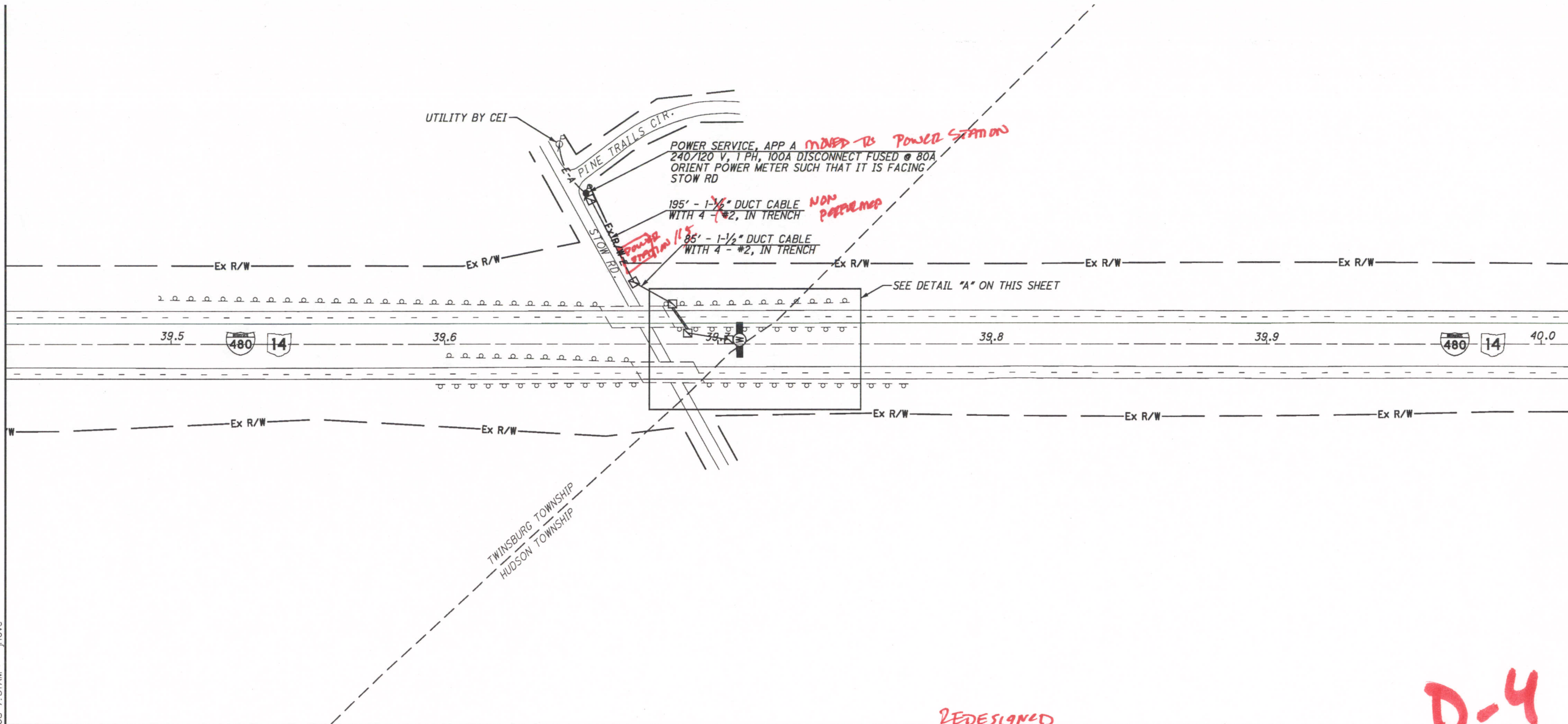
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 12 FOR CONDUIT ATTACHED TO STRUCTURE DETAILS
- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 25 FOR TYPICAL CCTV CAMERA WITH TWO VEHICLE DETECTORS DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 184 FOR CONDUIT ATTACHED TO STRUCTURE DETAILS FOR BRIDGE CROSSING RAMP
- REFER TO SHEET 197 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

M:\JOBS\39926\TECHPROD\hwy\trcf\77331\GP258.dgn 12-DEC-2008 7:33AM jrllove

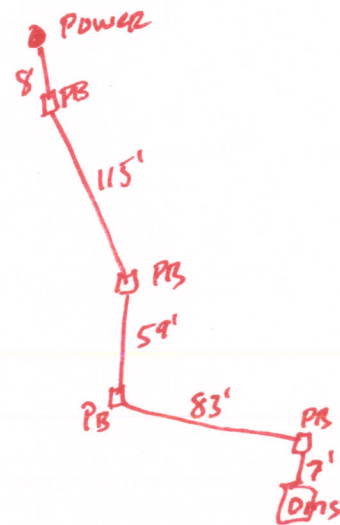
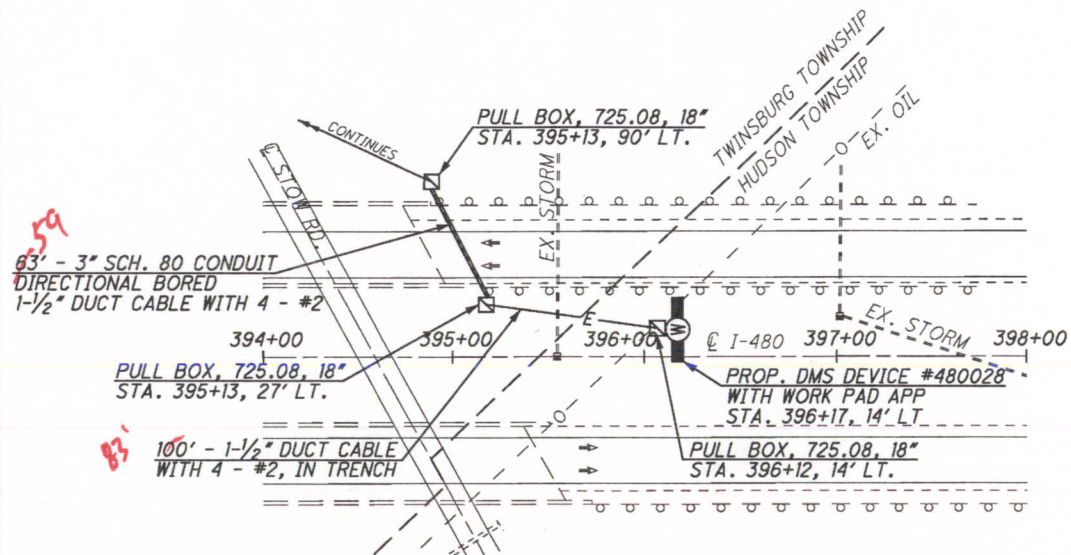
M:\JOBS\39926\TECHPROD\hwy\trcf\77331GP248.dgn 12-DEC-2008 7:31AM jrlove



REDESIGNED

D-4

DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 480028

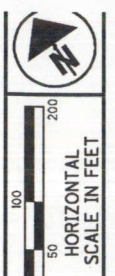
VAR-CLEVELAND
FREWAY MANAGEMENT
SYSTEM

1-480 AT STOW RD. (MP 39.46 TO MP 40.04)
TWINSBURG TOWNSHIP, SUMMIT COUNTY

163
207

CALCULATED STS CHECKED JDG

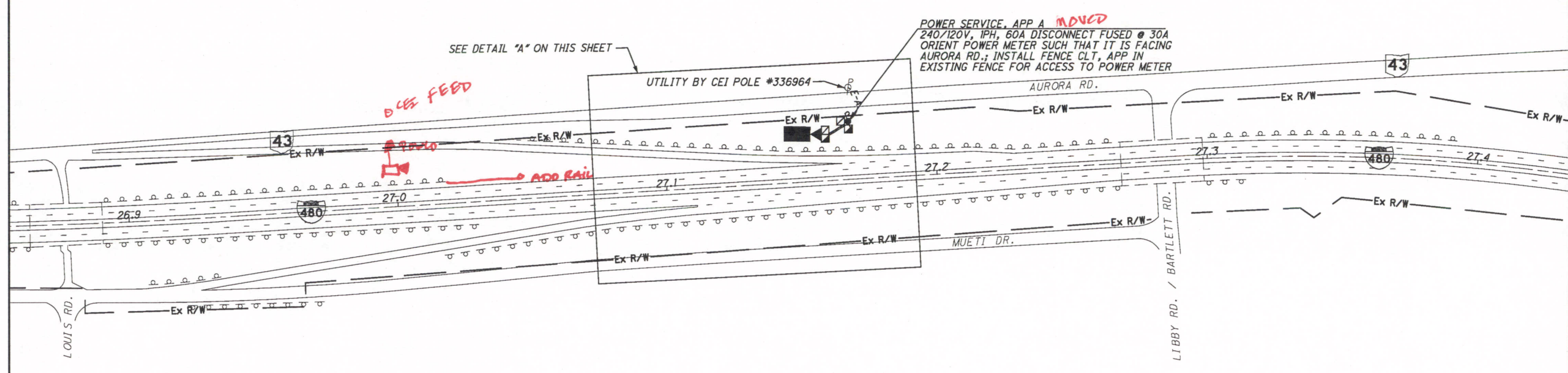
0 50 100 200
HORIZONTAL SCALE IN FEET



CALCULATED STS CHECKED JDG

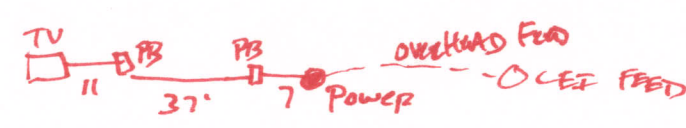
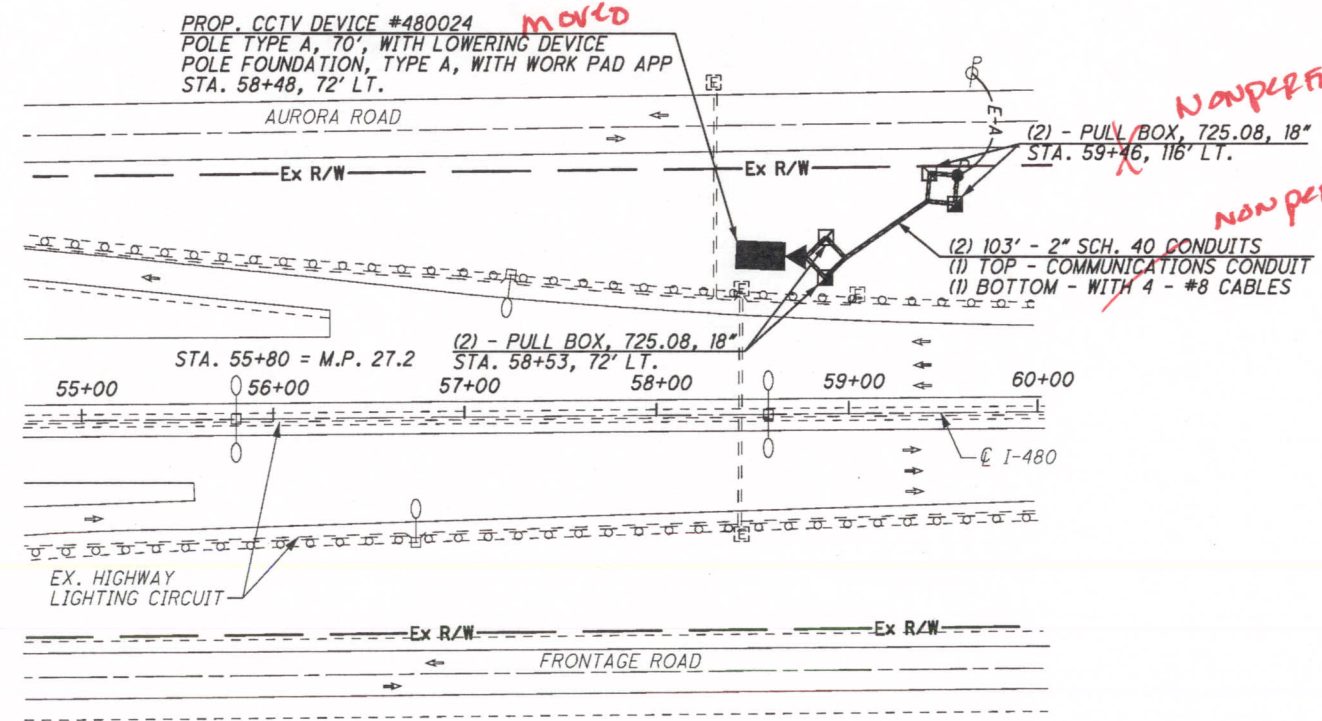
I-480 AT LIBBY RD. (MP 26.86 TO MP 27.43)
CITY OF BEDFORD HTS, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



REDESIGNED

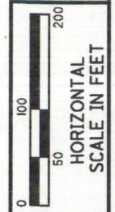
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

CCTV 480024

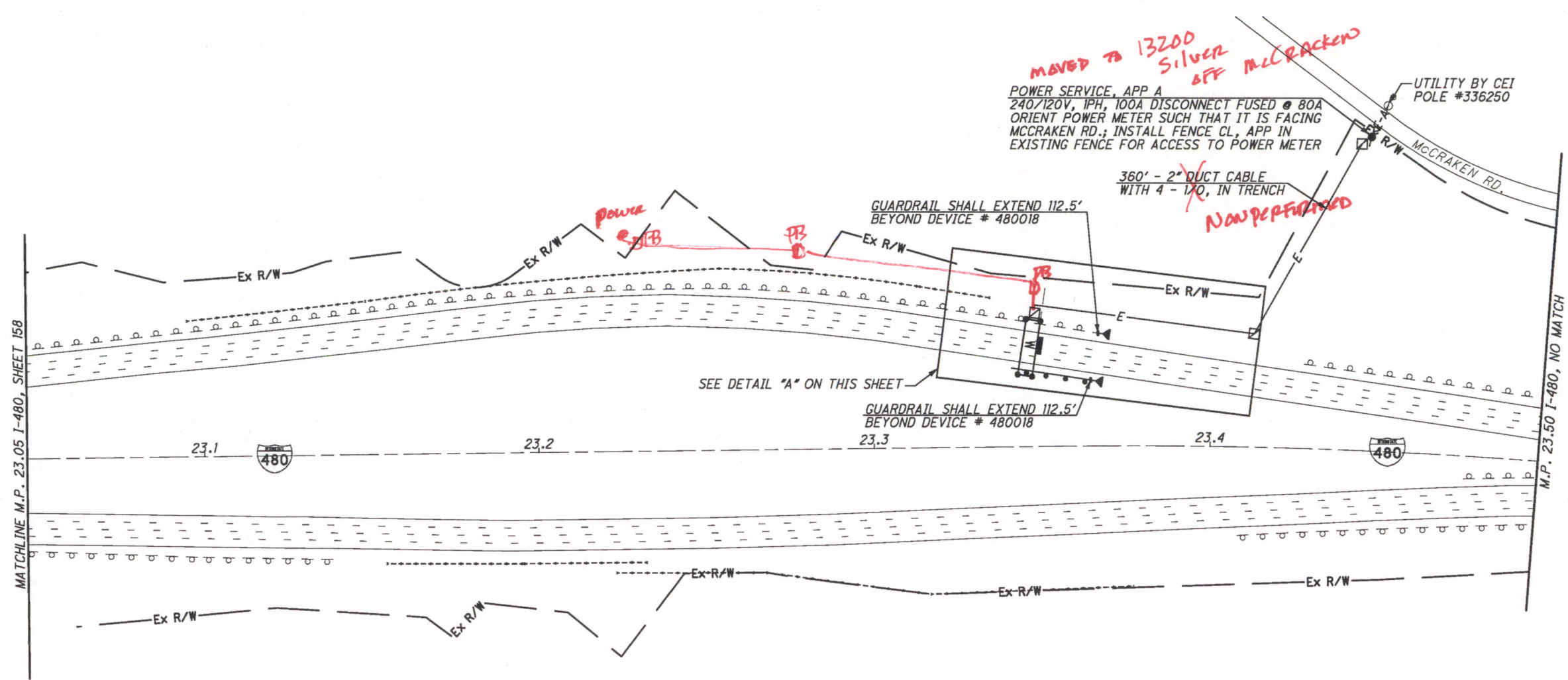
M:\JOBS\39926\TECHPROD\hwy\traf\77331GP246.dgn 05-MAY-2009 1:36PM jrllove



CALCULATED STS CHECKED JDC

I-480 AT SR-17 (MP 23.05 TO MP 23.50)
CITY OF GARFIELD HTS, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



MOVED TO 13200 Silver OFF MCCRAKEN

POWER SERVICE, APP A
240/120V, 1PH, 100A DISCONNECT FUSED @ 80A
ORIENT POWER METER SUCH THAT IT IS FACING MCCRAKEN RD.; INSTALL FENCE CL, APP IN EXISTING FENCE FOR ACCESS TO POWER METER

360' - 2" DUCT CABLE WITH 4 - 1/0, IN TRENCH

NON PERFORMED

GUARDRAIL SHALL EXTEND 112.5' BEYOND DEVICE # 480018

SEE DETAIL "A" ON THIS SHEET

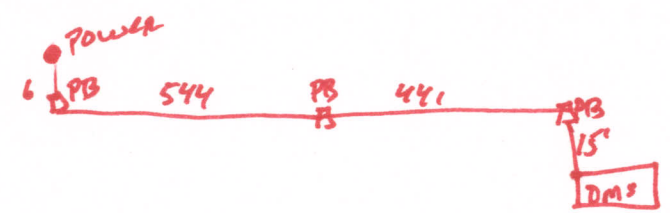
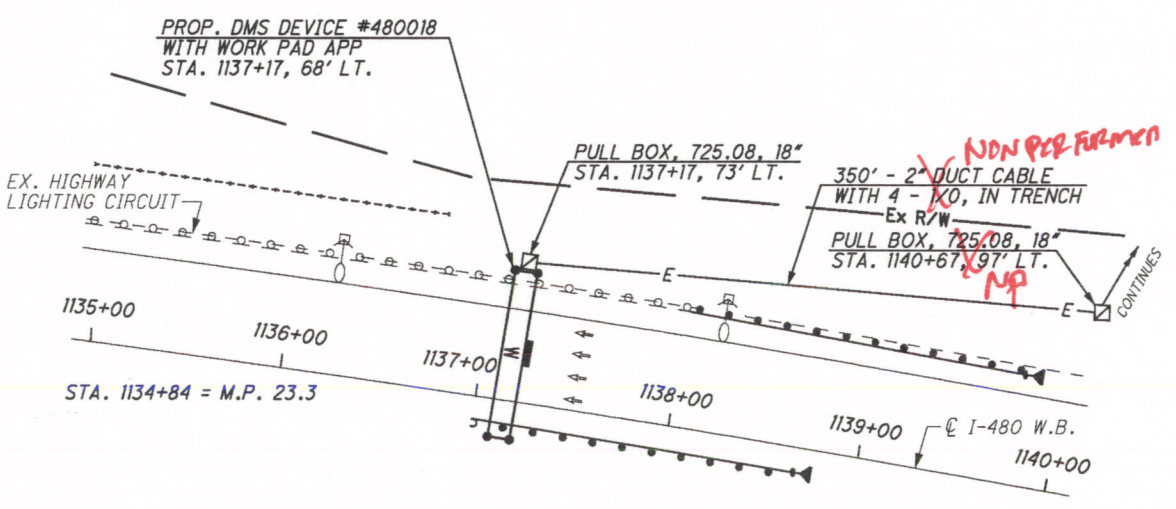
GUARDRAIL SHALL EXTEND 112.5' BEYOND DEVICE # 480018

MATCHLINE M.P. 23.05 I-480, SHEET 158

M.P. 23.50 I-480, NO MATCH

REDESIGNED

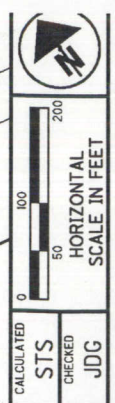
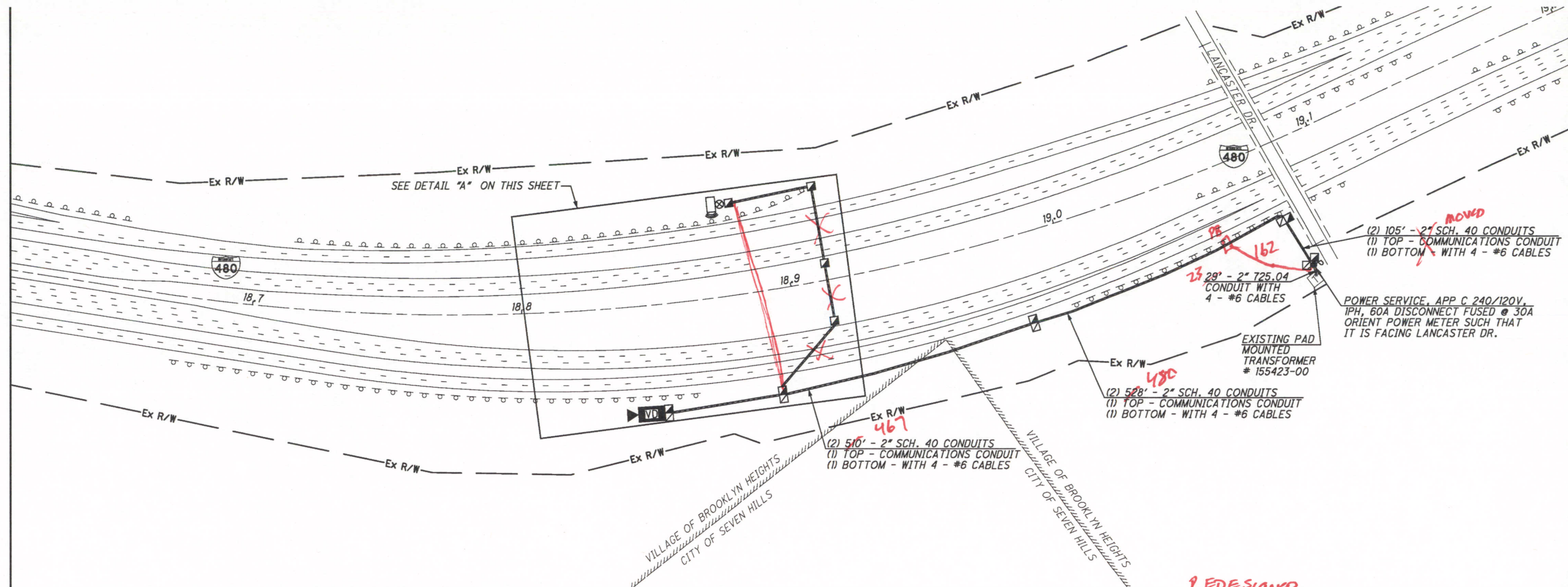
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 181 FOR DMS PROFILE
- REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 480018

M:\JOBS\39926\TECHPROD\hwy\trnf\77331GP229.dgn 18-NOV-2008 1:44PM jrl@ve



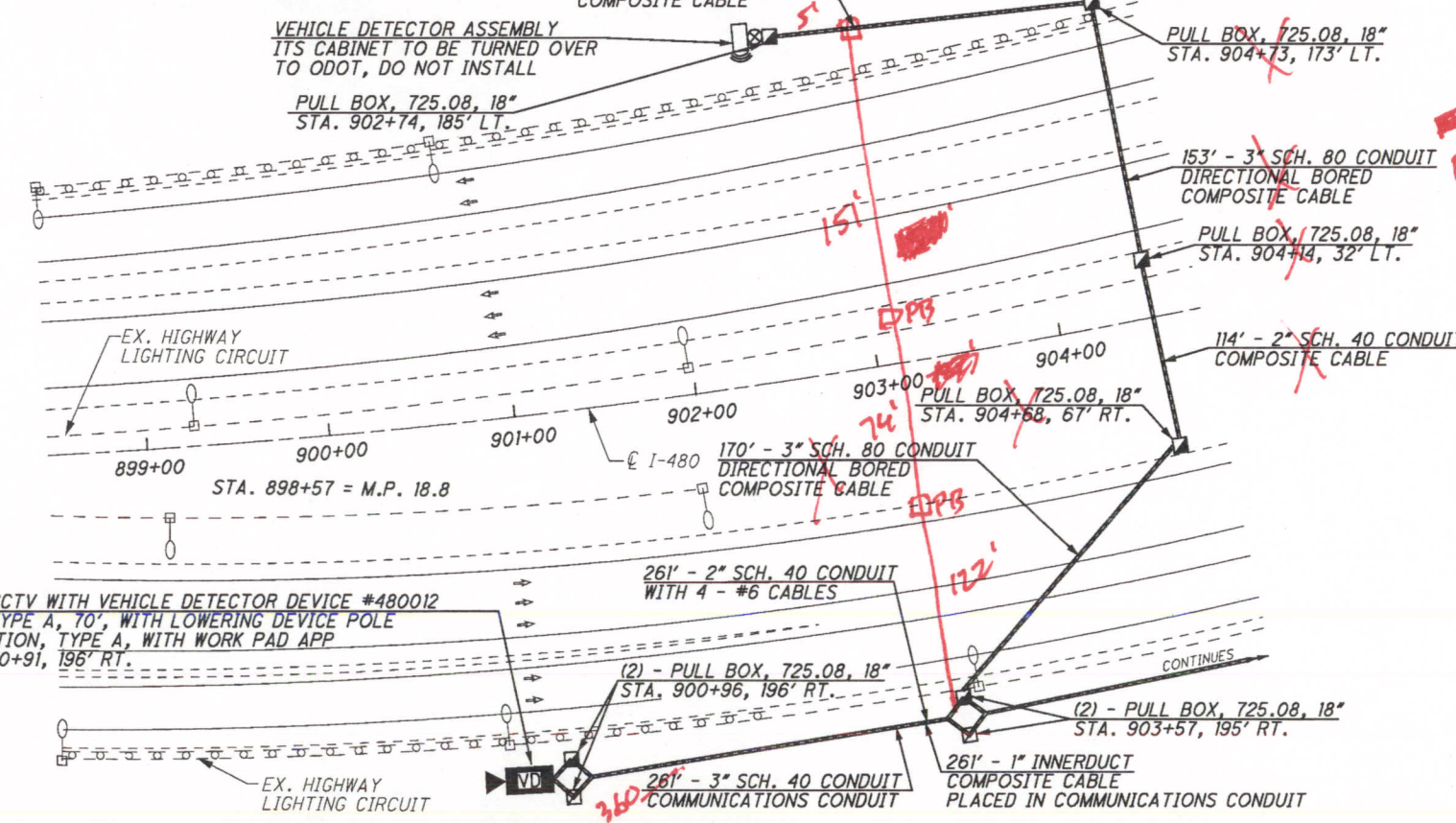
CALCULATED STS CHECKED JDG
 I-480 AT LANCASTER DR. (MP 18.55 TO MP 19.14)
 VILLAGE OF BROOKLYN HTS, CUYAHOGA CTY

MOVED
 (2) 105' - 2" SCH. 40 CONDUITS
 (1) TOP - COMMUNICATIONS CONDUIT
 (1) BOTTOM - WITH 4 - #6 CABLES
 POWER SERVICE, APP C 240/120V,
 IPH, 60A DISCONNECT FUSED @ 30A
 ORIENT POWER METER SUCH THAT
 IT IS FACING LANCASTER DR.

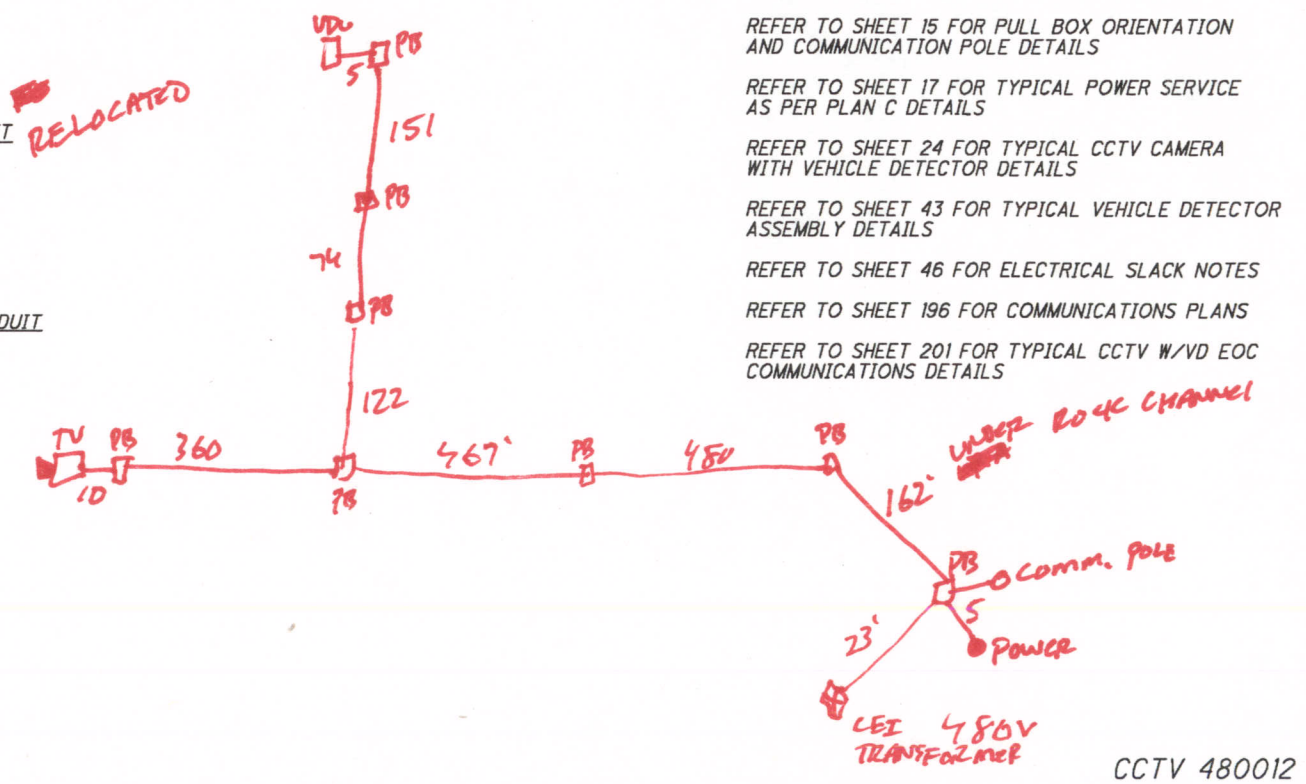
EXISTING PAD MOUNTED TRANSFORMER # 155423-00
 (2) 528' - 2" SCH. 40 CONDUITS
 (1) TOP - COMMUNICATIONS CONDUIT
 (1) BOTTOM - WITH 4 - #6 CABLES

Ex R/W 467
 (2) 510' - 2" SCH. 40 CONDUITS
 (1) TOP - COMMUNICATIONS CONDUIT
 (1) BOTTOM - WITH 4 - #6 CABLES

DETAIL "A" - NOT TO SCALE



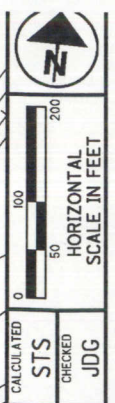
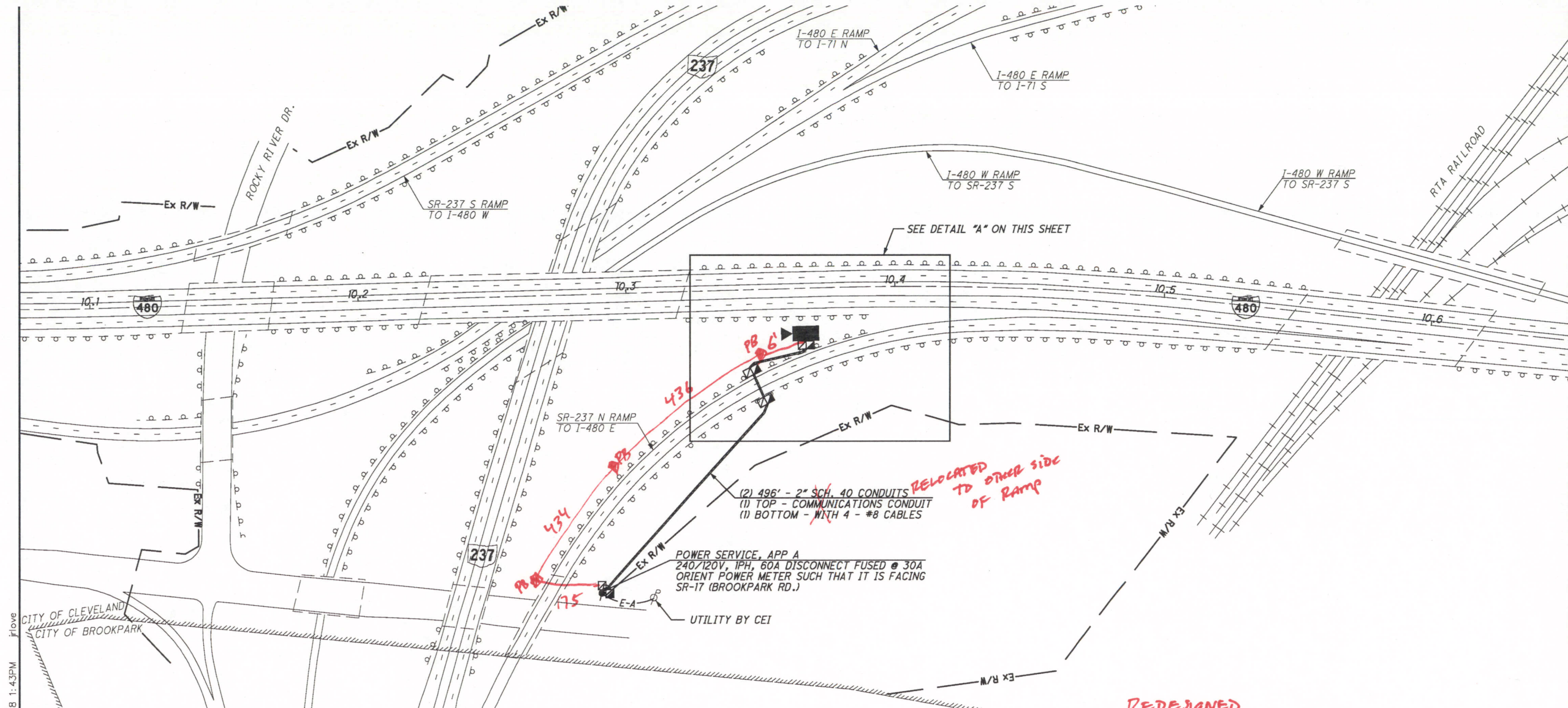
RELOCATED



REFER TO SHEET 14 FOR CONDUIT DETAILS
 REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
 REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN C DETAILS
 REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
 REFER TO SHEET 43 FOR TYPICAL VEHICLE DETECTOR ASSEMBLY DETAILS
 REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
 REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
 REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

CCTV 480012

VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM
 156
 207



CALCULATED STS CHECKED JDG
I-480 AT SR-237 (MP 10.07 TO MP 10.65)
CITY OF CLEVELAND, CUYAHOGA COUNTY

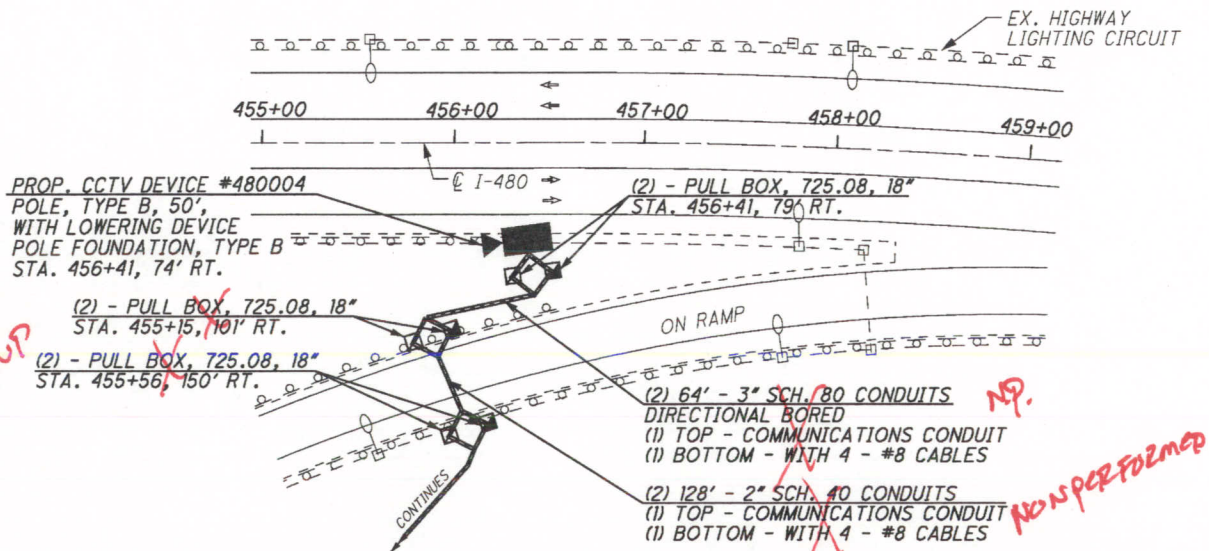
M:\JOBS\39926\TECHPROD\hwy\trf\77331\GP212.dgn 18-NOV-2008 1:43PM

(2) 496' - 2" SCH. 40 CONDUITS
 (1) TOP - COMMUNICATIONS CONDUIT
 (1) BOTTOM - WITH 4 - #8 CABLES
RELOCATED TO OTHER SIDE OF RAMP

POWER SERVICE, APP A
 240/120V, 1PH, 60A DISCONNECT FUSED @ 30A
 ORIENT POWER METER SUCH THAT IT IS FACING SR-17 (BROOKPARK RD.)
 UTILITY BY CEI

REDESIGNED

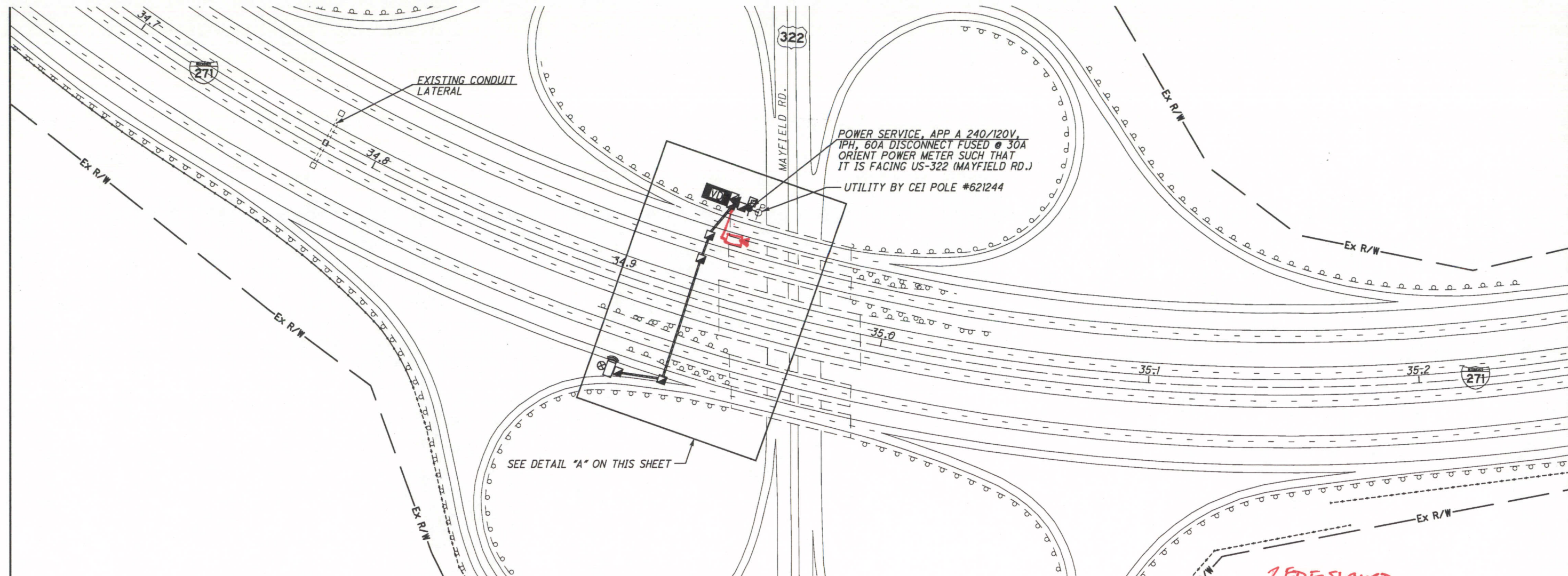
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

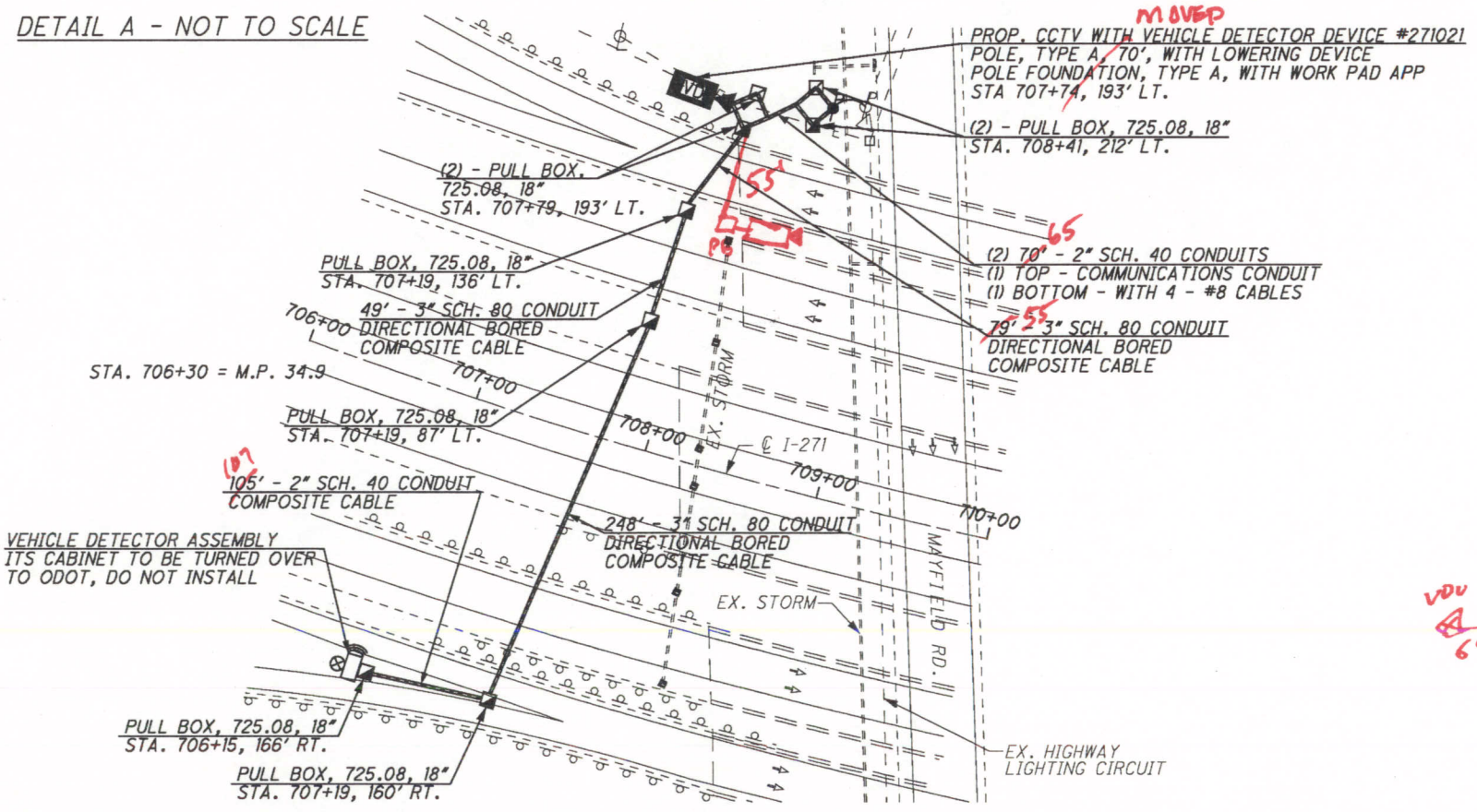
VAR-CLEVELAND
FREWAY MANAGEMENT
SYSTEM

CCTV 480004

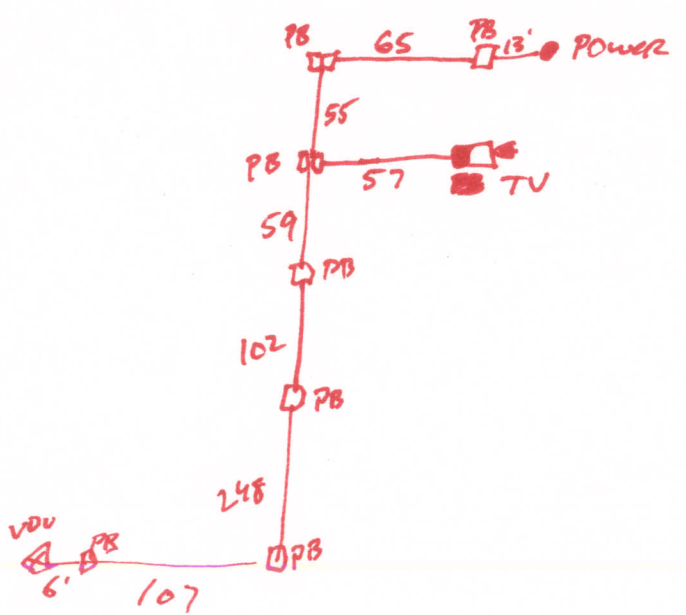


REDESIGNED

DETAIL A - NOT TO SCALE



-CAMERA IN MEDIAN

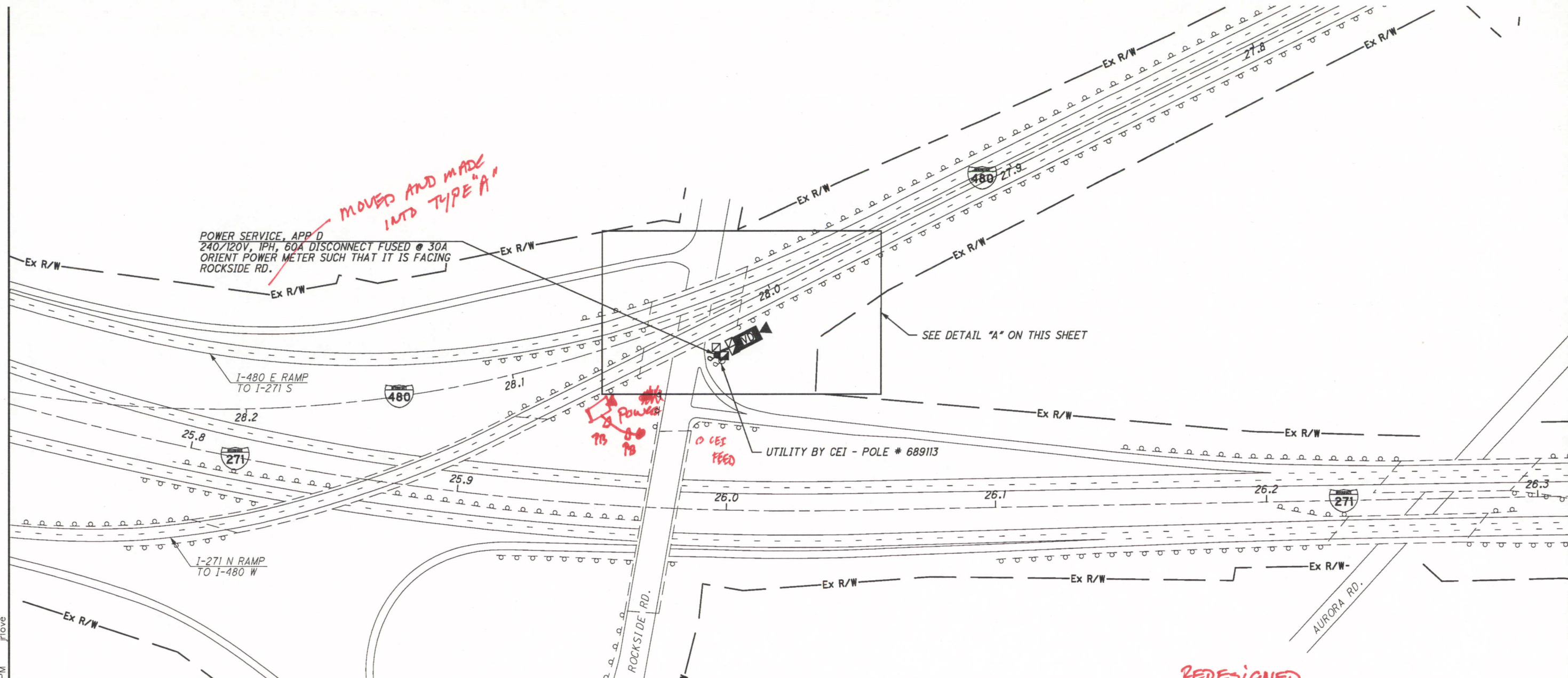


- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
- REFER TO SHEET 43 FOR TYPICAL VEHICLE DETECTOR ASSEMBLY DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 195 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/V D EOC COMMUNICATIONS DETAILS

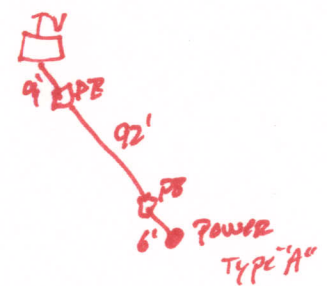
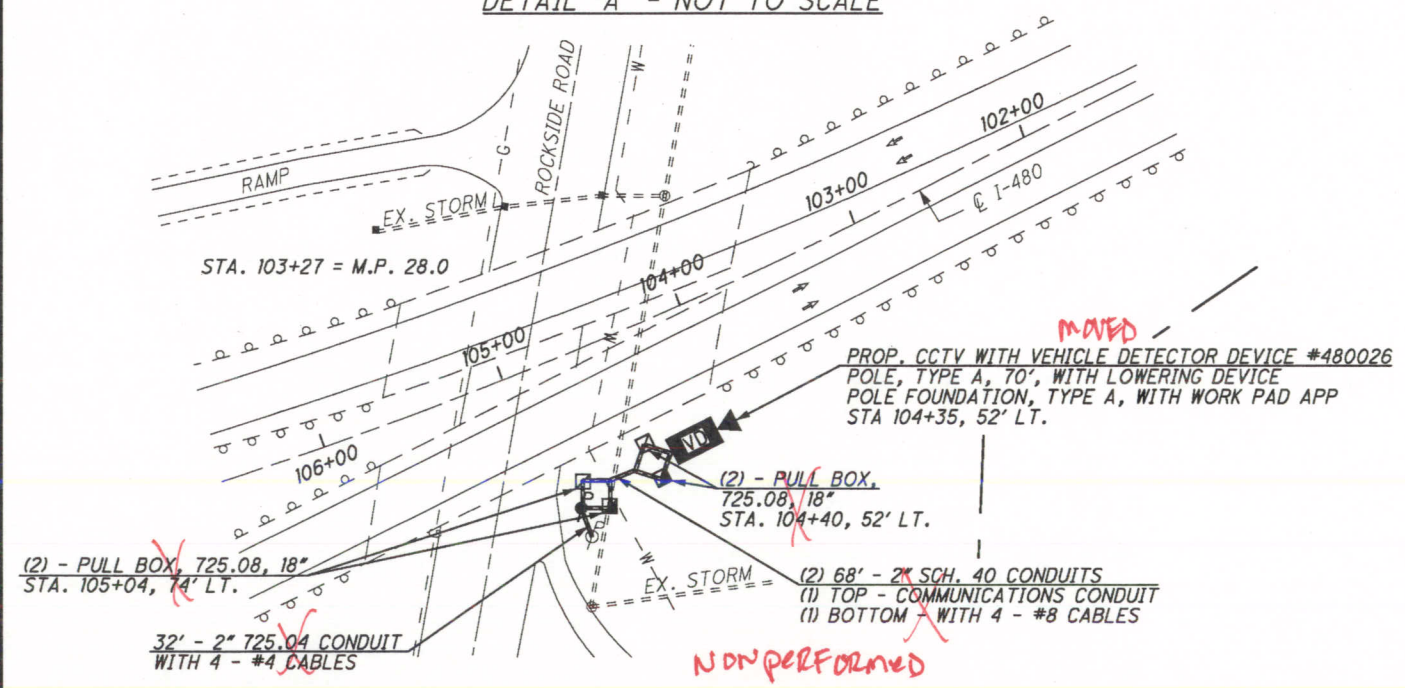
CCTV 271021

M:\JOBS\39926\TECHPROD\hwy\trf\77331GP201.dgn 18-NOV-2008 1:42PM jrlove

M:\JOBS\39926\TECHPROD\hwy\traf\77331GP183.dgn 18-NOV-2008 1:37PM jrlove



DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 196 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 199 FOR TYPICAL CCTV W/VD T-1 COMMUNICATIONS DETAILS

CCTV 480026

CITY OF BEDFORD HTS, CUYAHOGA COUNTY

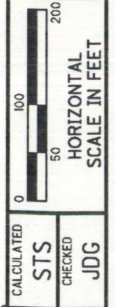
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

I-271 AT AURORA RD. (MP 25.73 TO MP 26.31)

143
207

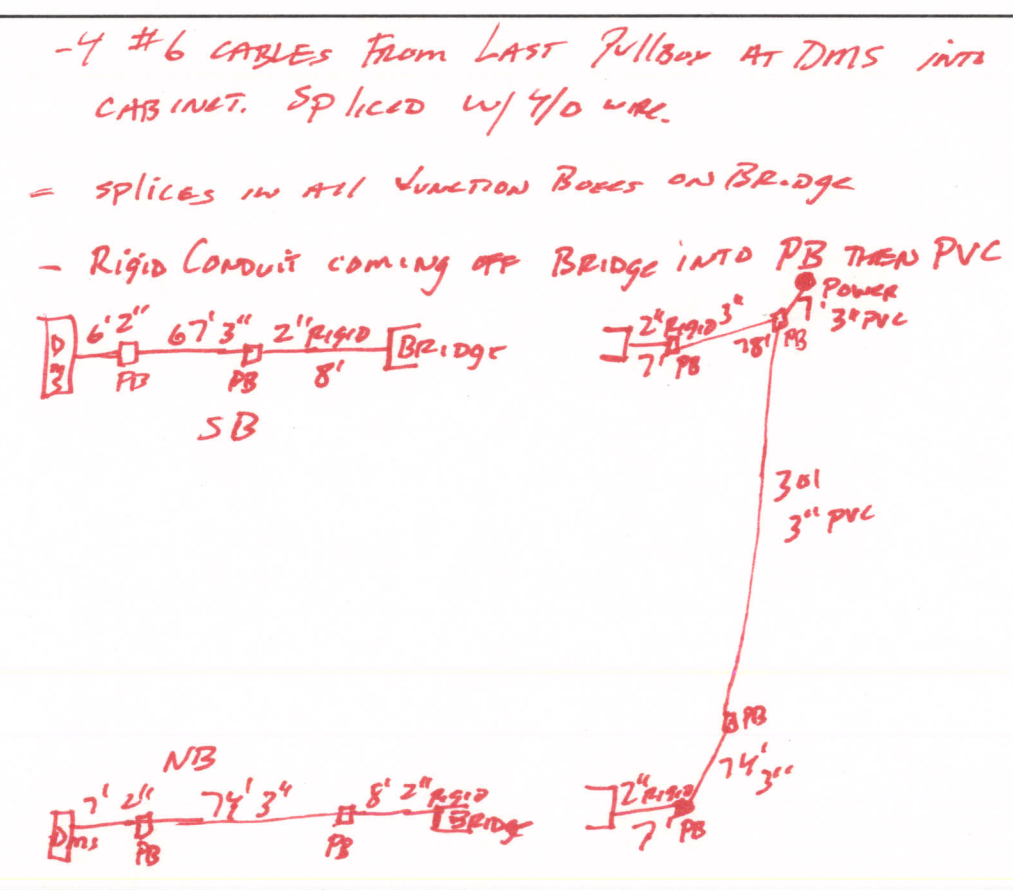
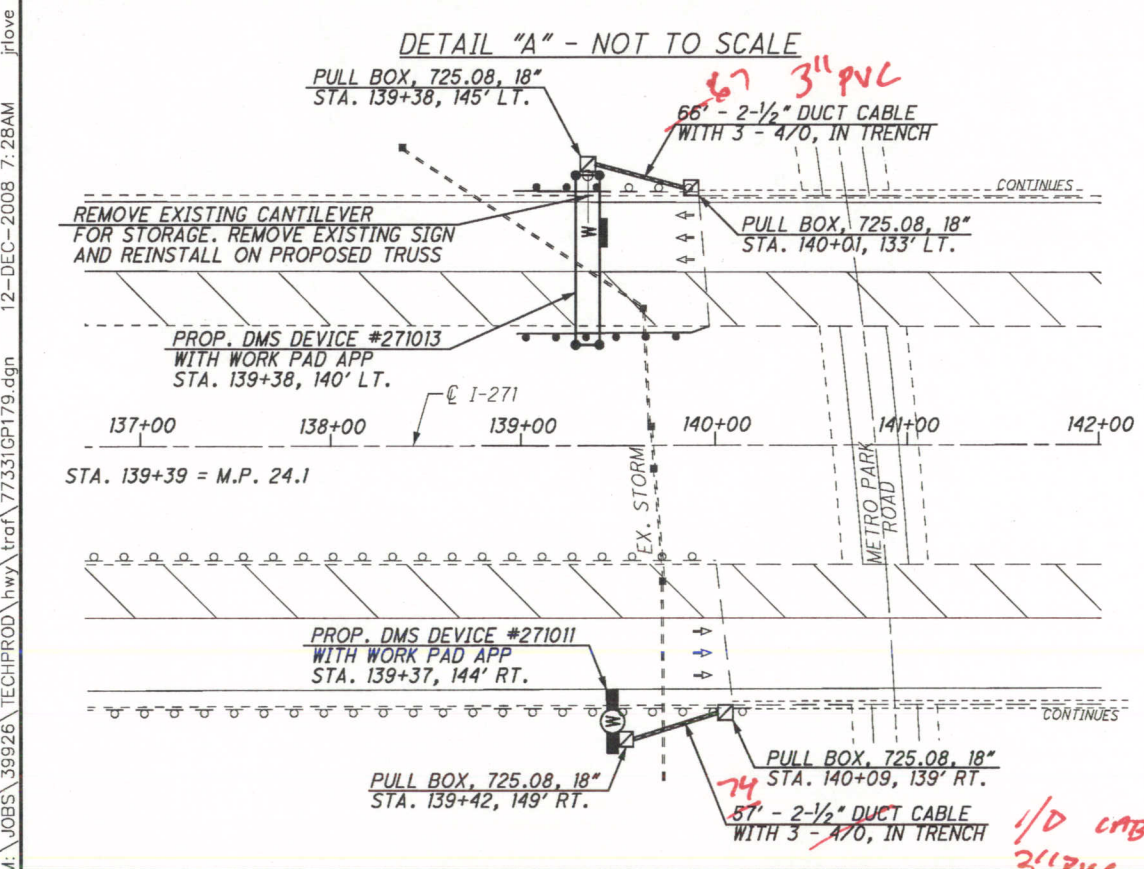
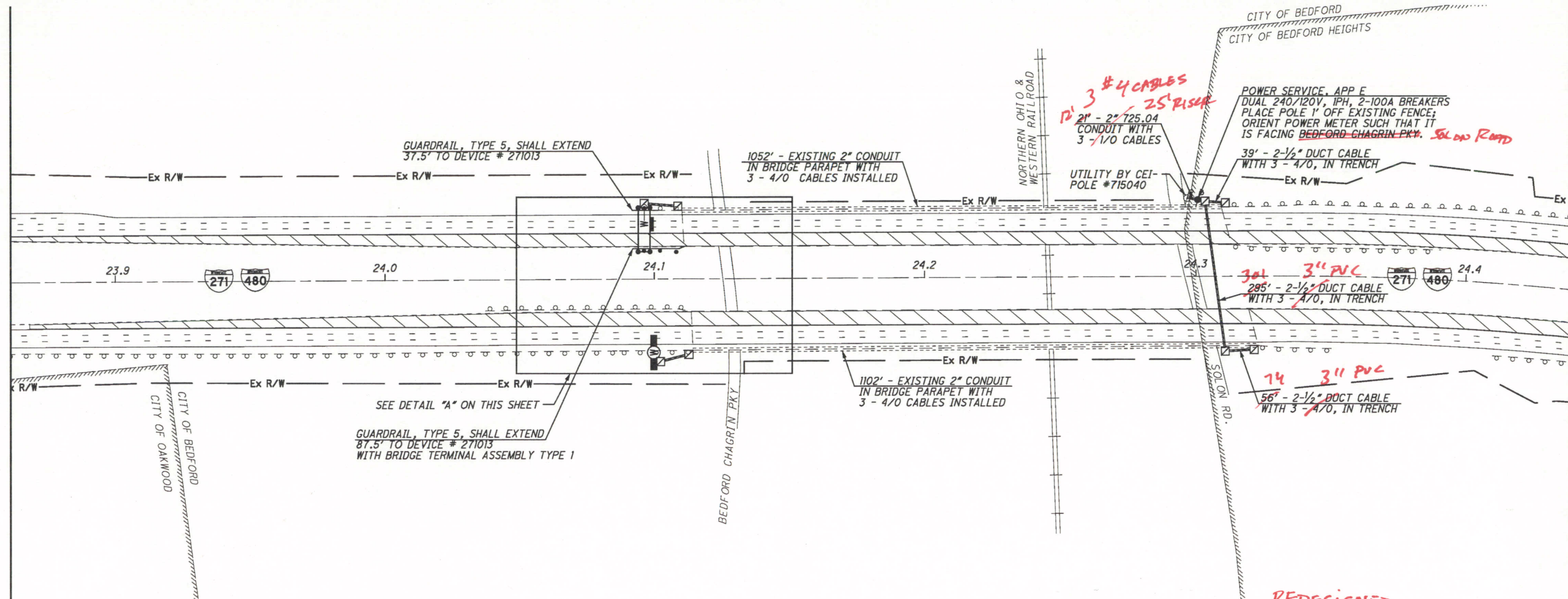
CALCULATED STS CHECKED JDG

0 50 100 200
HORIZONTAL SCALE IN FEET



CITY OF BEDFORD
CITY OF BEDFORD HEIGHTS
NORTHERN OHIO & WESTERN RAILROAD
CITY OF BEDFORD
CITY OF OAKWOOD
BEDFORD CHAGRIN PKY
SOLON RD.
CITY OF BEDFORD, CUYAHOGA COUNTY

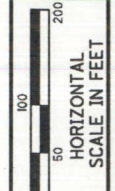
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



- REDESIGNED**
- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
 - REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN E DETAILS
 - REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
 - REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS
 - REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
 - REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
 - REFER TO SHEET 180 FOR DMS PROFILE
 - REFER TO SHEET 185 FOR CONDUIT DETAILS FOR BRIDGE CROSSING SOLON RD.
 - REFER TO SHEET 195 FOR COMMUNICATIONS PLANS
 - REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 271011
DMS 271013

M:\JOBS\39926\TECHPROD\hwy\trcf\77331GP179.dgn 12-DEC-2008 7:28AM jrl:love

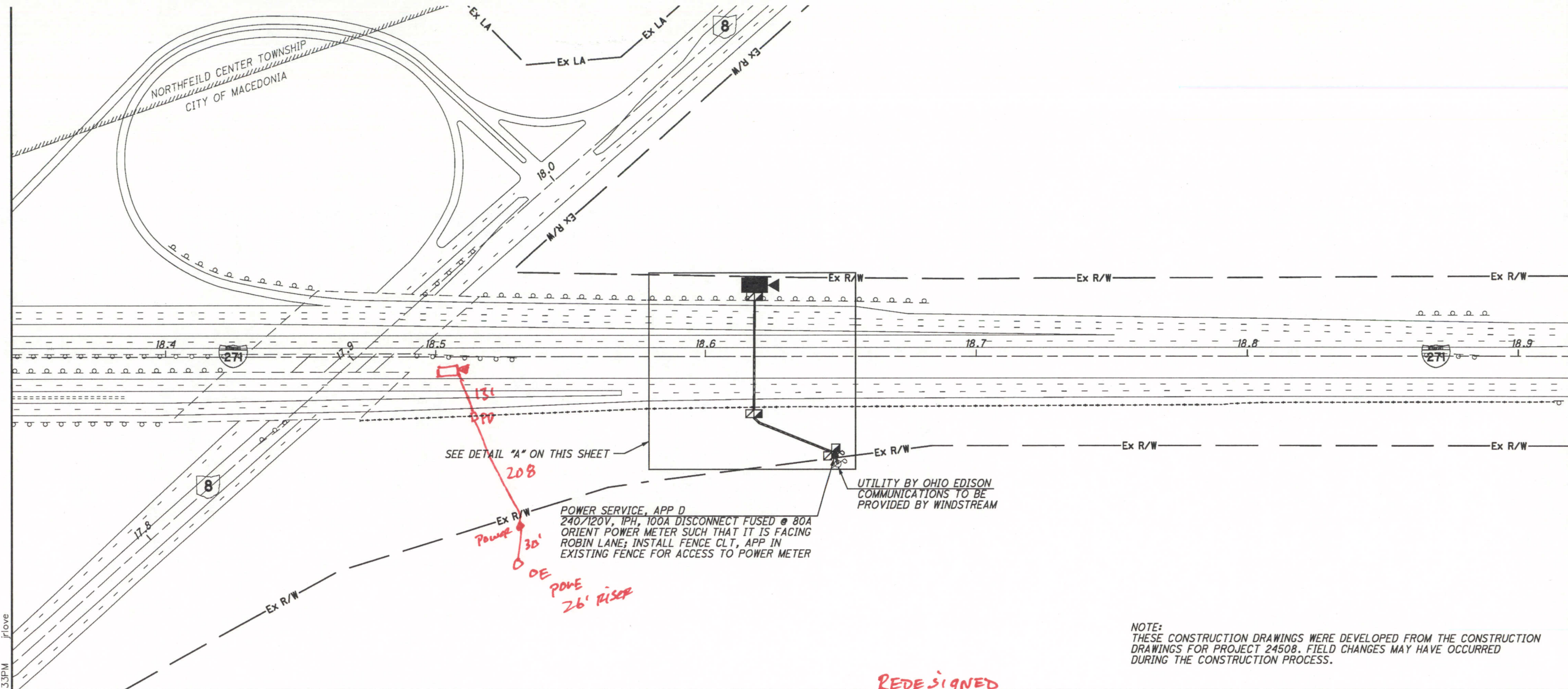


CALCULATED STS CHECKED JDG

I-271 AT SR-8 (MP 18.34 TO MP 18.92)
CITY OF MACEDONIA, SUMMIT COUNTY

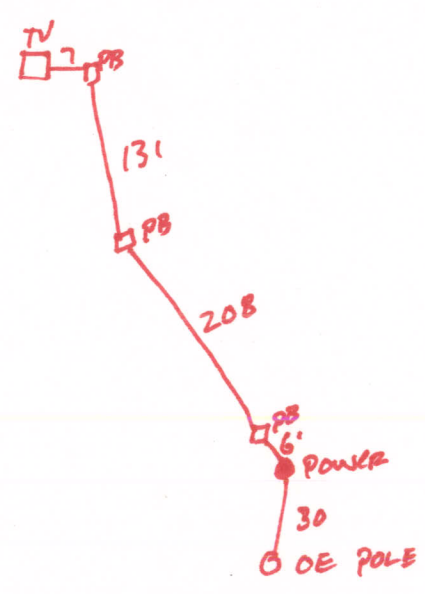
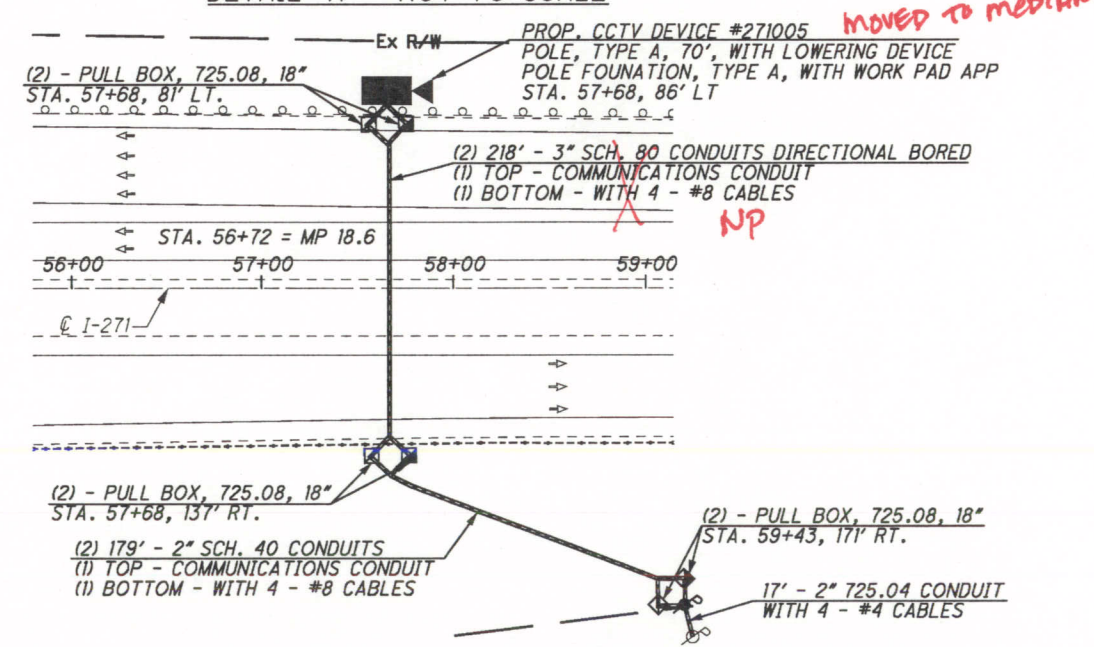
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

138
207



NOTE:
THESE CONSTRUCTION DRAWINGS WERE DEVELOPED FROM THE CONSTRUCTION DRAWINGS FOR PROJECT 24508. FIELD CHANGES MAY HAVE OCCURRED DURING THE CONSTRUCTION PROCESS.

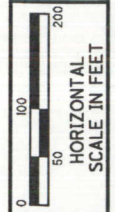
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 195 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

CCTV 271005

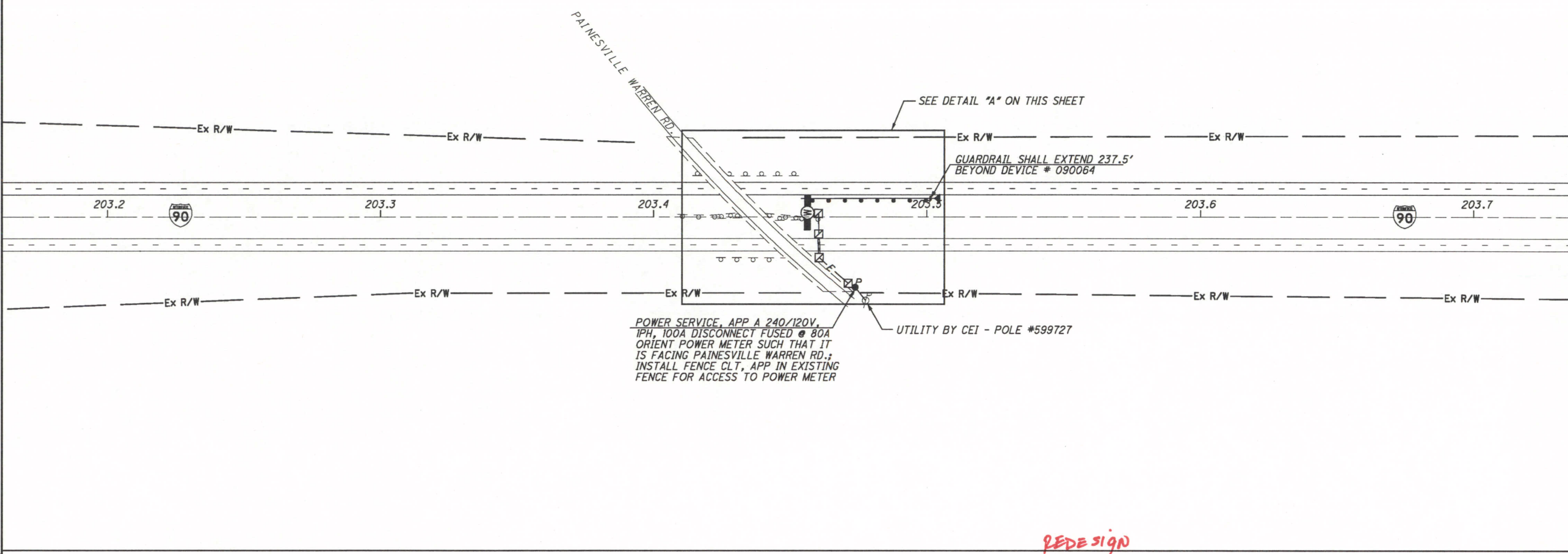
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CALCULATED STS
CHECKED JJD

I-90 AT PVILLE-WRN RD. (MP 203.16 TO MP 203.74)
CONCORD TOWNSHIP, LAKE COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

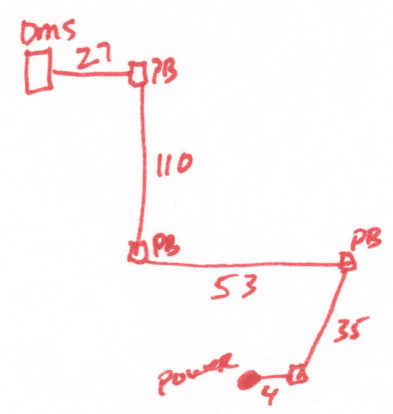
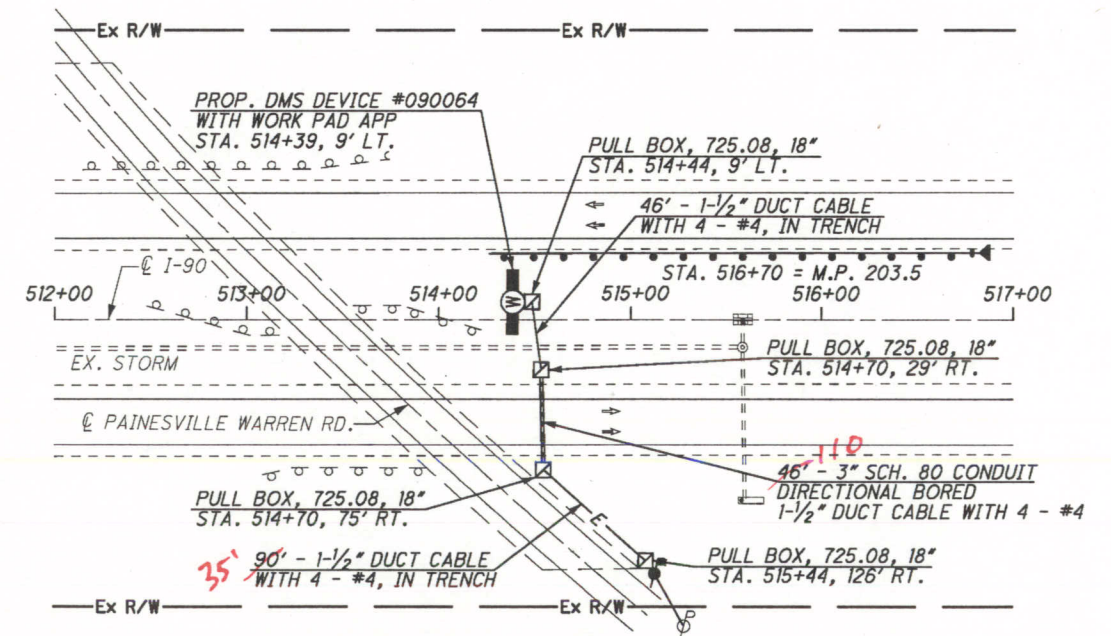


POWER SERVICE, APP A 240/120V,
IPH, 100A DISCONNECT FUSED @ 80A
ORIENT POWER METER SUCH THAT IT
IS FACING PAINESVILLE WARREN RD.;
INSTALL FENCE CLT, APP IN EXISTING
FENCE FOR ACCESS TO POWER METER

UTILITY BY CEI - POLE #599727

REDESIGN

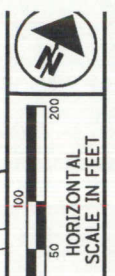
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 194 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 090064

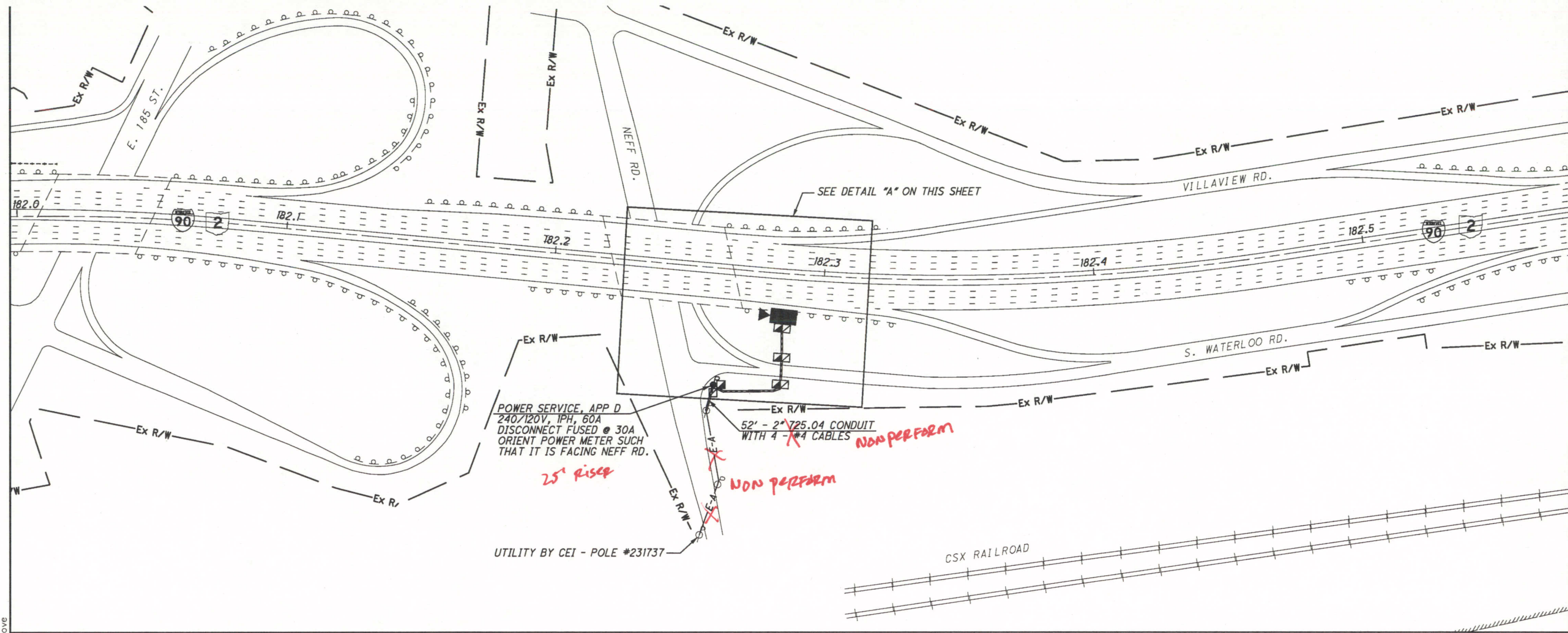
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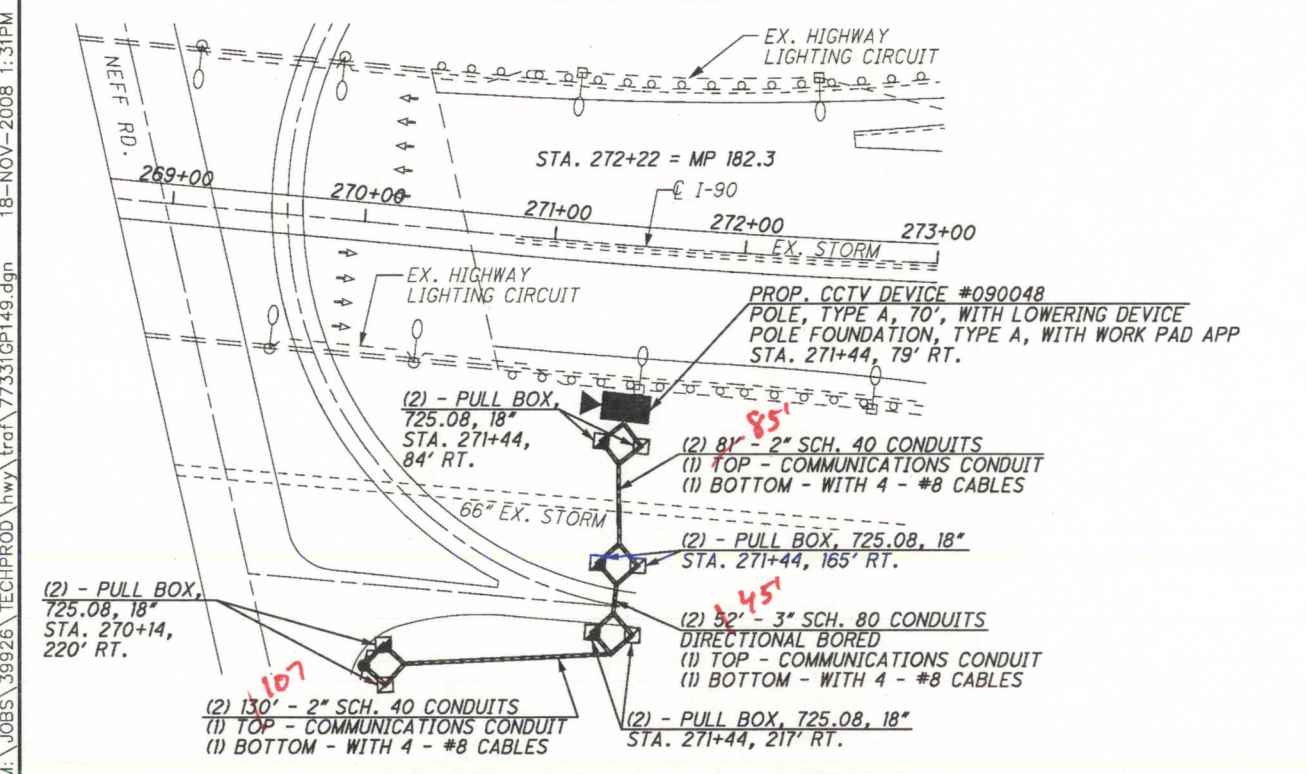
CALCULATED STS CHECKED JDG

I-90 AT NEFF RD. (MP 181.99 TO MP 182.58)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



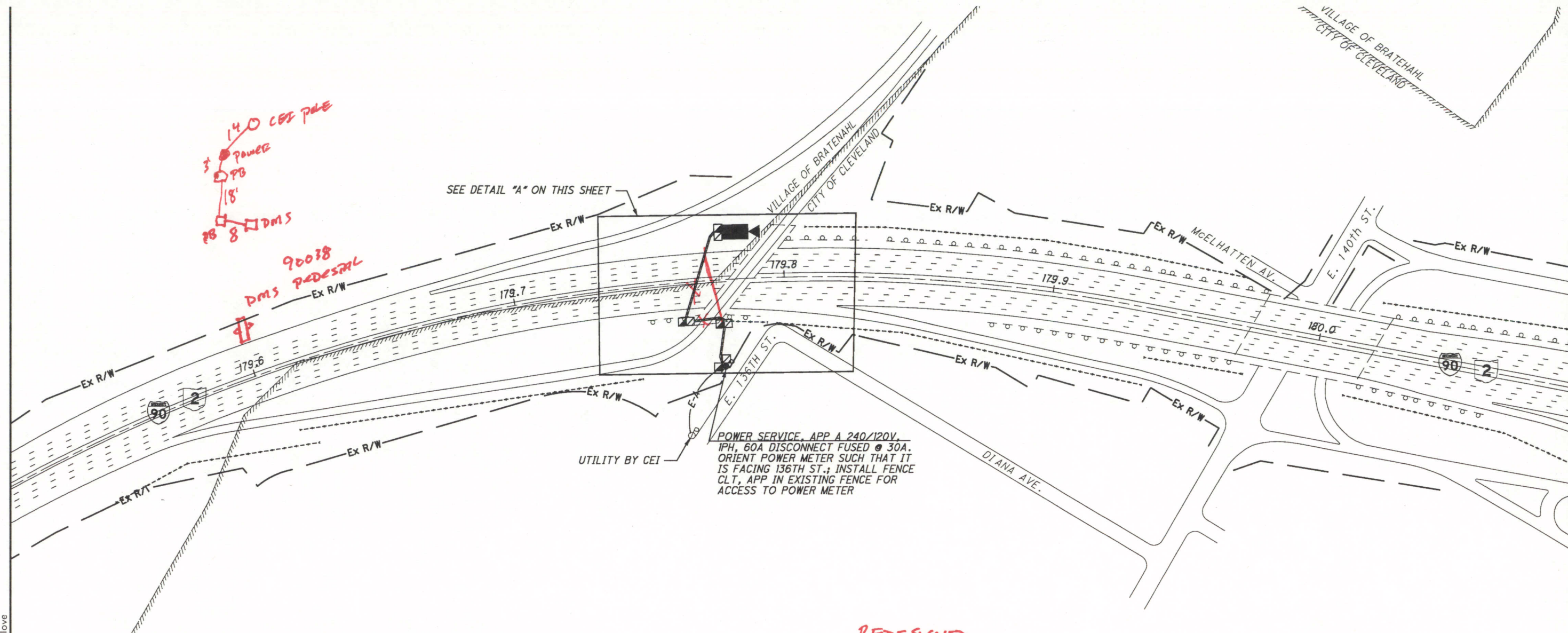
DETAIL "A" - NOT TO SCALE



REFER TO SHEET 14 FOR CONDUIT DETAILS
REFER TO SHEET 15 FOR PULL BOX ORIENTATION
AND COMMUNICATION POLE DETAILS
REFER TO SHEET 17 FOR TYPICAL POWER SERVICE
AS PER PLAN D DETAILS
REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
REFER TO SHEET 194 FOR COMMUNICATIONS PLANS
REFER TO SHEET 200 FOR TYPICAL CCTV EOC
COMMUNICATIONS DETAILS

CCTV 090048

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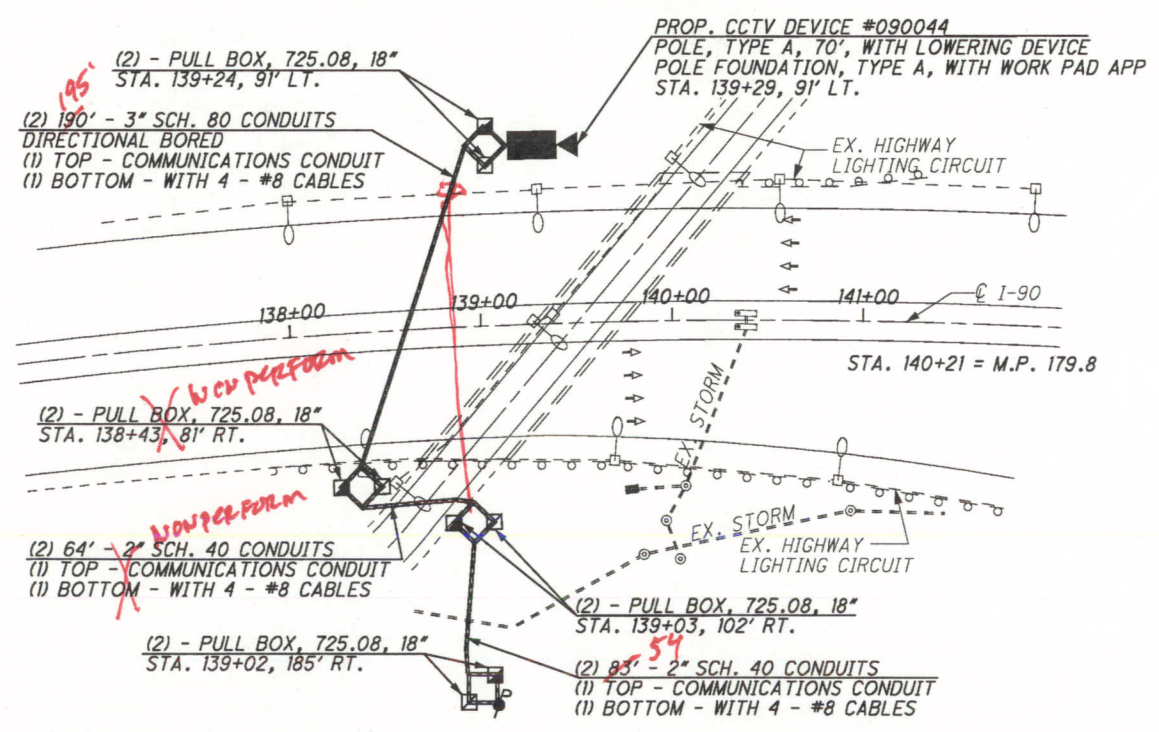


140' C&T POLE
3' POWER
PB
18'
PB 8' DMS
92038
DMS PEDESTAL
9P

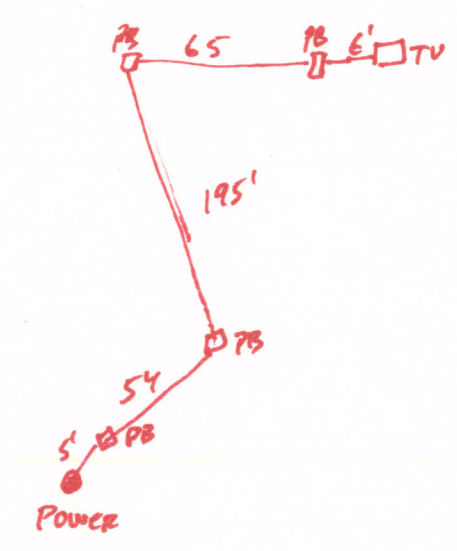
SEE DETAIL "A" ON THIS SHEET

REDESIGNED

DETAIL "A" - NOT TO SCALE

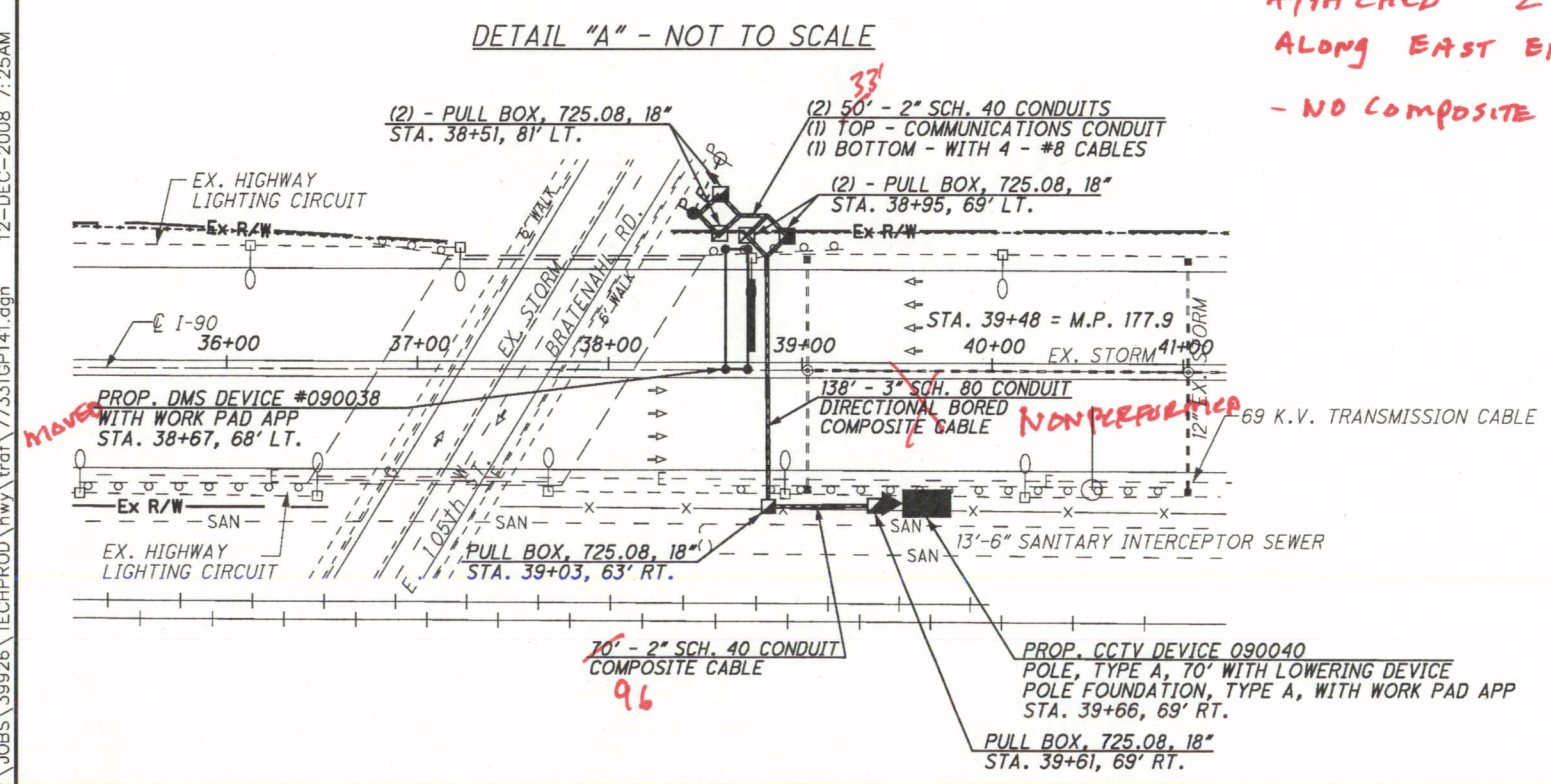
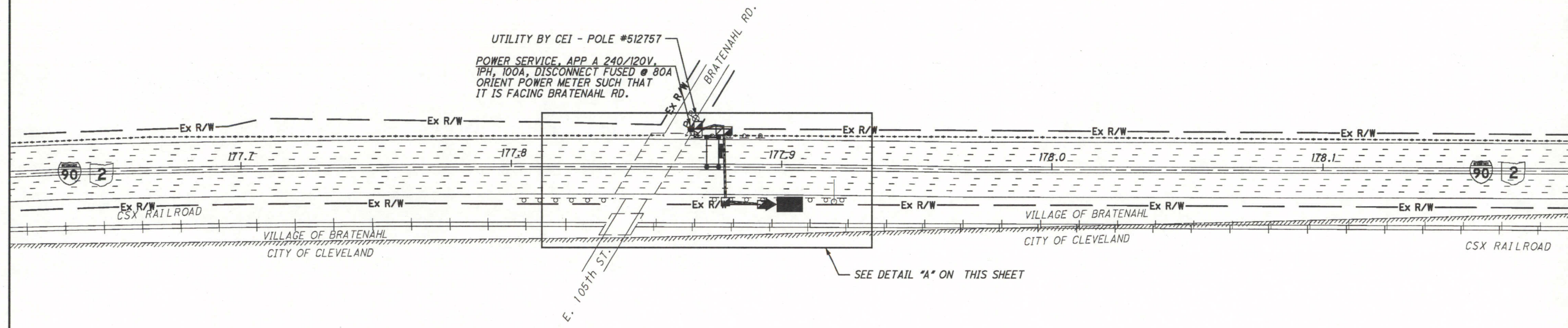


REFER TO SHEET 14 FOR CONDUIT DETAILS
REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
REFER TO SHEET 194 FOR COMMUNICATIONS PLANS
REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS



CCTV 090044

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REDESIGNED (DMS WAS RELOCATED TO PAGE 126/207)

*ATTACHED 2 Rigid CONDUITS ON BRIDGE ABUTMENT
ALONG EAST END OF E105TH TO POWER ON NORTH SIDE*

- NO COMPOSITE CABLES

REFER TO SHEET 11 FOR CONCRETE BARRIER
REPLACEMENT DETAILS

REFER TO SHEET 11B FOR BARRIER TRANSITION
DETAILS

REFER TO SHEET 14 FOR CONDUIT DETAILS

REFER TO SHEETS 15-15A FOR PULL BOX ORIENTATION
AND COMMUNICATION POLE DETAILS

REFER TO SHEET 16 FOR TYPICAL POWER SERVICE
AS PER PLAN A DETAILS

REFER TO SHEET 28 FOR TYPICAL DMS DETAILS

REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS
FOR DETAILS

REFER TO CONCRETE BARRIER MEIDAN TRUSS AND
PEDESTAL SUPPORT FOUNDATIONS FOR DETAILS

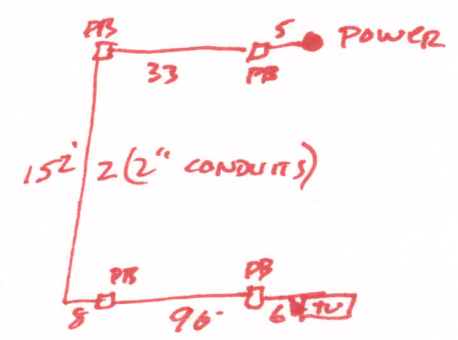
REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 178 FOR DMS PROFILE

REFER TO SHEET 193 FOR COMMUNICATIONS PLANS

REFER TO SHEET 205 FOR TYPICAL DMS-CCTV W/
COMPOSITE CABLE EOC DETAILS

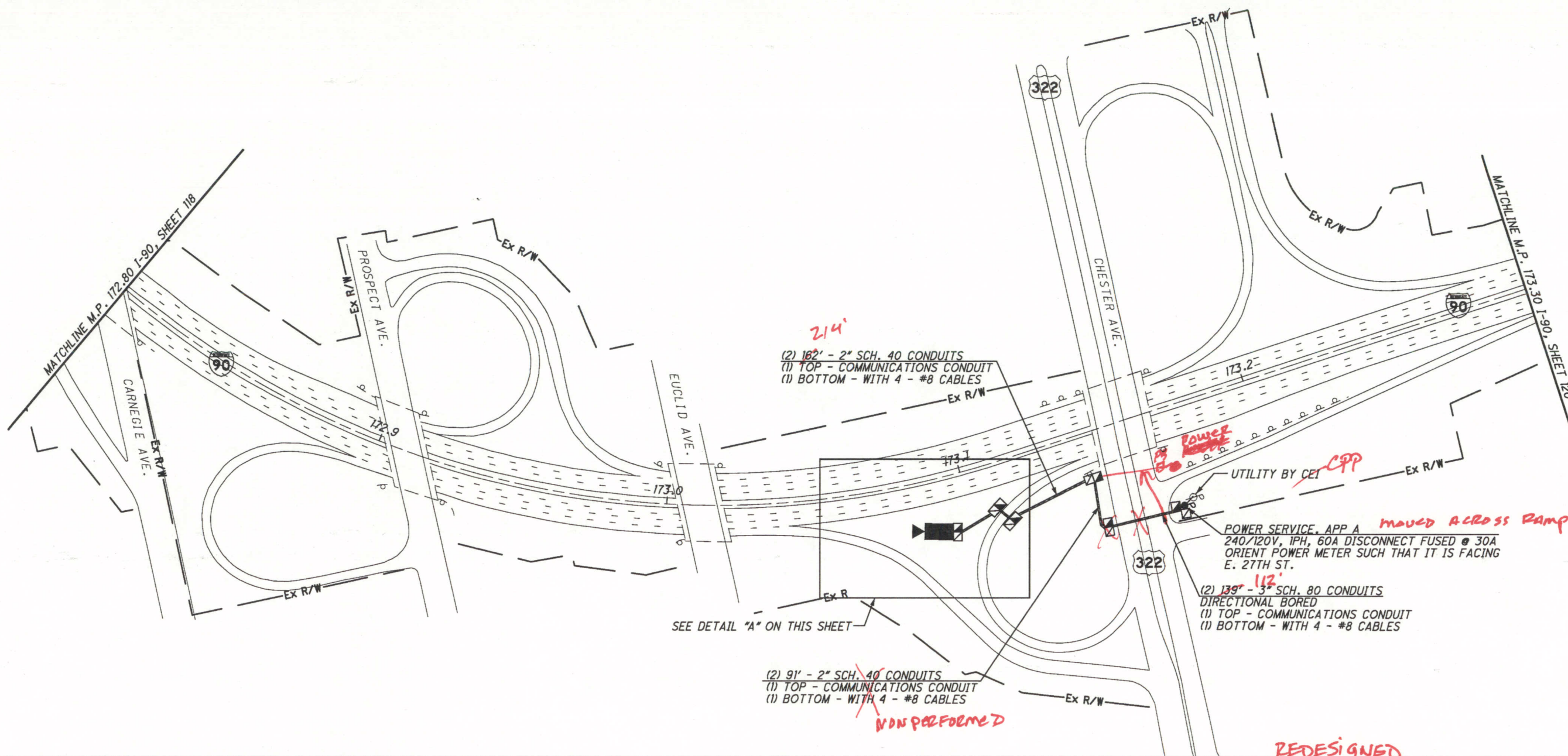
REFER TO SHEET 207 FOR TYPICAL CCTV W/ COMPOSITE
CABLE DETAILS



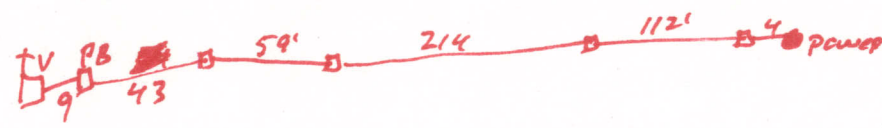
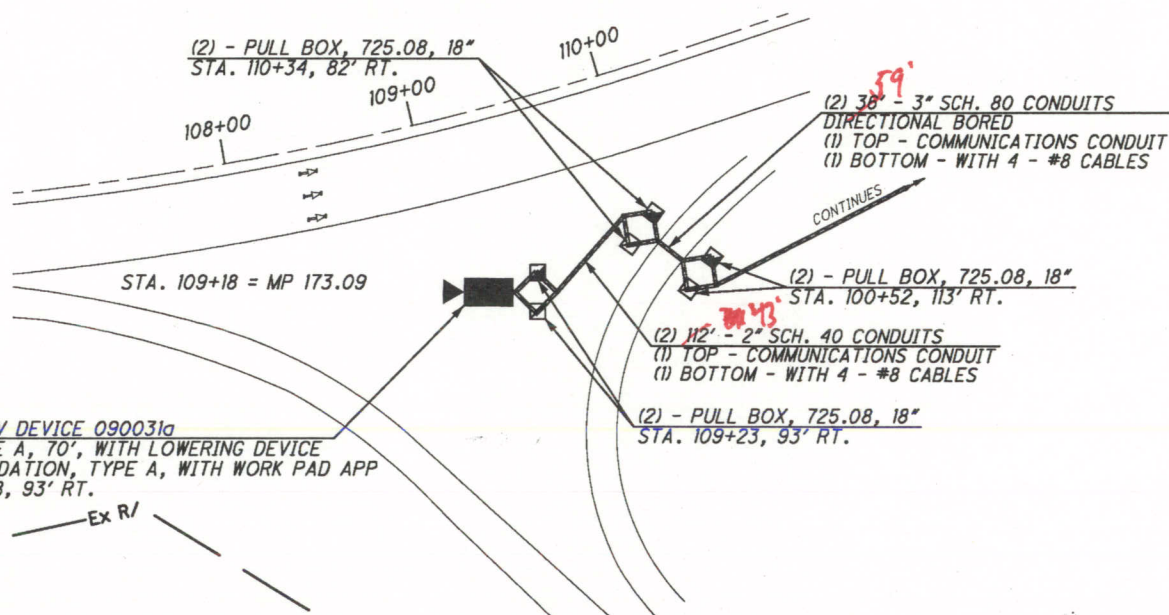
DMS 090038
CCTV 090040

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DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 193 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

CITY OF CLEVELAND, CUYAHOGA COUNTY

I-90 AT US-322 (MP 172.80 TO MP 173.30)

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

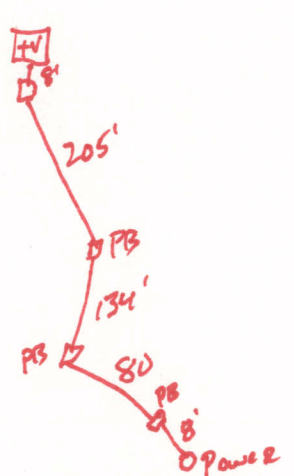
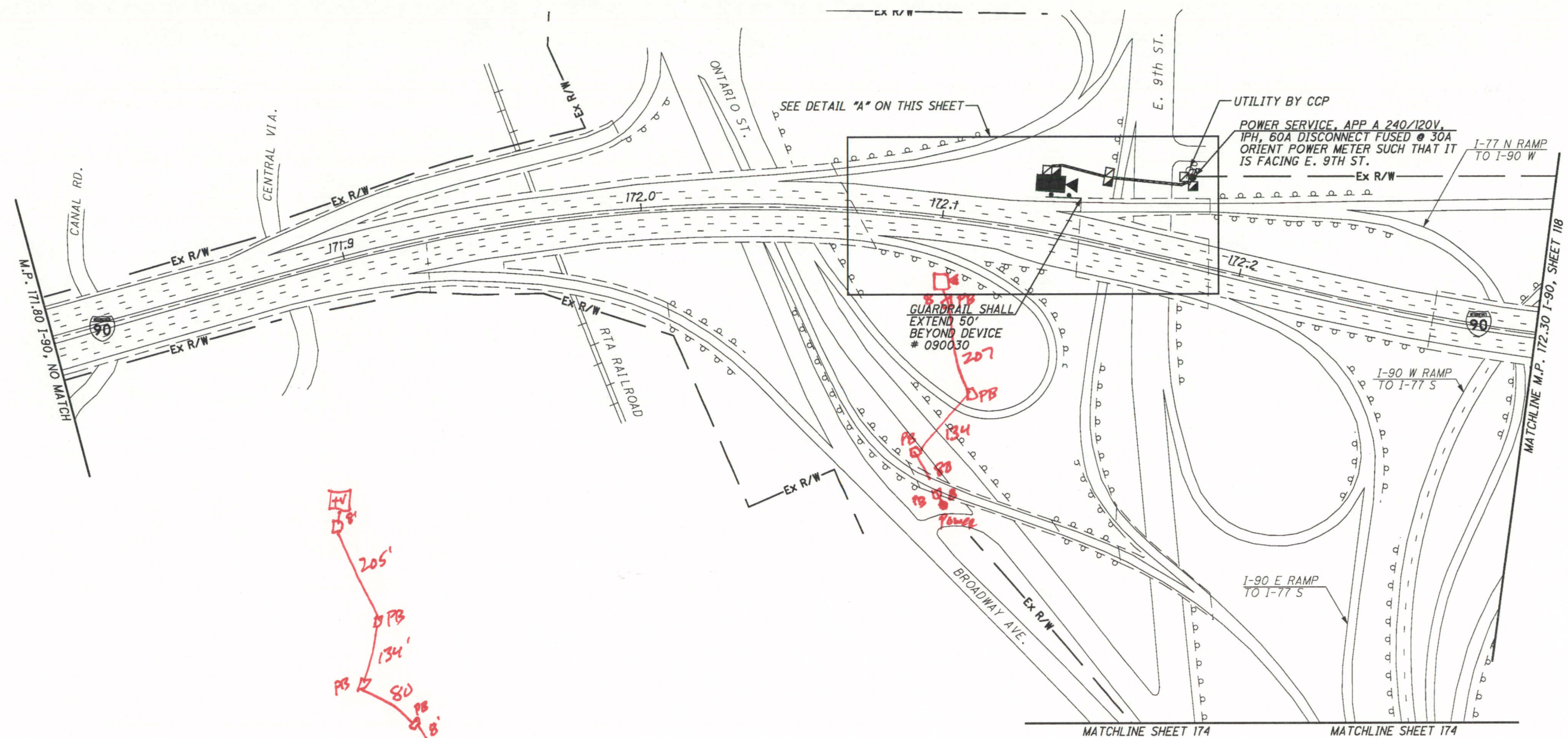
CCTV 090031A

119
207

CALCULATED STS CHECKED JDG

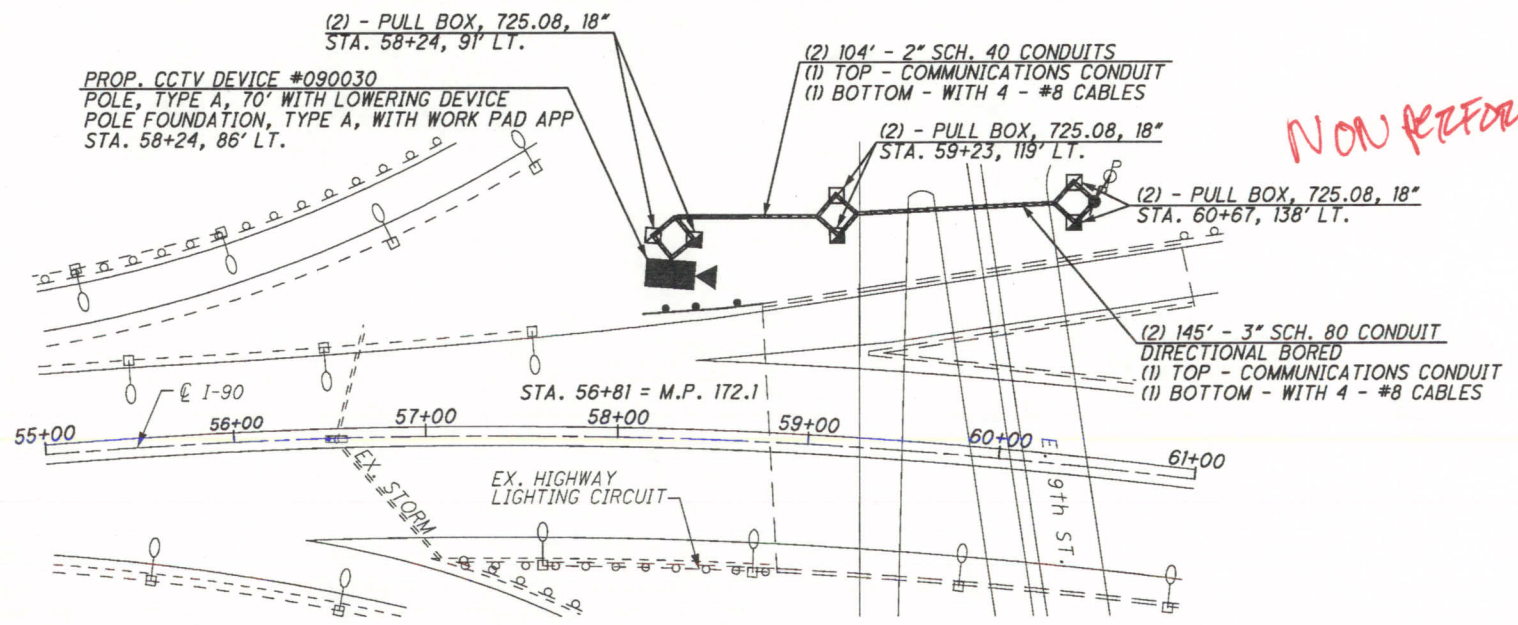
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HORIZONTAL SCALE IN FEET

M:\JOBS\39926\TECHPROD\hwy\trf\77331GP129.dgn 18-NOV-2008 1:27PM jrllove



REDESIGNED

DETAIL "A" - NOT TO SCALE



NOT PERFORMED

REFER TO SHEET 14 FOR CONDUIT DETAILS
 REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
 REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
 REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
 REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
 REFER TO SHEET 193 FOR COMMUNICATIONS PLANS
 REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

CCTV 090030

N

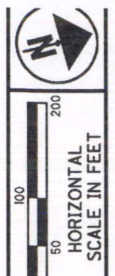
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HORIZONTAL SCALE IN FEET

CALCULATED	STS	CHECKED	JDG
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I-90 AT E.9TH ST. (MP 171.80 TO MP 172.30)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM

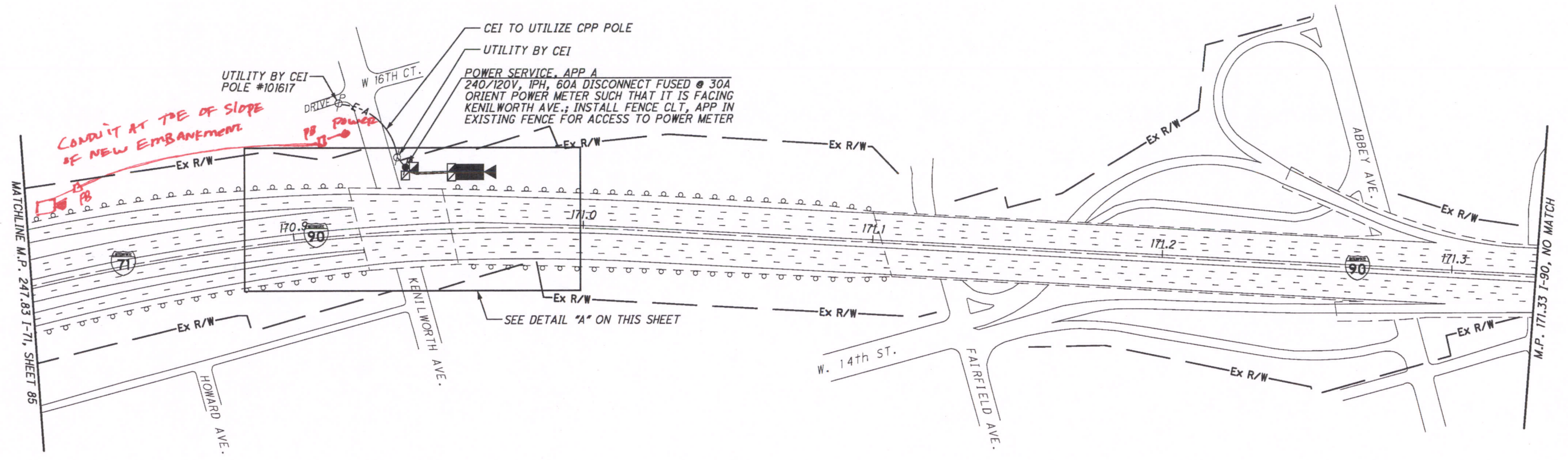
117
207



CALCULATED STS CHECKED JDG

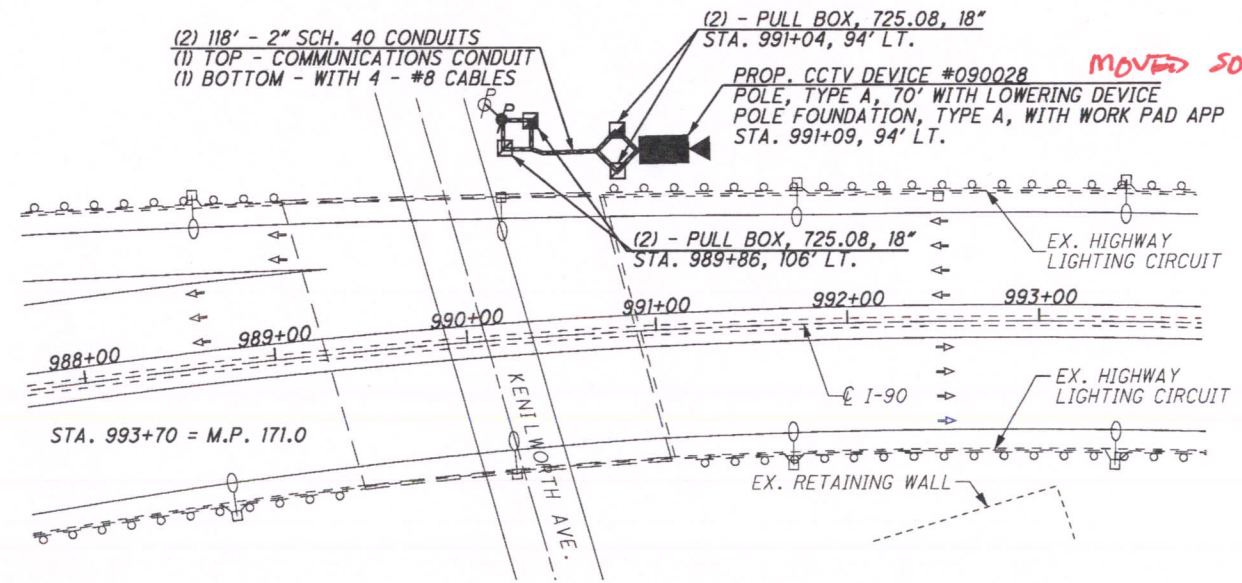
I-90 AT KENILWORTH AVE. (MP 247.83 TO MP 171.33)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



REDESIGNED

DETAIL "A" - NOT TO SCALE

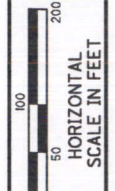


MOVED SOUTH DOWN RAMP TO I-90 WB

- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 193 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

CCTV 090028

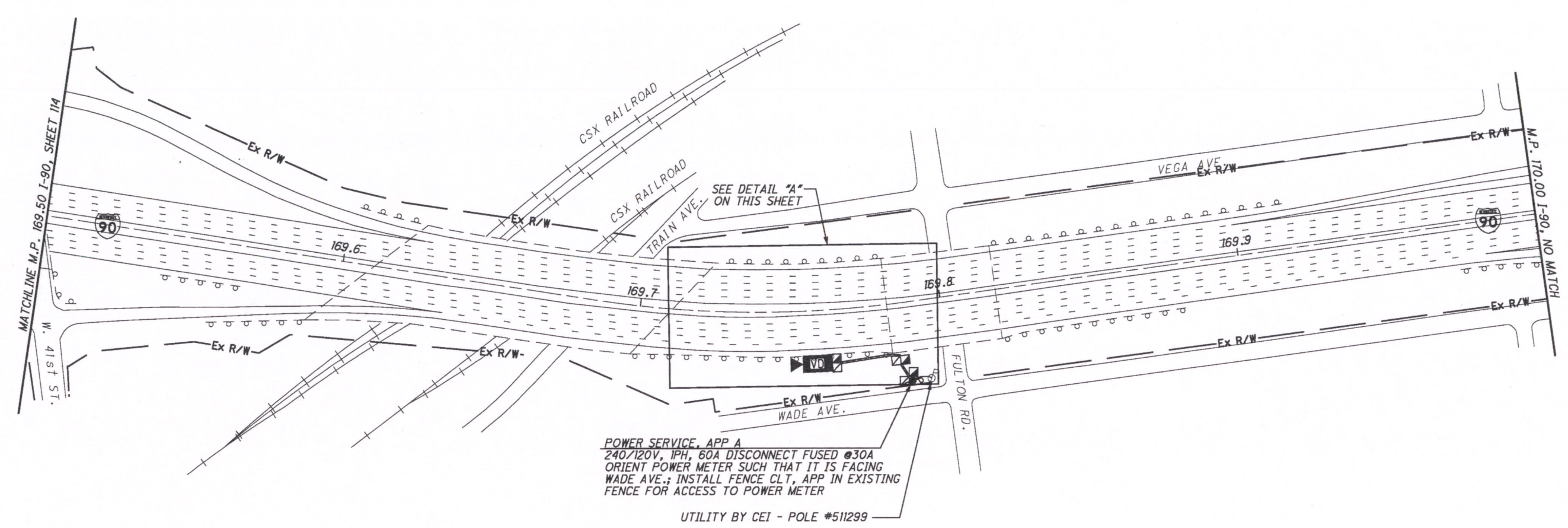
M:\JOBS\39926\TECHPROD\hwy\traf\77331\0P127.dgn 05-MAY-2009 1:29PM jrllove



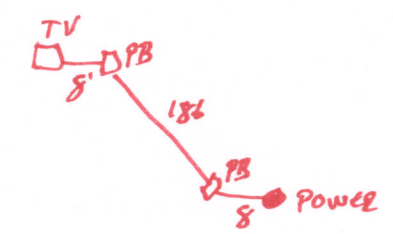
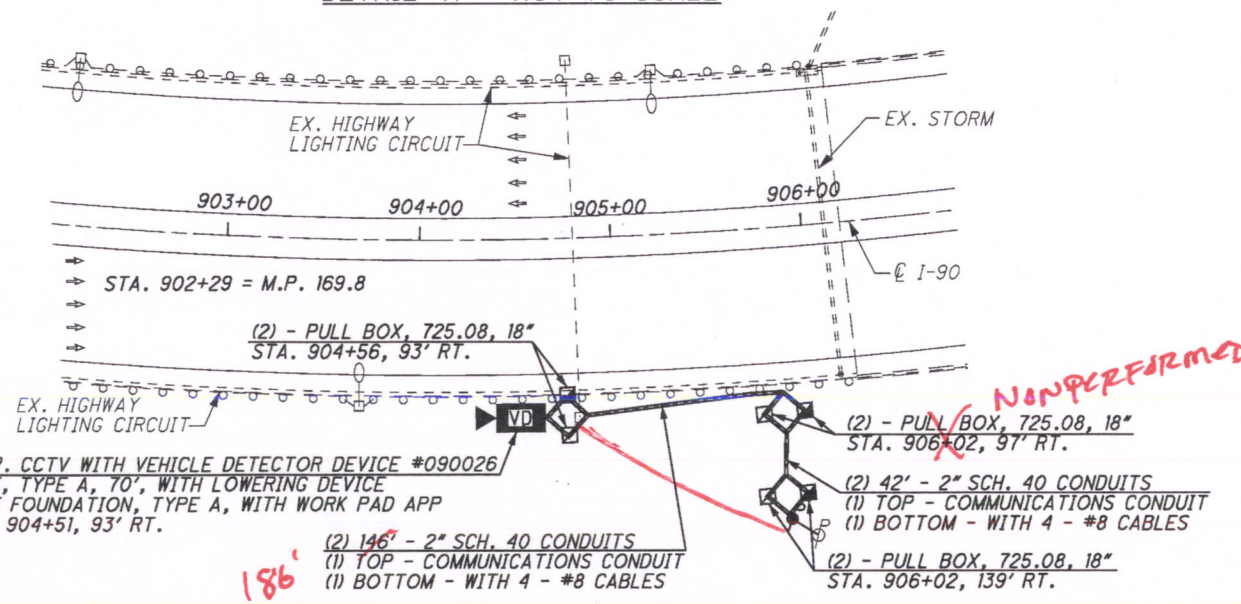
CALCULATED STS CHECKED JDG

I-90 AT FULTON RD. (MP 169.50 TO MP 170.00)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



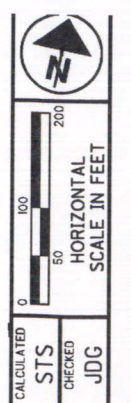
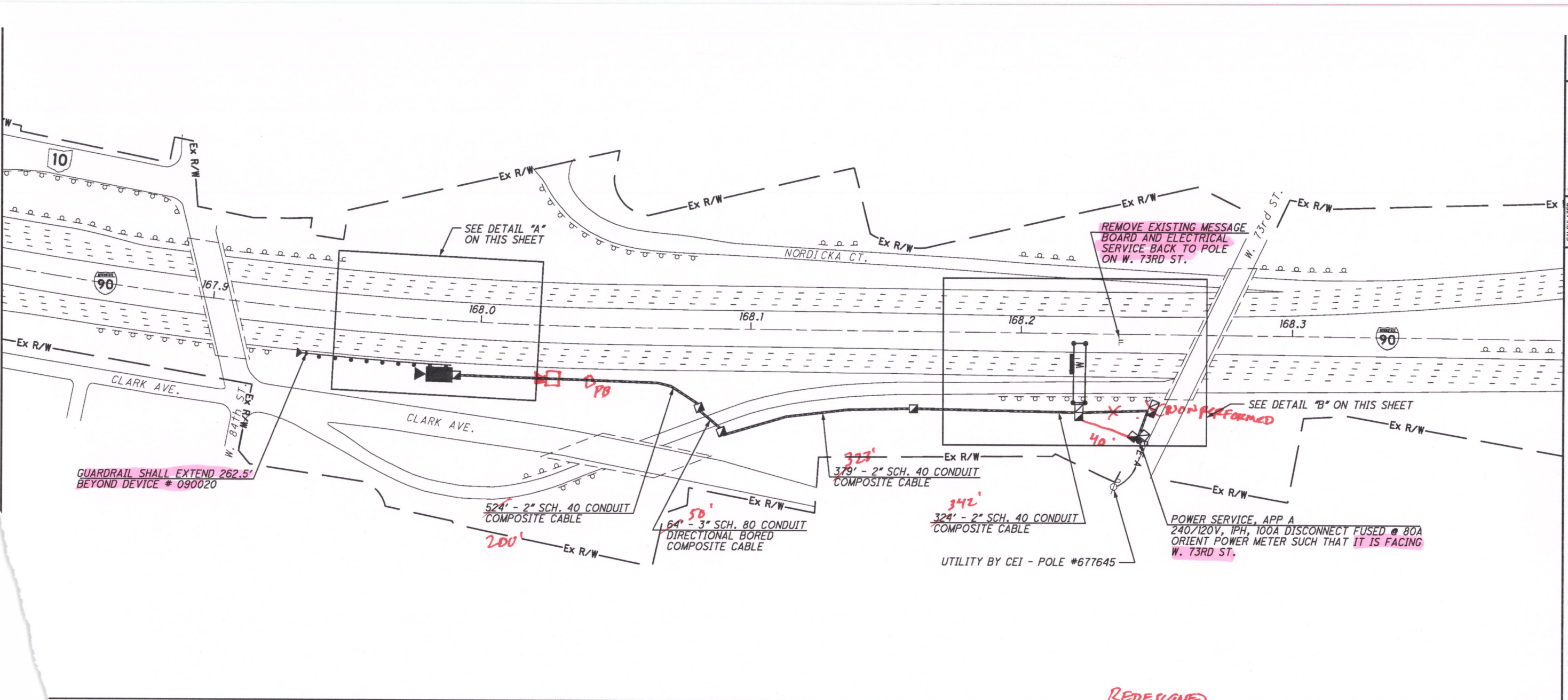
DETAIL "A" - NOT TO SCALE



REFER TO SHEET 14 FOR CONDUIT DETAILS
REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
REFER TO SHEET 193 FOR COMMUNICATIONS PLANS
REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

CCTV 090026

M:\JOBS\39926\TECHPROD\hwy\traf\77331GP125.dgn 05-MAY-2009 1:29PM jrllove



CALCULATED STS CHECKED JDG
I-90 AT W.73RD ST. (MP 167.82 TO MP 168.40)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREWAY MANAGEMENT
SYSTEM
 113
 207

GUARDRAIL SHALL EXTEND 262.5' BEYOND DEVICE # 090020

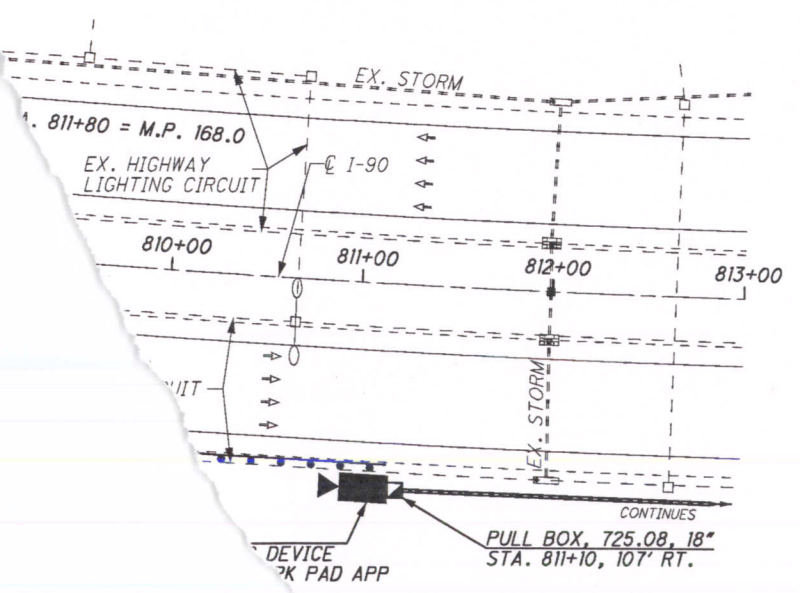
REMOVE EXISTING MESSAGE BOARD AND ELECTRICAL SERVICE BACK TO POLE ON W. 73RD ST.

SEE DETAIL "B" ON THIS SHEET

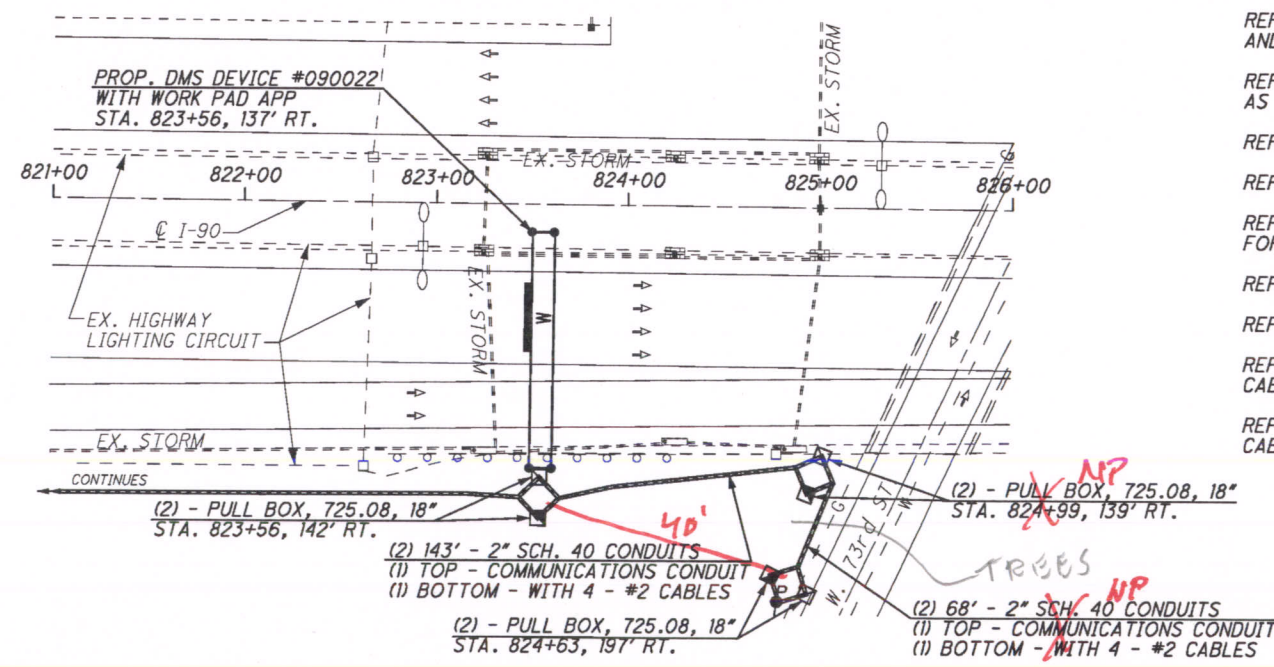
POWER SERVICE, APP A
 240/120V, 1PH, 100A DISCONNECT FUSED @ 80A
 ORIENT POWER METER SUCH THAT IT IS FACING W. 73RD ST.

UTILITY BY CEI - POLE #677645

DETAIL "A" - NOT TO SCALE



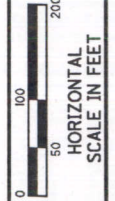
DETAIL "B" - NOT TO SCALE



REDESIGNED

- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEETS 15-15A FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 192 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 205 FOR TYPICAL DMS W/ COMPOSITE CABLE EOC DETAILS
- REFER TO SHEET 207 FOR TYPICAL CCTV W/ COMPOSITE CABLE DETAILS

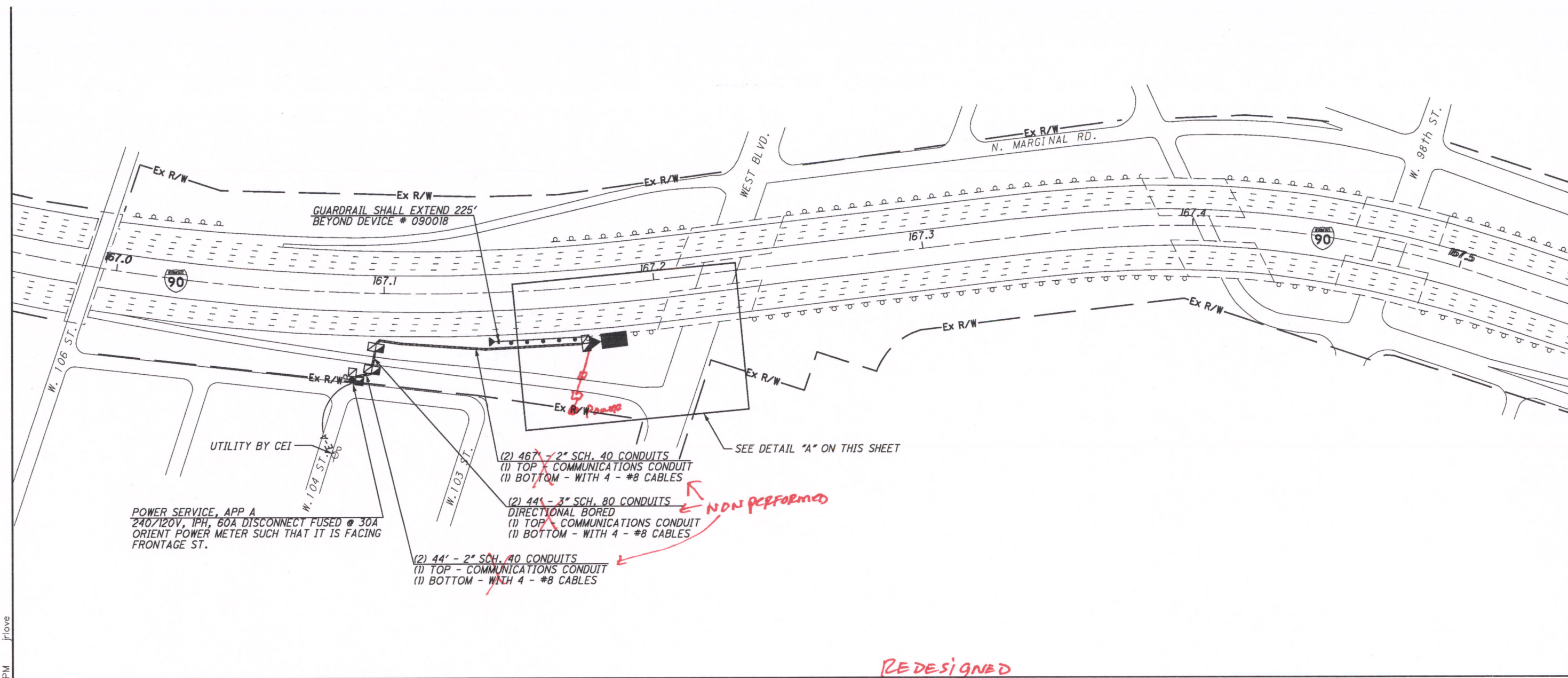
CCTV 090020
 DMS 090022



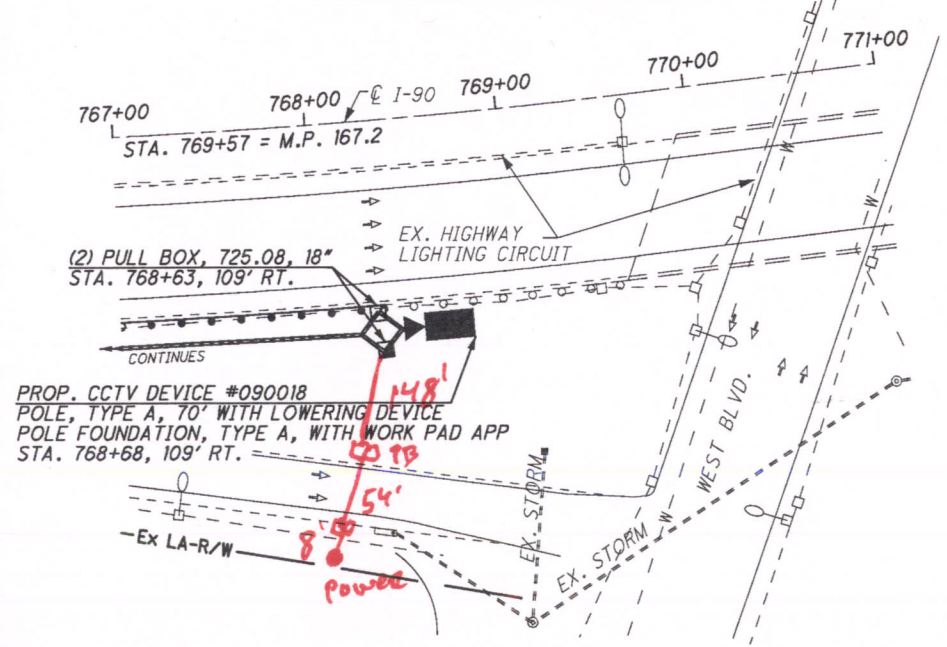
CALCULATED
STS
CHECKED
JDC

I-90 AT WEST BLVD. (MP 166.96 TO MP 167.54)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



DETAIL "A" - NOT TO SCALE

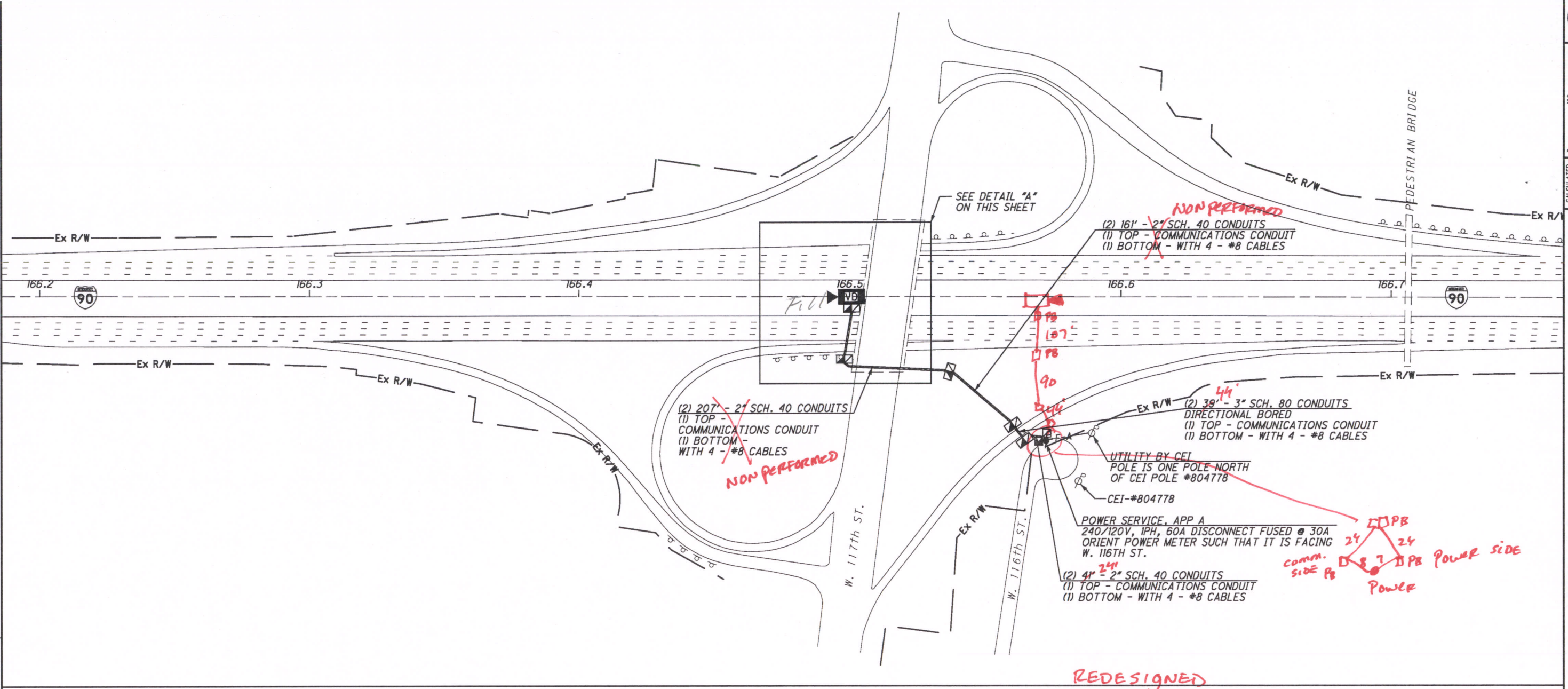


- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 192 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

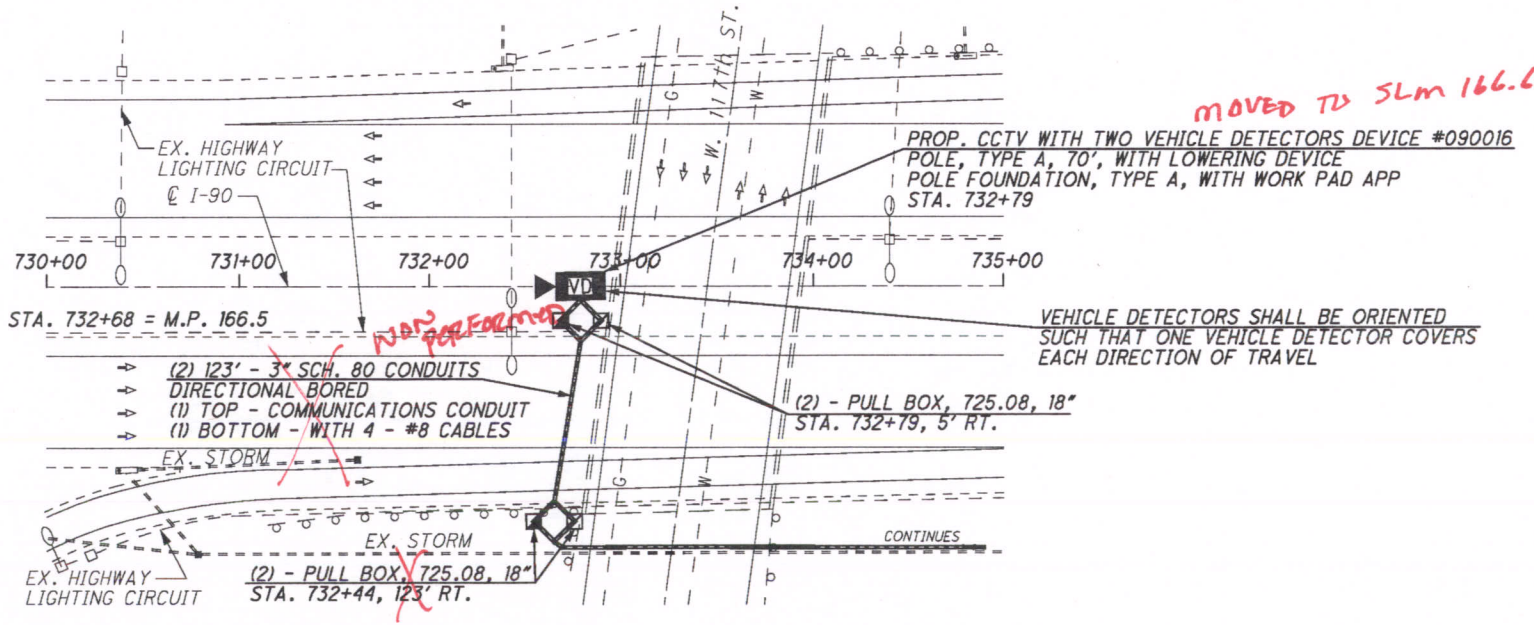
CCTV 090018

M:\JOBS\39926\TECHPROD\hwy\traf\77331\0P120.dgn 18-NOV-2008 1:26PM jrllove

M:\JOBS\39926\TECHPROD\hwy\trf\77331\GP119.dgn 11-DEC-2008 7:15AM jrllove



DETAIL "A" - NOT TO SCALE



REFER TO SHEET 14 FOR CONDUIT DETAILS

REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS

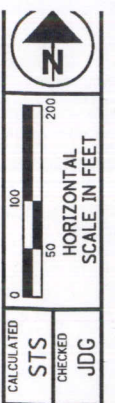
REFER TO SHEET 25 FOR TYPICAL CCTV CAMERA WITH TWO VEHICLE DETECTORS DETAILS

REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 192 FOR COMMUNICATIONS PLANS

REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

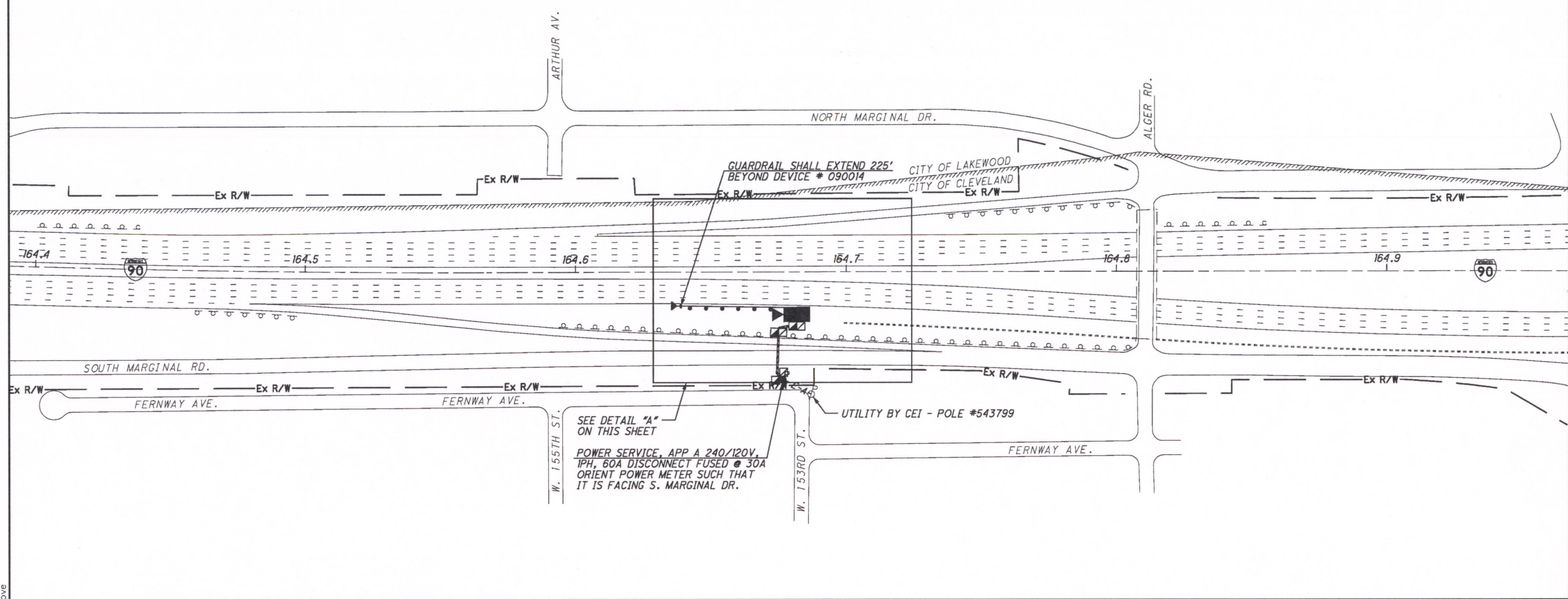
CCTV 090016



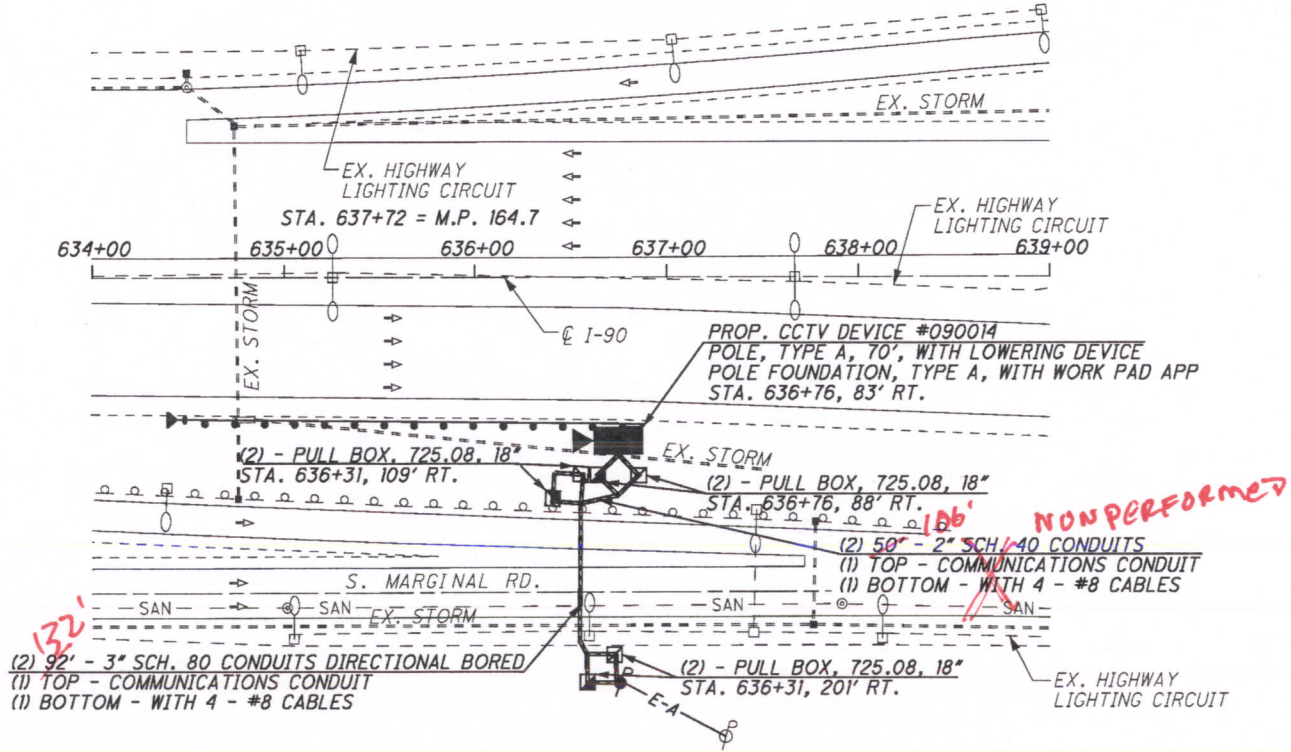
CALCULATED STS CHECKED JDG
 I-90 AT ALGER RD. (MP 164.39 TO MP 164.97)
 CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
 FREEWAY MANAGEMENT
 SYSTEM

110
 207



DETAIL "A" - NOT TO SCALE

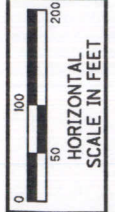


REFER TO SHEET 14 FOR CONDUIT DETAILS
 REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
 REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
 REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
 REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
 REFER TO SHEET 192 FOR COMMUNICATIONS PLANS
 REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

NON PERFORMED

CCTV 090014

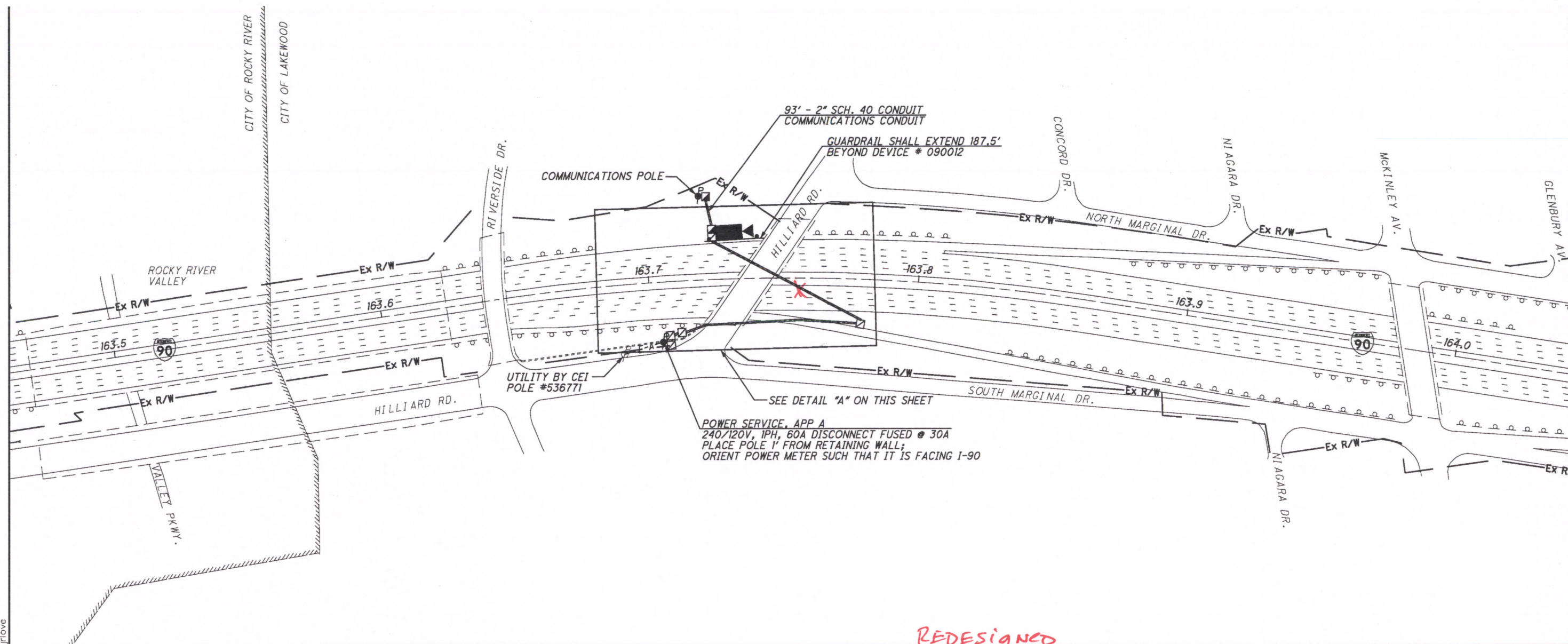
M:\JOBS\39926\TECHPROD\hwy\traf\773310P115.dgn 18-NOV-2008 1:25PM jrlve



CALCULATED STS CHECKED JDG

I-90 AT HILLIARD RD. (MP 163.46 TO MP 164.04)
CITY OF LAKEWOOD, CUYAHOGA COUNTY

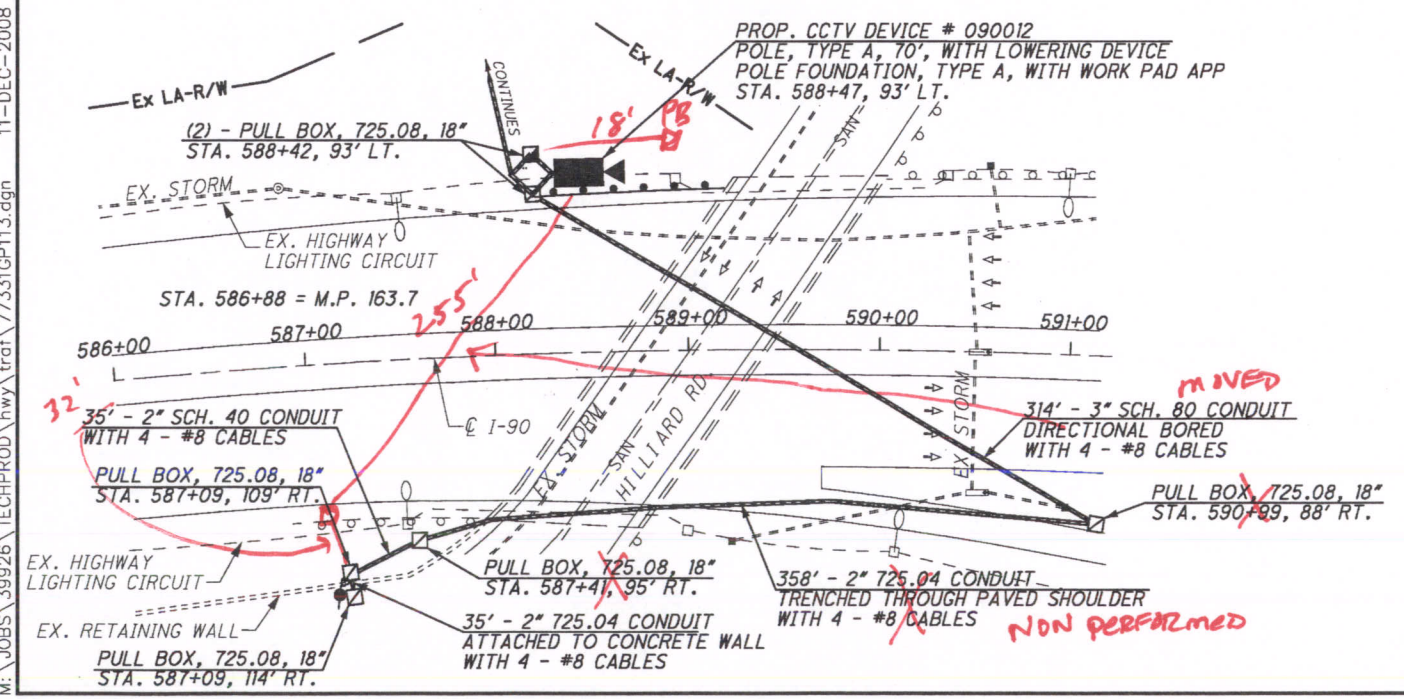
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



POWER SERVICE, APP A
 240/120V, 1PH, 60A DISCONNECT FUSED @ 30A
 PLACE POLE 1' FROM RETAINING WALL;
 ORIENT POWER METER SUCH THAT IT IS FACING I-90

REDESIGNED

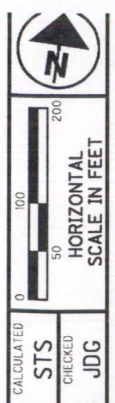
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 13 FOR CONDUIT TRANSITION TO SHOULDER DETAILS
- REFER TO SHEET 14 FOR CONDUIT AND CONDUIT ATTACHED TO WALL DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 23 FOR TYPICAL CCTV CAMERA DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 192 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

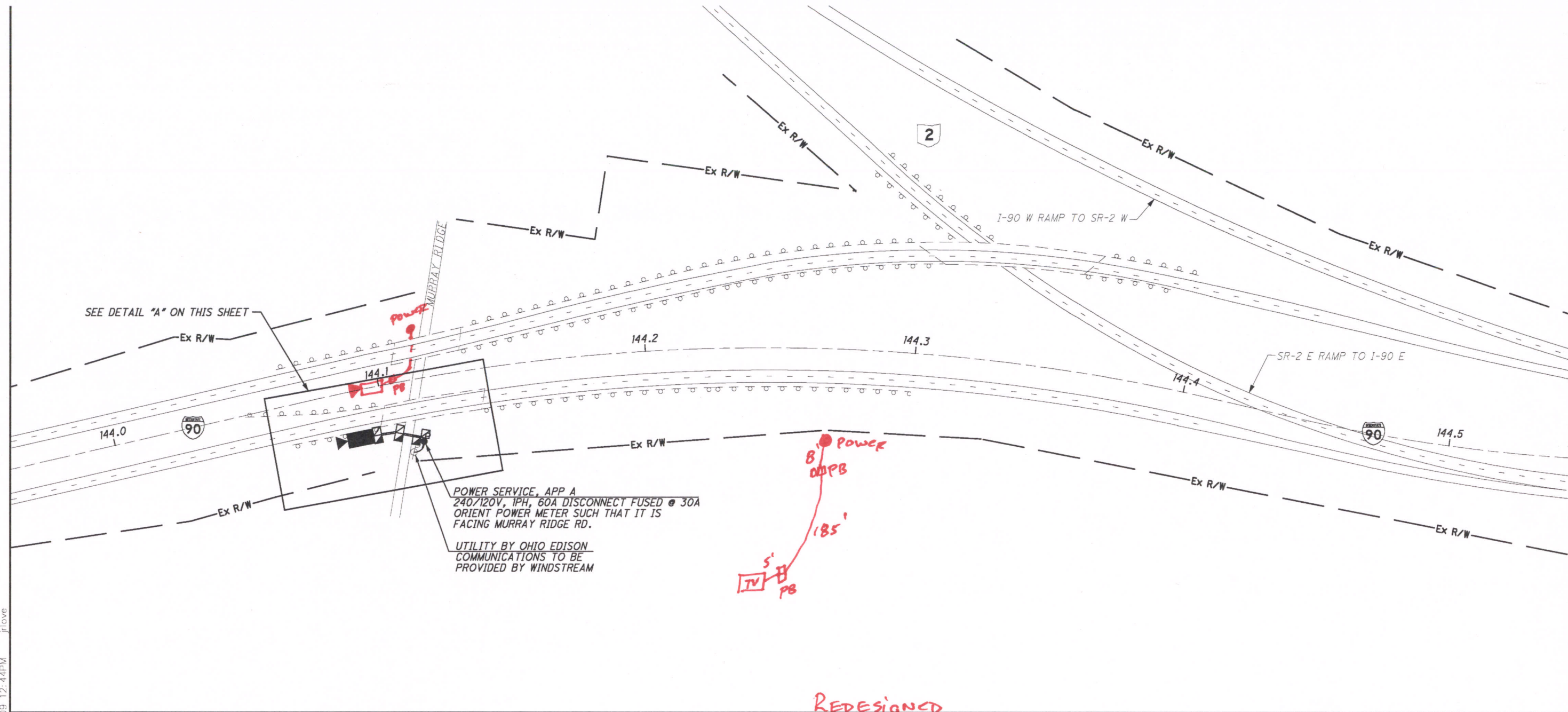
CCTV 090012

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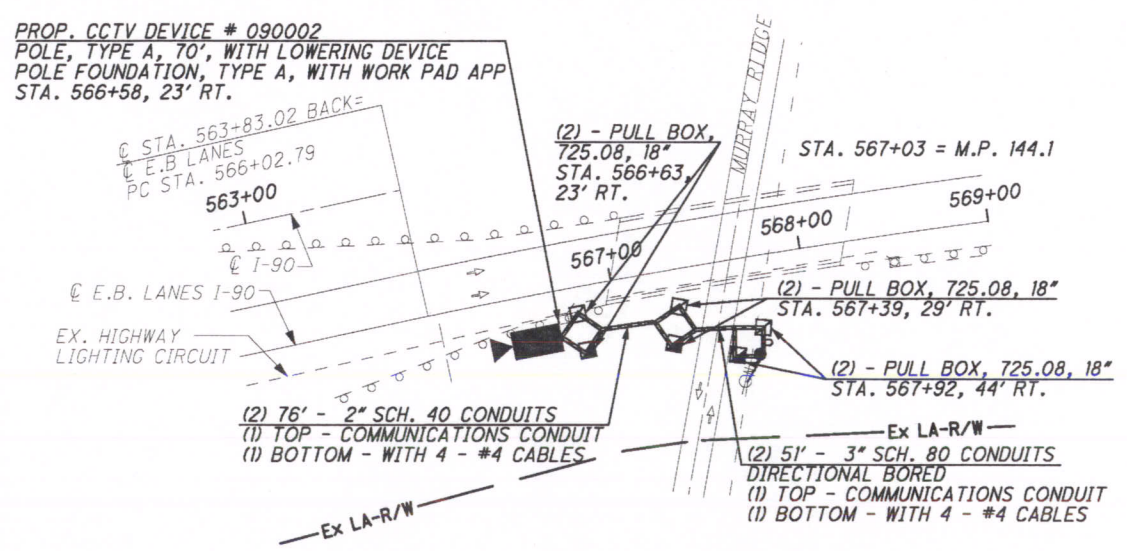


CALCULATED STS CHECKED JDG
 I-90 AT SR-2 WEST (MP 143.96 TO MP 144.54)
 ELYRIA TOWNSHIP, LORAIN COUNTY

VAR-CLEVELAND
 FREEWAY MANAGEMENT
 SYSTEM



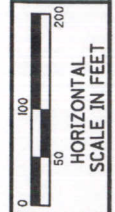
DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 192 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

CCTV 090002

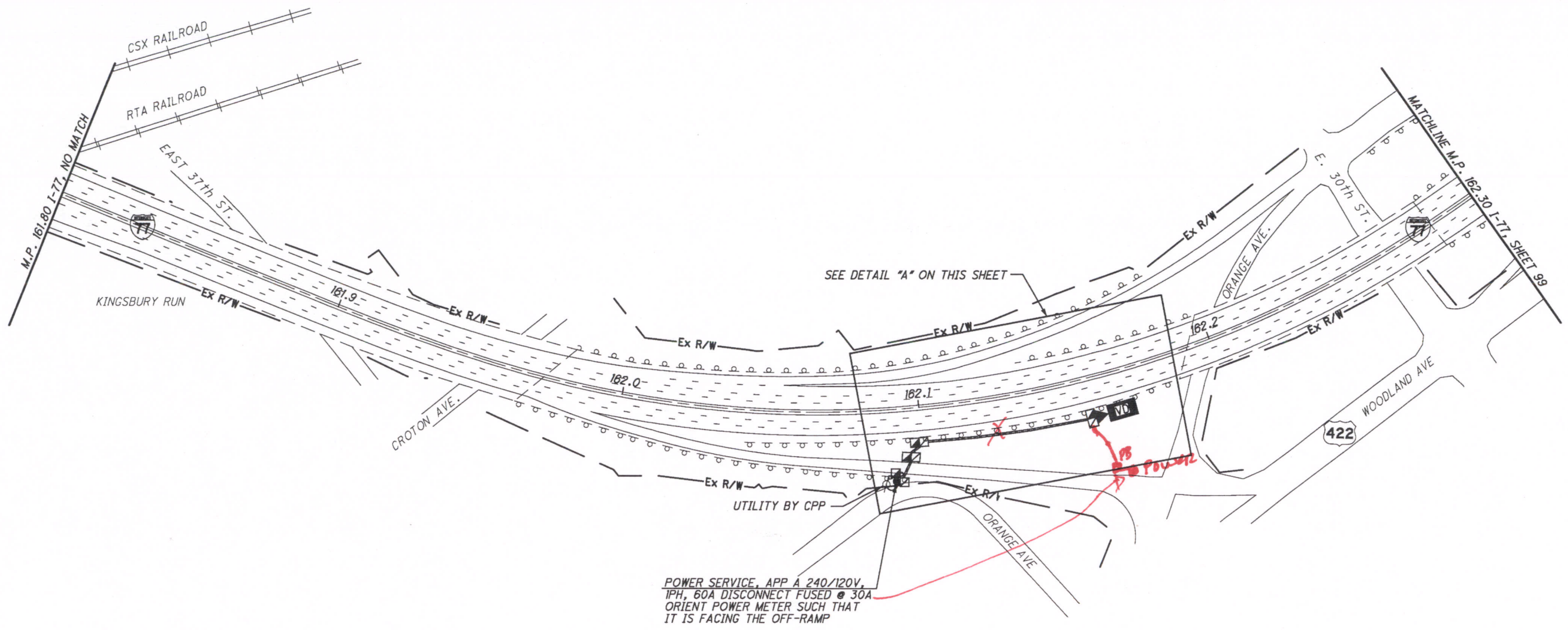
M:\JOBS\39926\TECHPROD\hwy\traf\77331GP103.dgn 02-APR-2009 12:44PM jrlove



CALCULATED STS
CHECKED JDC

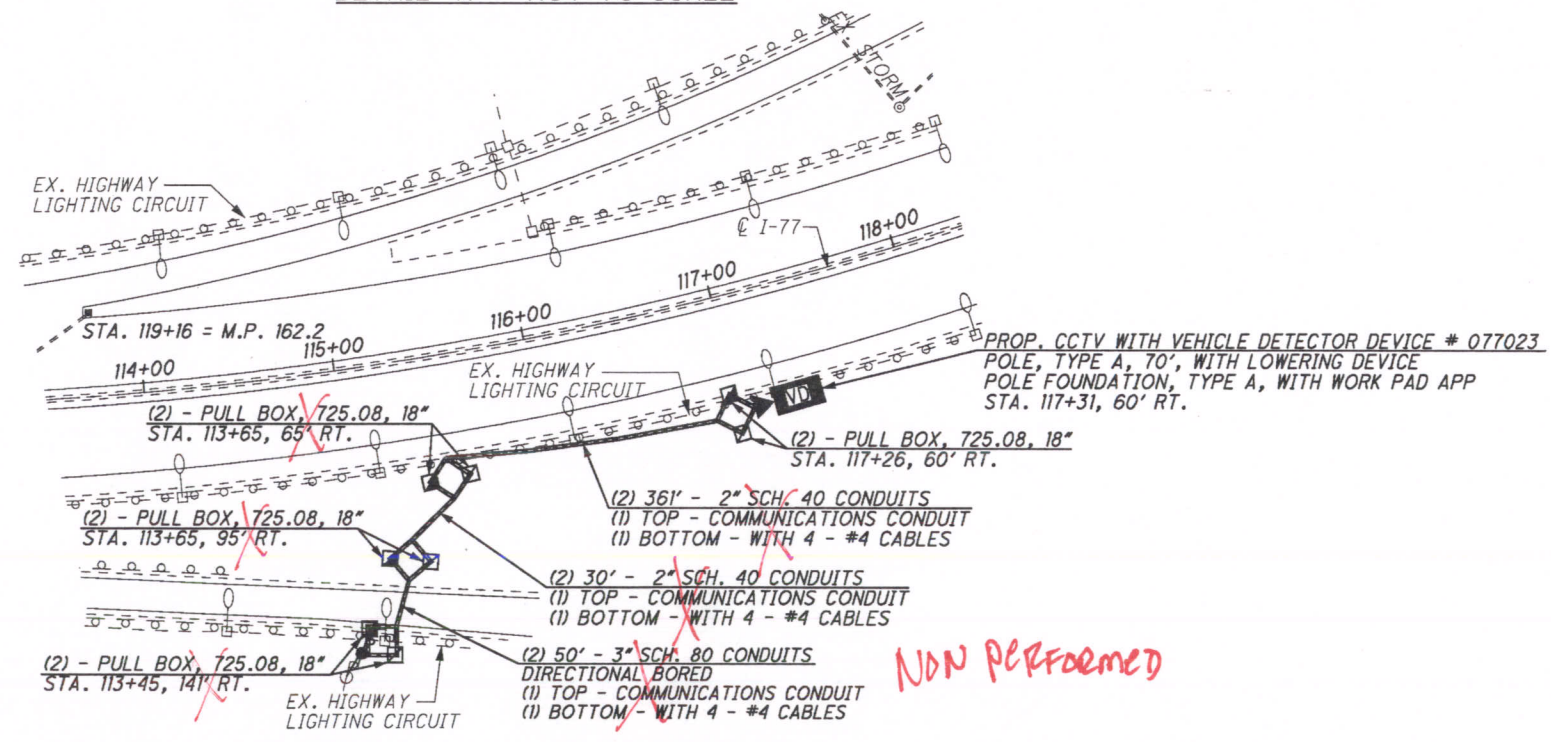
I-77 AT ORANGE AVE. (MP 161.80 TO MP 162.30)
CITY OF CLEVELAND, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

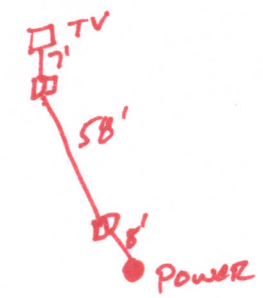


REDESIGNED

DETAIL "A" - NOT TO SCALE



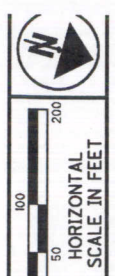
NON PERFORMED



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 191 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

CCTV 077023

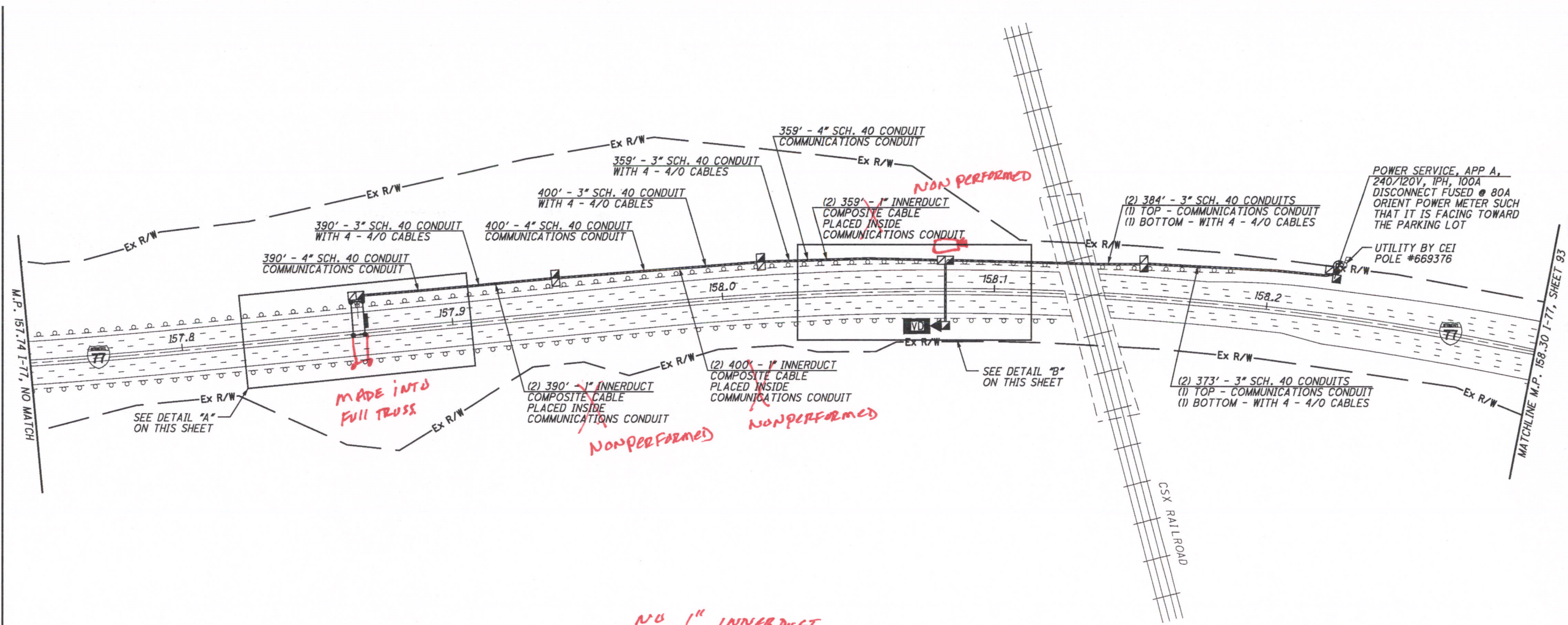
M:\JOBS\39926\TECHPROD\hwy\traf\77331GP098.dgn 18-NOV-2008 1:21PM jrl



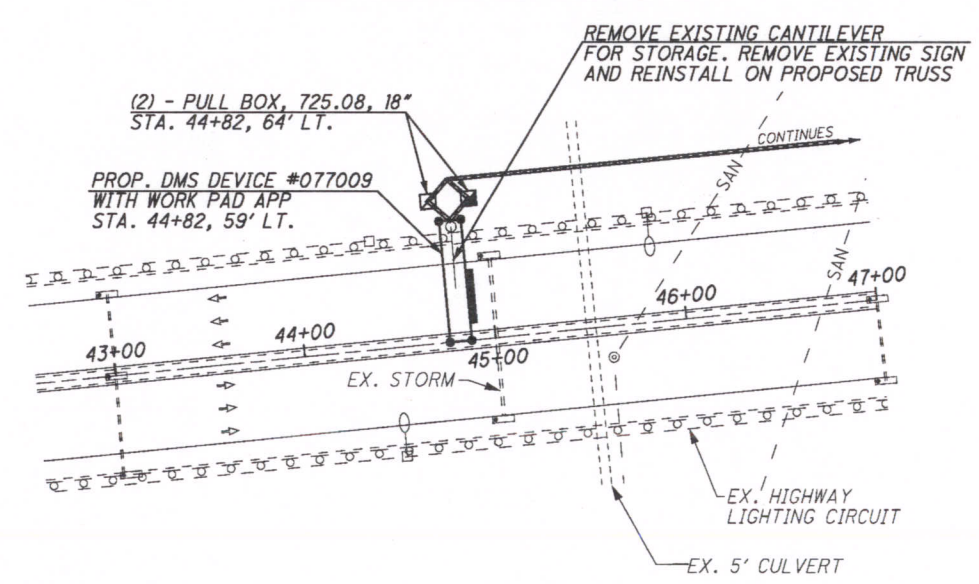
CALCULATED STS
CHECKED JJD

I-77 S OF GRANT AVE. (MP 157.74 TO MP 158.30)
VILLAGE OF CUYAHOGA COUNTY

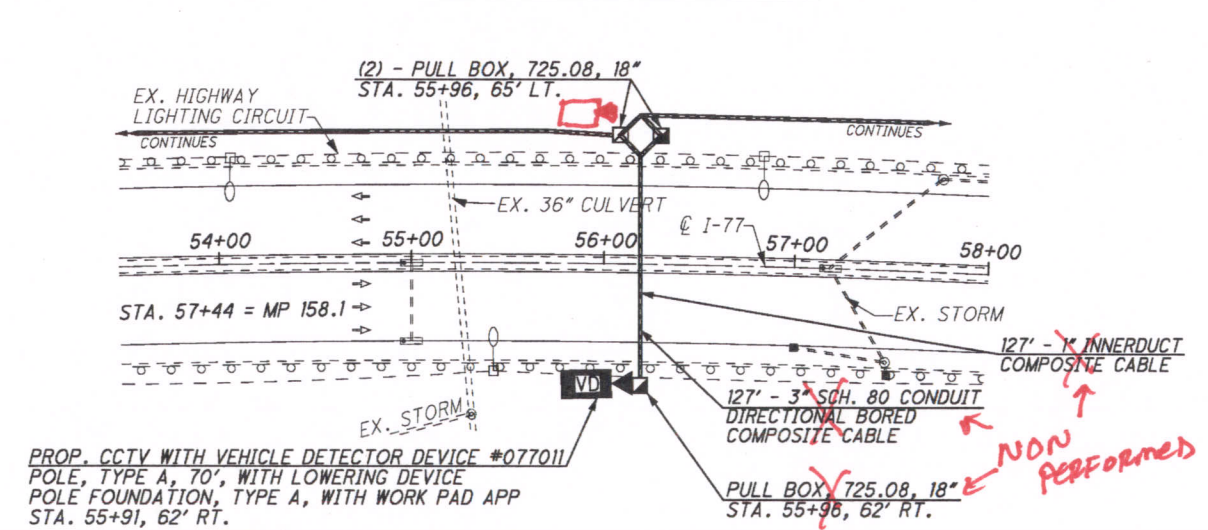
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



DETAIL "A" - NOT TO SCALE



DETAIL "B" - NOT TO SCALE

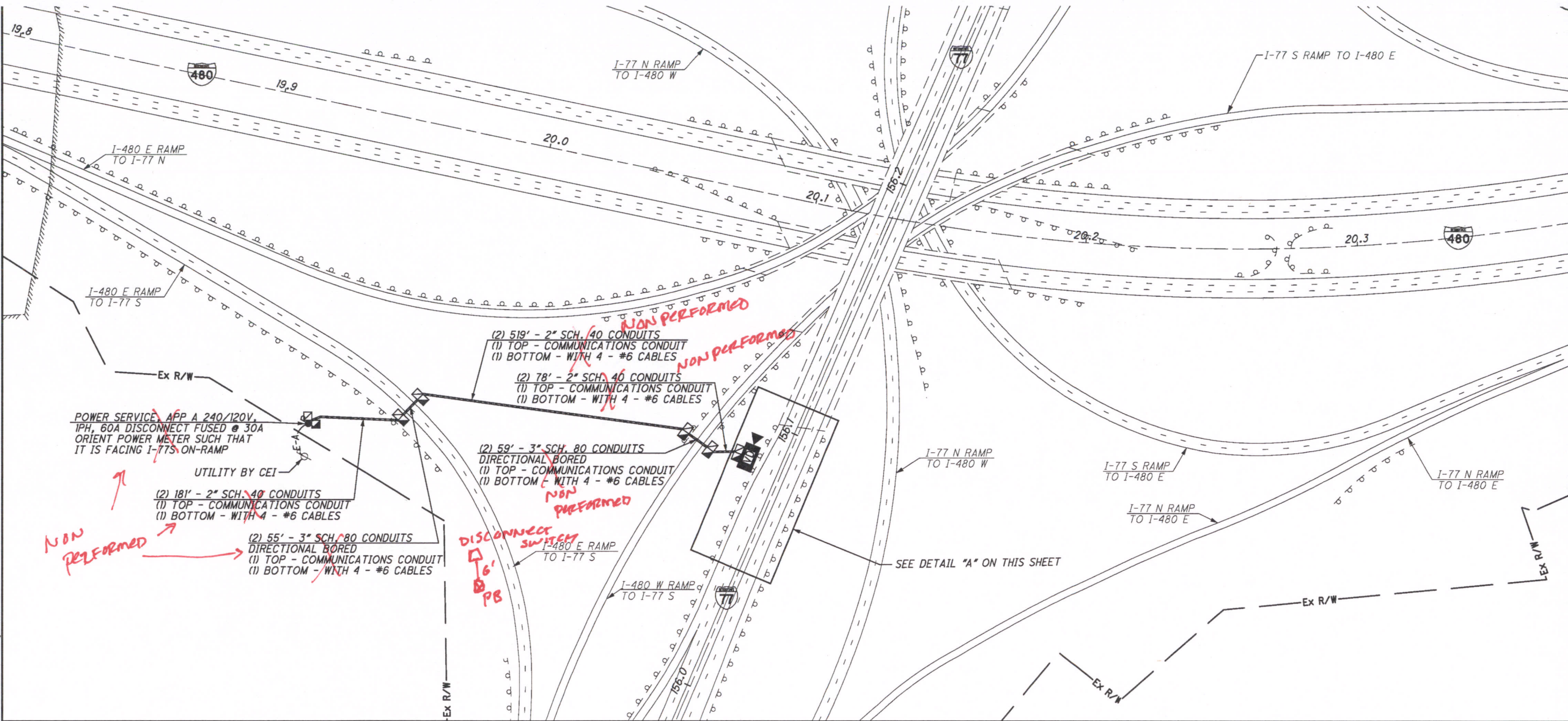


- REFER TO SHEET 11 FOR CONCRETE BARRIER REPLACEMENT DETAILS
- REFER TO SHEET 11A FOR BARRIER HEIGHT TRANSITION DETAILS
- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEETS 15-15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO CONCRETE BARRIER MEDIAN TRUSS AND PEDESTAL SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 176 FOR DMS PROFILE
- REFER TO SHEET 191 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 207A FOR TYPICAL DMS - CCTV W/ VD T-1 COMMUNICATIONS DETAILS
- REFER TO SHEET 208 FOR TYPICAL DMS - CCTV W/ VD W/ COMPOSITE CABLE COMMUNICATIONS DETAILS

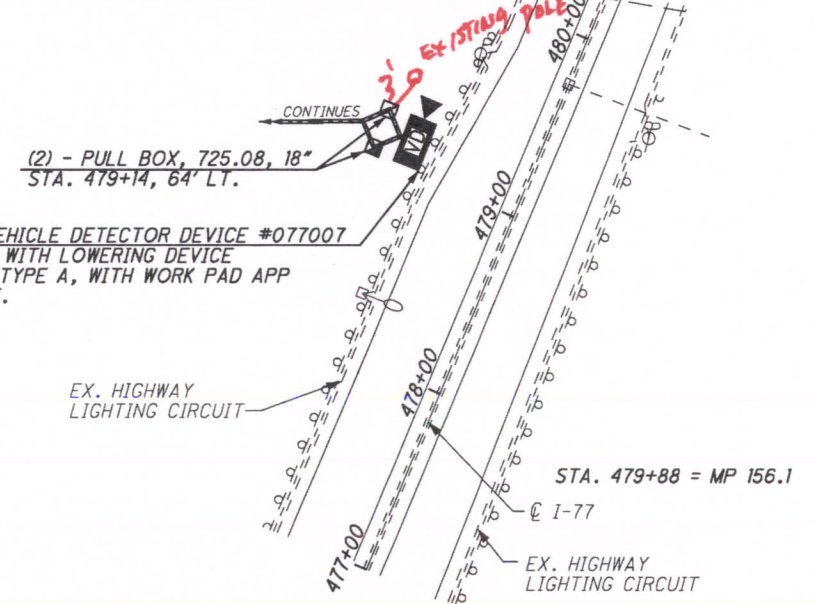
DMS 077009
CCTV 077011

M:\JOBS\39926\TECHPROD\hwy\trf\77331\GP090.dgn 12-DEC-2008 7:21AM jrllove

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DETAIL "A" - NOT TO SCALE



REDESIGNED

- USED EXISTING POWER AT CCTV SITE
- ADDED DISCONNECT SWITCH + PULLBOX ALONG RAMP

- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 24 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 191 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 201 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

CCTV 077007

CALCULATED STS CHECKED JJDG

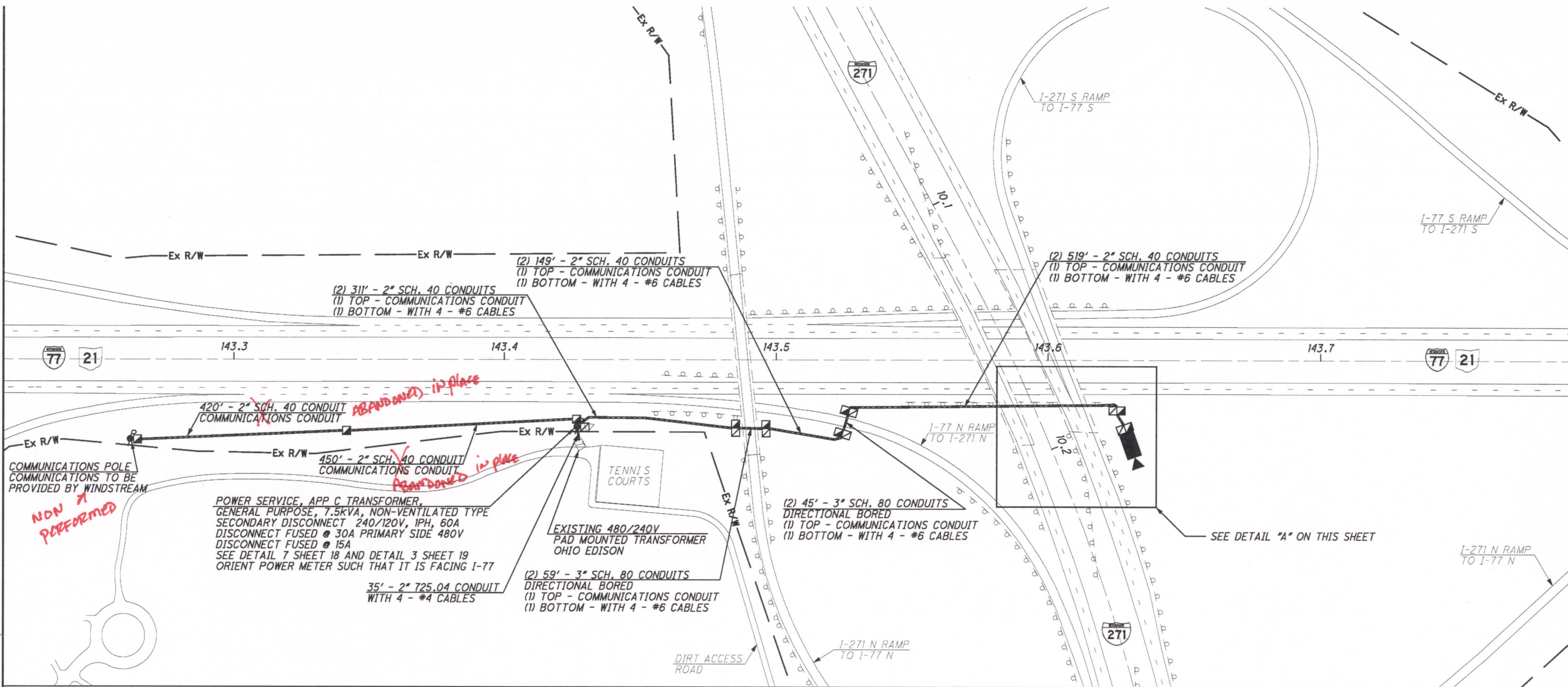
0 50 100 200 HORIZONTAL SCALE IN FEET

I-77 AT I-480 (MP 155.98 TO MP 156.28)
CITY OF INDEPENDENCE, CUYAHOGA COUNTY

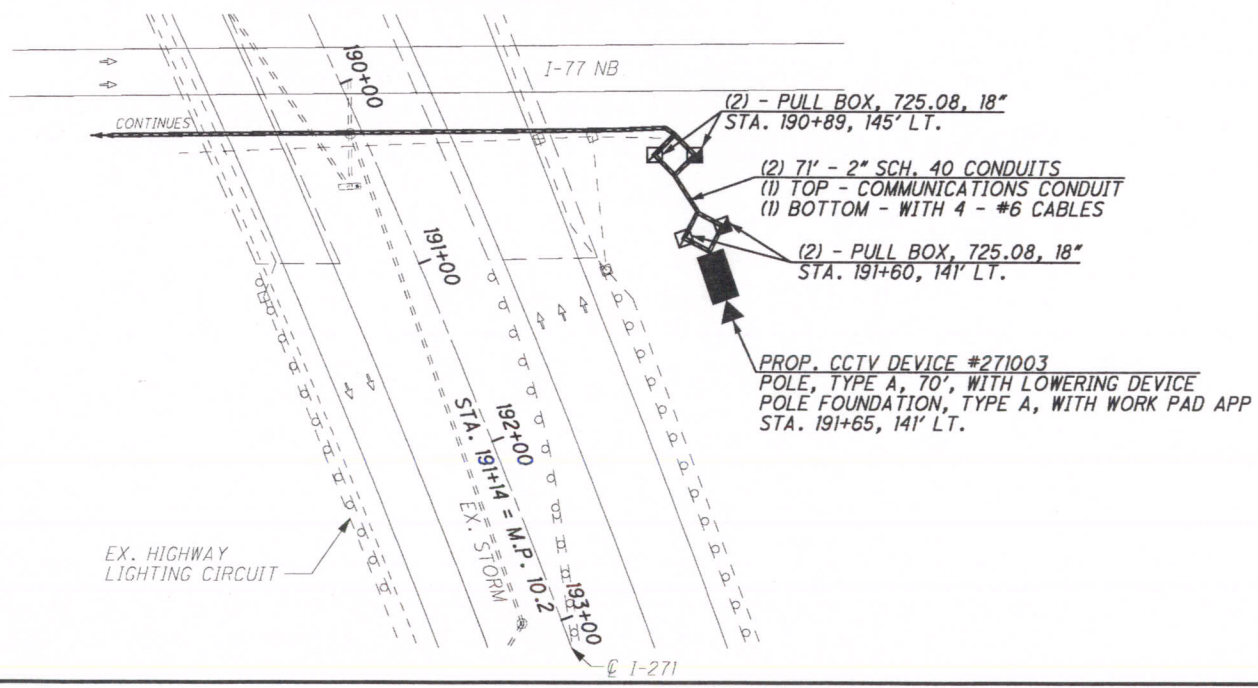
VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

91
207

M:\JOBS\39926\TECHPRD\hwy\tra\77351GP061.dgn 02-APR-2009 12:43PM jrlave



DETAIL "A" - NOT TO SCALE



REFER TO SHEET 14 FOR CONDUIT DETAILS

REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN C DETAILS

REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS

REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 195 FOR COMMUNICATIONS PLANS

REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

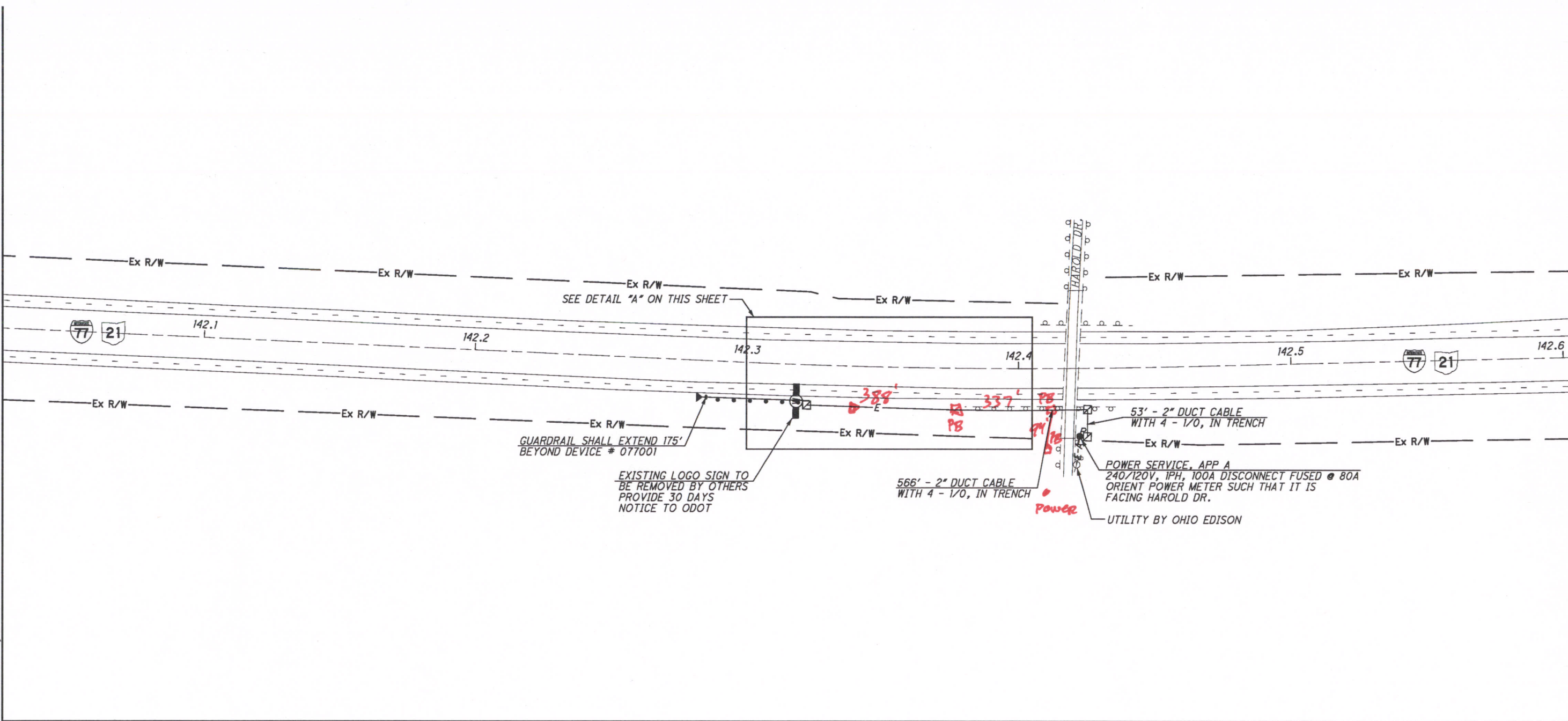
I-77 AT I-271 (MP 143.21 TO MP 143.79)
 RICHFIELD TOWNSHIP, SUMMIT COUNTY
 VAR-CLEVELAND
 FREEWAY MANAGEMENT
 SYSTEM

CALCULATED STS
 CHECKED JDG

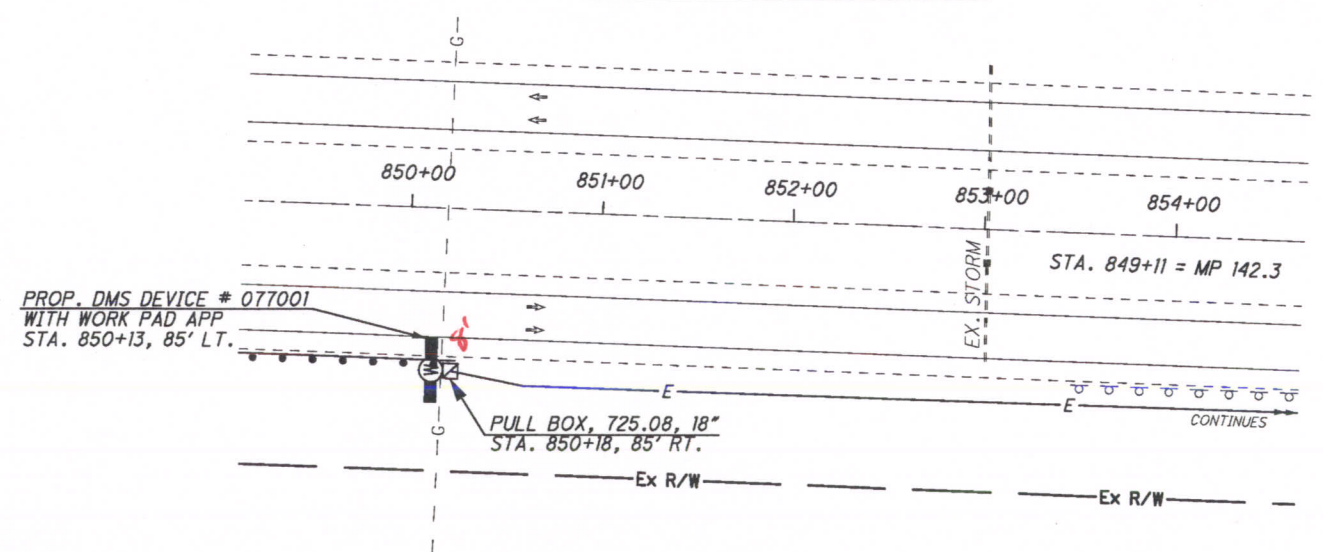
HORIZONTAL SCALE IN FEET
 0 50 100 200

87
 207

M:\JOBS\39926\TECHPROD\hwy\trcf\77331GP059.dgn 12-DEC-2008 7:20AM jrlove



DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 191 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 077001

I-77 AT HAROLD DR. (MP 142.03 TO MP 142.61)
CITY OF RICHFIELD, SUMMIT COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM

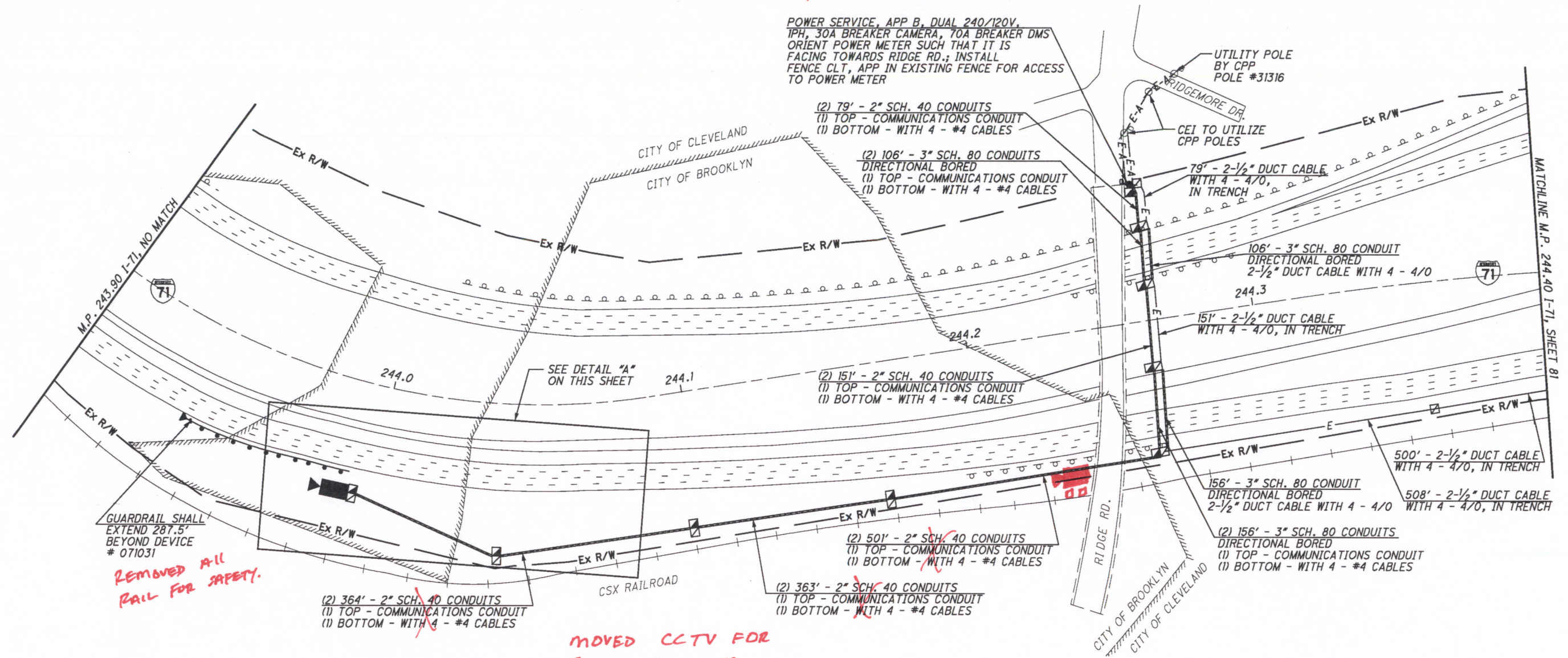
CALCULATED STS
CHECKED JDC

0 50 100
HORIZONTAL SCALE IN FEET

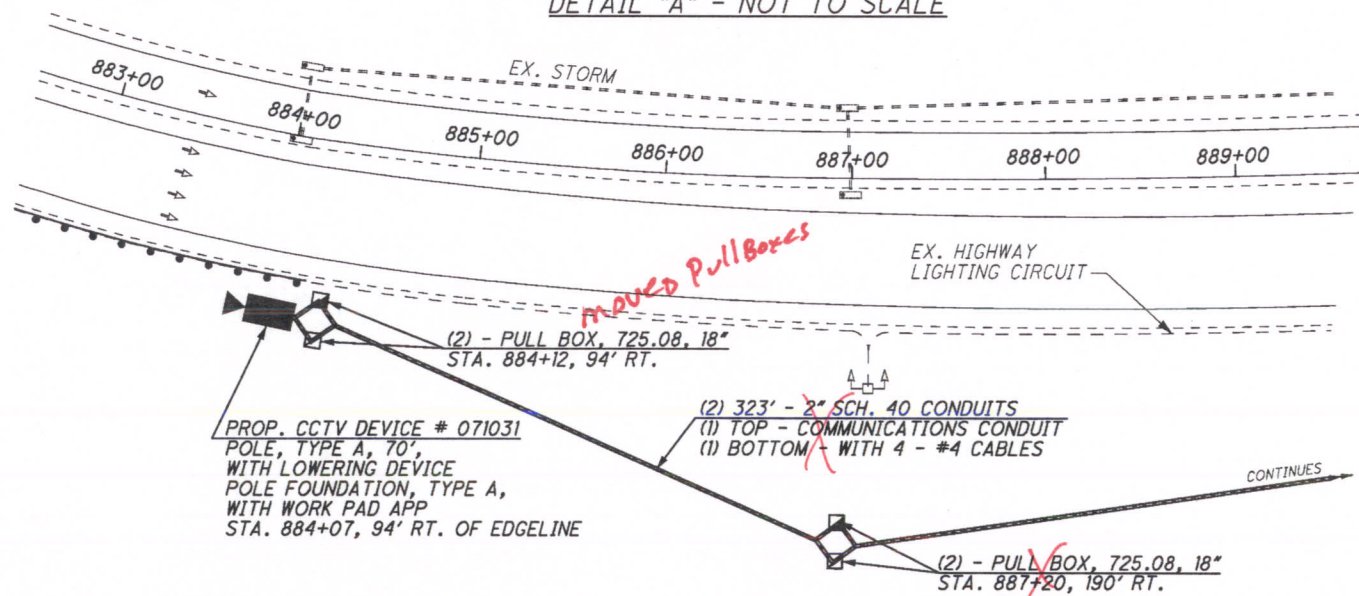
86
207

MADE TYPE 'A' POWER SERVICE

POWER SERVICE, APP B, DUAL 240/120V, 1PH, 30A BREAKER CAMERA, 70A BREAKER DMS ORIENT POWER METER SUCH THAT IT IS FACING TOWARDS RIDGE RD.; INSTALL FENCE CLT, APP IN EXISTING FENCE FOR ACCESS TO POWER METER



DETAIL "A" - NOT TO SCALE



REFER TO SHEET 14 FOR CONDUIT DETAILS

REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 17 FOR TYPICAL POWER SERVICE AS PER PLAN B DETAILS

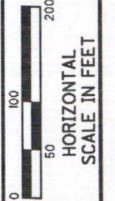
REFER TO SHEET 23 FOR TYPICAL CCTV DETAILS

REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 190 FOR COMMUNICATIONS PLANS

REFER TO SHEET 200 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

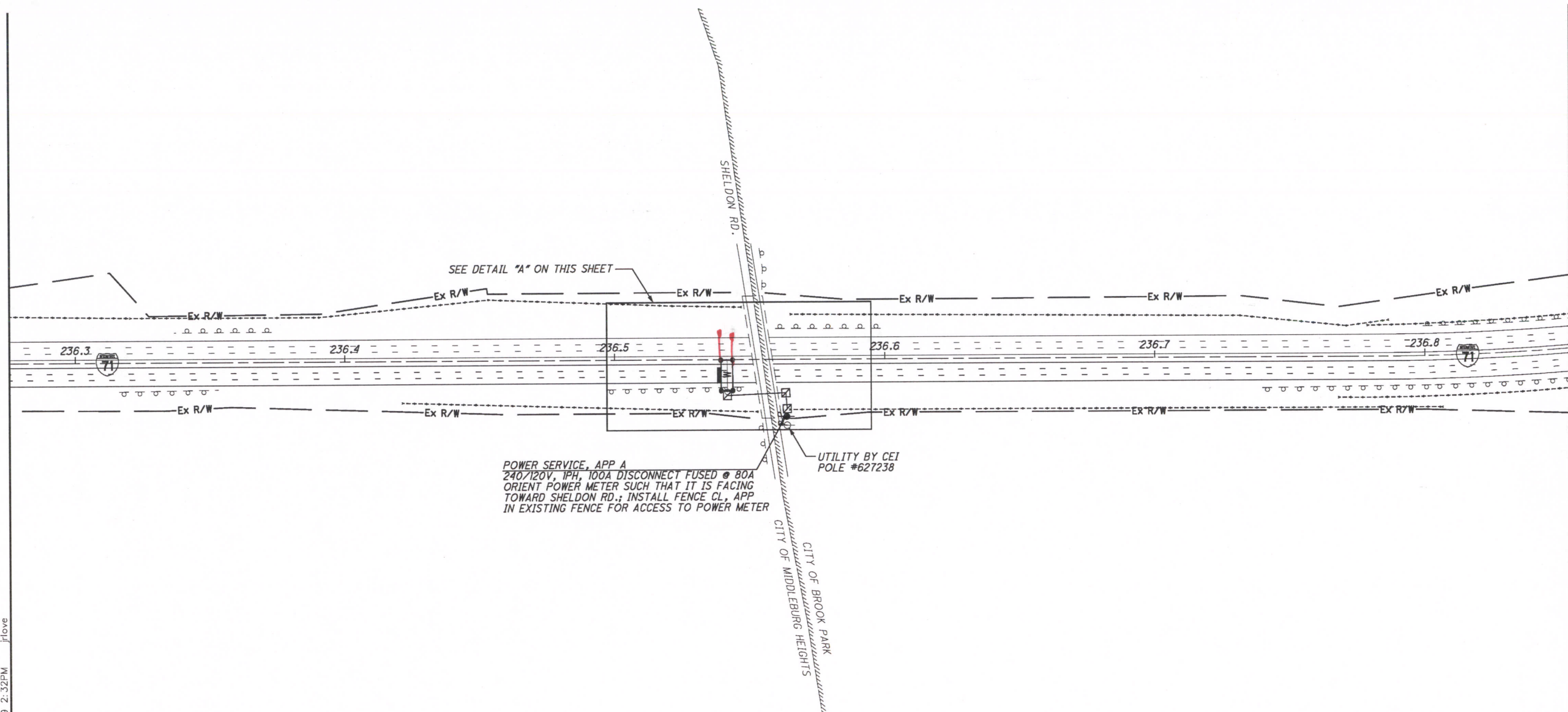
CCTV 071031



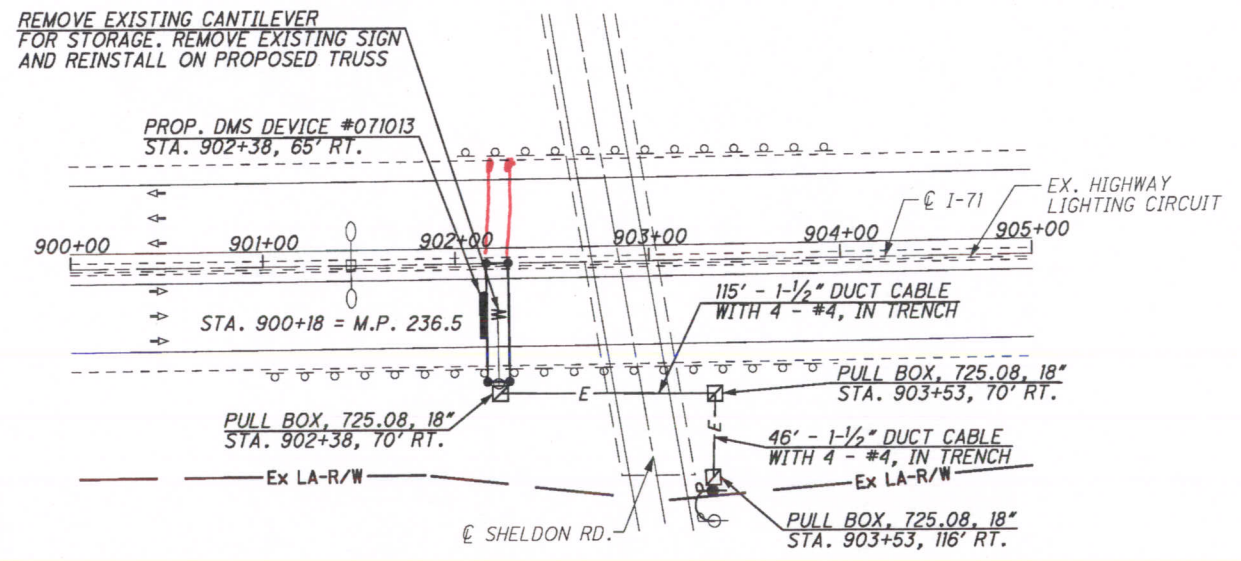
CALCULATED STS
CHECKED JDG

I-71 AT SHELDON RD. (MP 236.28 TO MP 236.86)
CITY OF MIDDLEBURG HTS, CUYAHOGA COUNTY

VAR-CLEVELAND
FREEWAY MANAGEMENT
SYSTEM



DETAIL "A" - NOT TO SCALE

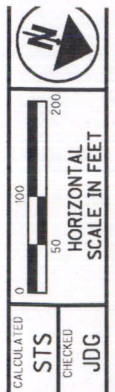


MADE INTO
FULL TRUSS

- REFER TO SHEET 11 FOR CONCRETE BARRIER REPLACEMENT DETAILS
- REFER TO SHEET 11B FOR BARRIER AT TRANSITION DETAILS
- REFER TO SHEET 15A FOR PULL BOX ORIENTATION FOR DMS LOCATIONS DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 28 FOR TYPICAL DMS DETAILS
- REFER TO TRUSS ROW SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO CONCRETE BARRIER MEDIAN TRUSS AND PEDESTAL SIGN SUPPORT FOUNDATIONS FOR DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 174 FOR DMS PROFILE
- REFER TO SHEET 189 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 202 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

DMS 071013

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CALCULATED STS
 CHECKED JDG
 1-71 AT SR-303 (MP 225.73 TO MP 226.31)
 CITY OF BRUNSWICK, MEDINA COUNTY

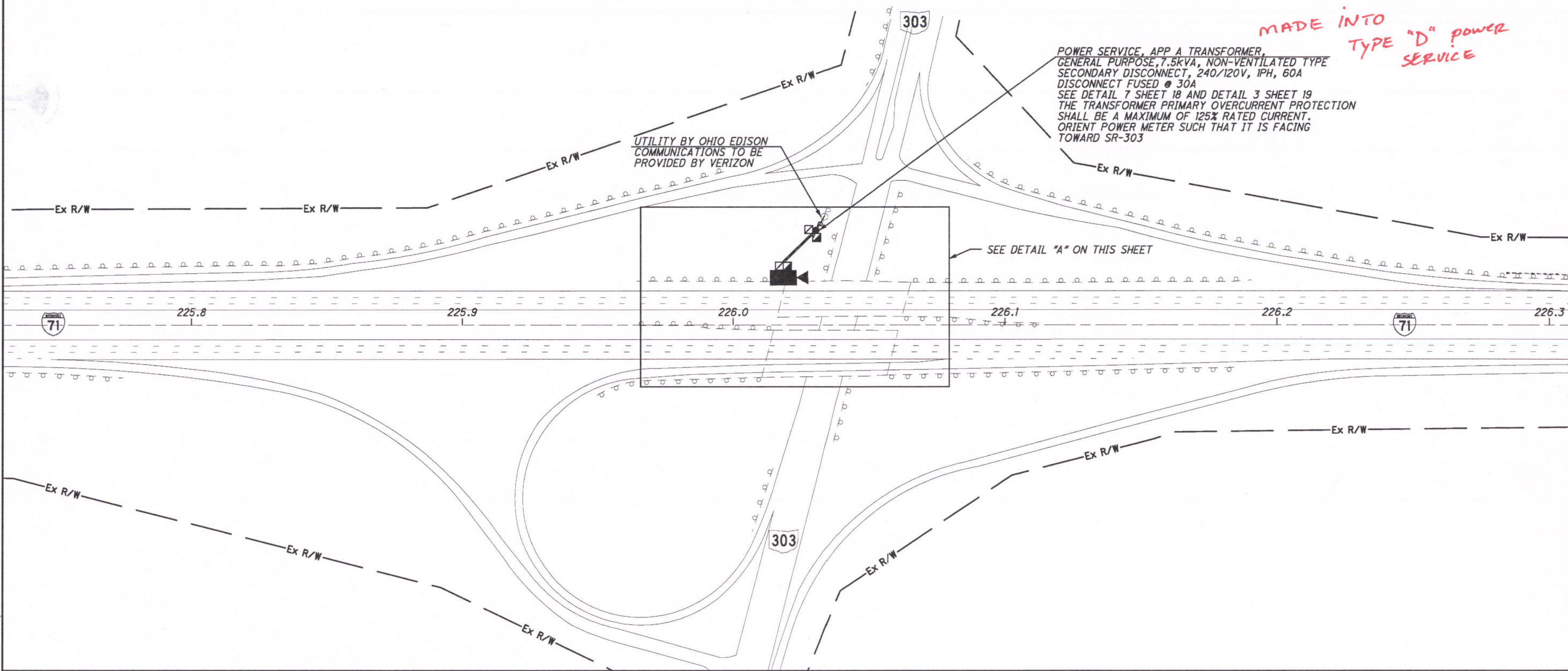
VAR-CLEVELAND
 FREEWAY MANAGEMENT
 SYSTEM

MADE INTO
TYPE "D" POWER
SERVICE

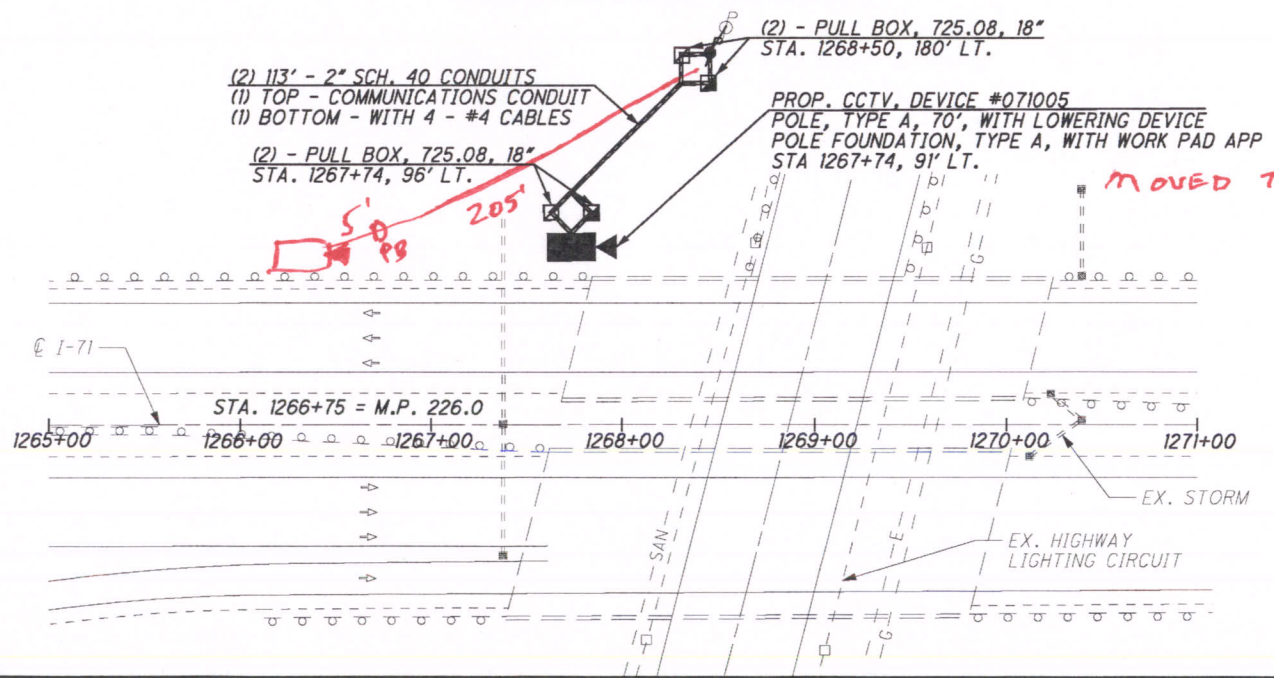
POWER SERVICE, APP A TRANSFORMER,
 GENERAL PURPOSE, 7.5KVA, NON-VENTILATED TYPE
 SECONDARY DISCONNECT, 240/120V, IPH, 60A
 DISCONNECT FUSED @ 30A
 SEE DETAIL 7 SHEET 18 AND DETAIL 3 SHEET 19
 THE TRANSFORMER PRIMARY OVERCURRENT PROTECTION
 SHALL BE A MAXIMUM OF 125% RATED CURRENT.
 ORIENT POWER METER SUCH THAT IT IS FACING
 TOWARD SR-303

UTILITY BY OHIO EDISON
 COMMUNICATIONS TO BE
 PROVIDED BY VERIZON

SEE DETAIL "A" ON THIS SHEET



DETAIL "A" - NOT TO SCALE



- REFER TO SHEET 14 FOR CONDUIT DETAILS
- REFER TO SHEET 15 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS
- REFER TO SHEET 16 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS
- REFER TO SHEET 26 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS
- REFER TO SHEET 46 FOR ELECTRICAL SLACK NOTES
- REFER TO SHEET 189 FOR COMMUNICATIONS PLANS
- REFER TO SHEET 198 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

MOVED TO 1266+64

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