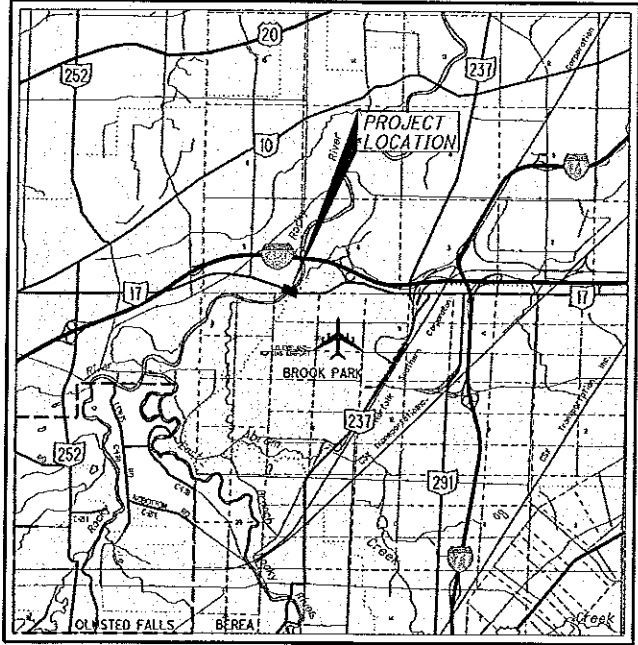


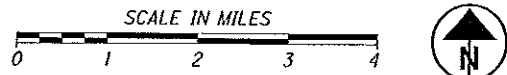
CUY - SR 17-02.83
 170220 PID - 101682
 Dist 12 4/6/2017

Contract Proposal Available @ www.
 Contracts.dot.state.oh.us/home



LOCATION MAP

LATITUDE: 041° 25' 11" LONGITUDE: -081° 51' 29"



PORTION TO BE IMPROVED

INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

DESIGN DESIGNATION

CURRENT ADT (2017)	10,980
DESIGN YEAR ADT (2037)	12,100
DESIGN HOURLY VOLUME (2037)	968
DIRECTIONAL DISTRIBUTION	0.55
TRUCKS (24 HOUR B&C)	230
DESIGN SPEED	40 MPH
LEGAL SPEED	40 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN MINOR ARTERIAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

UNDERGROUND UTILITIES
 CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection Service
 Call Before You Dig
 1-800-362-2164
 (Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
 1-800-925-0988

PLAN PREPARED BY:
E.L. ROBINSON ENGINEERING
 1458 West 9th Street - Cleveland, Ohio 44113
 www.erobinsonengineering.com

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

CUY-17-2.83

CITY OF CLEVELAND
 CITY OF FAIRVIEW PARK
 CUYAHOGA COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
TYPICAL SECTION	2
GENERAL NOTES	3
MAINTENANCE OF TRAFFIC NOTES	4
DETOUR PLAN	5-6
INTERSECTION DETAIL	7-8
TEMPORARY SIGNAL PLAN	9-10
GENERAL SUMMARY	11
FENCE PLAN	12-13
TRAFFIC CONTROL	15-18
SIGN ELEVATION DETAIL	19
STRUCTURES (OVER 20' SPAN)	20-34

PROJECT DESCRIPTION

REPLACE THE RAILING, WEARING SURFACE, PAINT THE STEEL CURB PLATE, AND SEAL FASCIA SURFACE FROM THE TOP OF FLOOR BEAMS TO THE NEW RAILING ON THE BROOKPARK ROAD BRIDGE (CUY-17-0283, SFN 1802046) IN THE CITIES OF FAIRVIEW PARK AND CLEVELAND.

PROJECT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (MAINTENANCE PROJECT)

2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 5 & 6.

ENGINEERS SEAL:
 FOR ENTIRE PLAN SET EXCEPT STRUCTURES OVER 20' AND OVER



SIGNED: *D. M. D. S. J.*
 DATE: 12/28/2016

ENGINEERS SEAL:
 FOR STRUCTURES 20' AND OVER



SIGNED: *D. M. D. S. J.*
 DATE: 12/28/2016

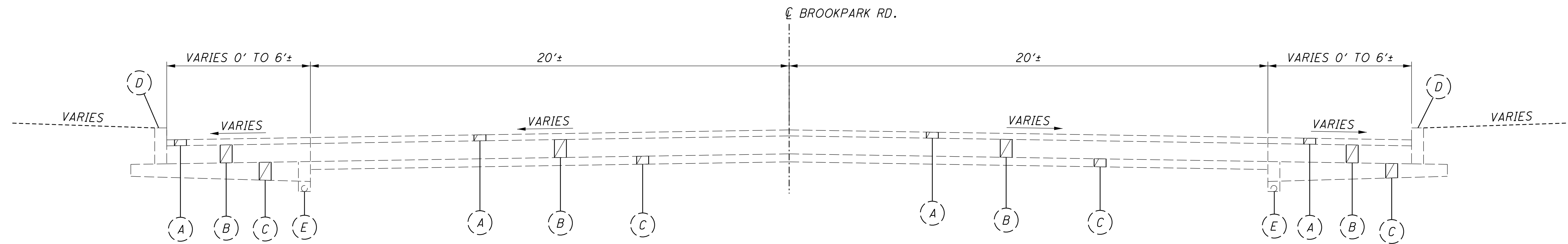
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-5.1	7/19/13	TC-16.21	10/18/13	800	1/20/17		
		TC-21.20	7/15/16	832	1/17/14		
F-1.1	7/19/13	TC-22.10	10/18/13	847	7/15/16		
F-3.1	7/19/13	TC-52.20	7/15/16				
F-3.3	7/19/13						
RM-4.2	4/18/14						
EXJ-3-82	1/18/13						
MT-95.30	7/15/16						
MT-95.31	7/18/14						
MT-97.10	7/18/14						
MT-101.60	7/19/13						
MT-102.20	7/18/14						
MT-105.10	7/19/13						

APPROVED *M. S. D.*
 DATE: 12-28-16 DISTRICT DEPUTY DIRECTOR

APPROVED *John W. ...*
 DATE: 11-10-17 DIRECTOR, DEPARTMENT OF TRANSPORTATION

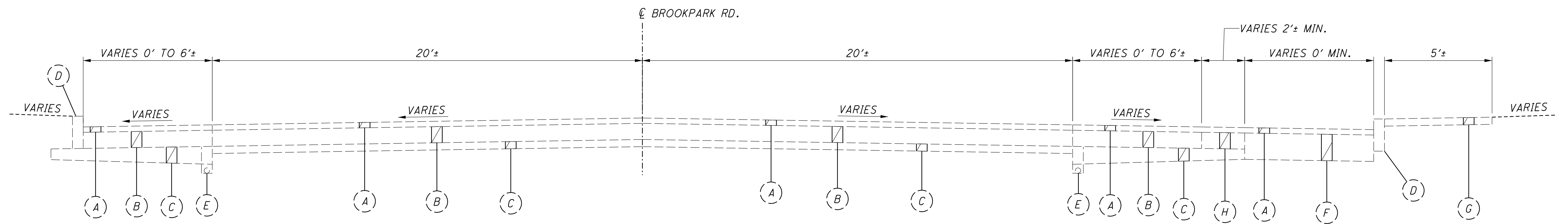
FEDERAL PROJECT NO.	NON-FEDERAL
CONSTRUCTION PROJECT NO.	101682
RAILROAD INVOLVEMENT	NONE
PID NO.	101682
CUY-17-2.83	
1	34

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**EXISTING NORMAL SECTION
BROOKPARK RD.**

SECTION APPLIES:
STA. 21+55.54 TO STA. 23+35.54 = 180.00 FT



**EXISTING NORMAL SECTION
BROOKPARK RD.**

SECTION APPLIES:
STA. 42+54.12 TO STA. 44+95.00 = 240.88 FT

EXISTING LEGEND:

- | | |
|---------------------------------|--|
| (A) EX. 8.5" ± ASPHALT CONCRETE | (F) EX. FULL DEPTH ASPHALT PAVEMENT |
| (B) EX. 9" ± CONCRETE BASE | (G) EX. 4" ± CONCRETE WALK |
| (C) EX. SUBBASE | (H) EX. 6" ± BITUMINOUS AGGREGATE BASE |
| (D) EX. CURB | |
| (E) EX. UNDERDRAIN | |

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T OHIO
ATTN: JAMES JANIS
13630 LORAIN AVE, 2ND FLOOR
CLEVELAND, OHIO 44111
PHONE: 216-476-6142
FAX: 216-476-6013

ODOT DISTRICT 12
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125
PHONE: 216-581-2100
FAX: 216-584-2274

DOMINION EAST OHIO
ATTN: BRYAN D. DAYTON
320 SPRINGSIDE DR, SUITE 320
AKRON, OHIO 44333
EMAIL: BRYAN.D.DAYTON@DOM.COM
PHONE: 330-664-2409
FAX: 888-504-0126

CITY OF CLEVELAND, DIVISION OF WATER
ATTN: FRED ROBERTS
1201 LAKESIDE AVE
CLEVELAND, OHIO 44114
PHONE: 216-664-2444 X5590
FAX: 440-546-8780
EMAIL: FRED.ROBERTS@CLEVELANDWATER.COM

ILLUMINATING CO.
ATTN: TED RADER
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
PHONE: 440-546-8738
FAX: 440-546-8780
EMAIL: RADERT@FIRSTENERGYCORP.COM

CITY OF CLEVELAND, DIVISION OF WATER
POLLUTION CONTROL
ATTN: ELIE RAMY
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
PHONE: 216-664-2756
EMAIL: ERAMY@CLEVELANDWPC.COM

VERIZON
ATTN: AL GUEST
120 RAVINE STREET
AKRON, OHIO 44303
PHONE: 330-253-8267
CELL: 330-329-5495
EMAIL: ALLAN.GUEST@VERIZON.COM

CENTURY LINK
ATTN: CHRIS STRAYER
441 W. BROAD STREET
PATASKALA, OHIO 43062
PHONE: 303-886-1299
EMAIL: CHRISTOPHER.STRAYER@CENTURYLINK.COM

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CLEVELAND METROPARKS CONTACT

ALL REQUIRED NOTIFICATION AND COORDINATION FOR THE CLEVELAND METROPARKS SHALL BE DONE THROUGH THE CONTACT LISTED BELOW:

JOHN C. KILGORE, P.E.
MANAGER OF FACILITIES ENGINEERING
OFFICE: (216) 635-3251
CELL: (216) 780-1163
CLEVELANDMETROPARKS.COM

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9:00 PM AND 8:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. PLACEMENT OF THE OVERLAY WILL OCCUR AT NIGHT TO TAKE ADVANTAGE OF THE COOLER TEMPERATURES. THE CITY MAY BE REQUESTED TO MODIFY THE CURRENT NOISE RESTRICTIONS.

SHAWN LEININGER, AICP
DIRECTOR OF PUBLIC SERVICE & DEVELOPMENT
CITY OF FAIRVIEW PARK
20777 LORAIN ROAD
FAIRVIEW PARK, OHIO 44126
MAIN: 440-333-2200
OFFICE: 440-356-4412
CELL: 440-728-7952

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 50 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. 2016-AGL-14722-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAM BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

CONTROL POINT TABLE

POINT	NORTH	EAST	DESCRIPTION
200	639150.17	2146492.93	CONTROL POINT MAG NAIL SET
201	639052.62	2145713.37	CONTROL POINT IRON PIN SET
202	639916.37	2142889.27	CONTROL POINT IRON PIN SET
203	640690.11	2142852.00	CONTROL POINT MAG NAIL SET
300	639023.44	2145889.83	CONTROL POINT MAG NAIL SET
301	638985.92	2145646.42	CONTROL POINT MAG NAIL SET
302	639068.38	2145600.56	CONTROL POINT MAG NAIL SET
303	639085.78	2145350.07	CONTROL POINT MAG NAIL SET
304	639196.48	2145200.46	CONTROL POINT MAG NAIL SET
305	639098.28	2145490.12	CONTROL POINT MAG NAIL SET
306	639204.78	2145001.15	CONTROL POINT MAG NAIL SET
307	639319.50	2144837.09	CONTROL POINT MAG NAIL SET
308	639327.40	2144637.52	CONTROL POINT MAG NAIL SET
309	639442.81	2144473.16	CONTROL POINT MAG NAIL SET
310	639450.53	2144274.36	CONTROL POINT MAG NAIL SET
311	639566.54	2144108.52	CONTROL POINT MAG NAIL SET
312	639572.62	2143914.71	CONTROL POINT MAG NAIL SET
313	639659.55	2143833.57	CONTROL POINT MAG NAIL SET
314	639639.50	2143717.20	CONTROL POINT MAG NAIL SET
315	639837.38	2143293.74	CONTROL POINT IRON PIN SET
316	638879.40	2145652.38	CONTROL POINT MAG NAIL SET
317	638918.72	2145570.53	CONTROL DRILL HOLE SET
318	639054.34	2146192.74	CONTROL HUB SET
319	638995.92	2146196.54	CONTROL HUB SET

PROJECT BENCHMARKS

BENCH MARK 1
N 639030.7320, E 2145497.0690
STA. 42+49.88, 34' RT
ELEV. = 749.36
CHISELED SQUARE IN NE CORNER CONCRETE SIGN PAD

BENCH MARK 2
N 639265.4460, E 2145012.0170
STA. 37+16.32, 34' LT
ELEV. = 753.13
TOP OF SW BOLT OF LIGHT POLE BASE

BENCH MARK 3
N 639388.7080, E 2144647.9350
STA. 33+31.94, 33' LT
ELEV. = 754.25
TOP OF SW BOLT OF LIGHT POLE BASE

BENCH MARK 4
N 639511.9759, E 2144283.9460
STA. 29+47.64, 33' LT
ELEV. = 755.45
TOP OF SW BOLT OF LIGHT POLE BASE

BENCH MARK 5
N 639646.2757, E 2143683.9670
STA. 23+36.32, 32' RT
ELEV. = 755.48
MAG NAIL SET BEHIND BRIDGE RAILING

BENCH MARK 6
N 639912.5510, E 2142841.2200
STA. 14+47.61, 37' RT
ELEV. = 757.75
NE CORNER CONCRETE SIGNAL PAD

CURVE DATA
P.I. Sta. 14+99.92
 $\Delta = 10^\circ 58' 00''$ (RT)
Dc = 2° 59' 59"
R = 1,910.08'
T = 183.36'
L = 365.60'
E = 8.78'
C = 365.04'
C.B. = S 76° 44' 58" E

CURVE DATA
P.I. Sta. 43+75.33
 $\Delta = 19^\circ 00' 46''$ (LT)
Dc = 6° 01' 55"
R = 949.87'
T = 159.06'
L = 315.20'
E = 13.23'
C = 313.76'
C.B. = S 80° 46' 18" E

CALCULATED
MLL
CHECKED
JTW

GENERAL NOTES

CUY-17-2.83

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ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, ITEM 614 AND THE FOLLOWING:

1. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE PROJECT LIMITS AS SHOWN ON THE DETOUR MAP.

2. THE CONTRACTOR SHALL INFORM ODOT EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK AND SHALL WORK WITH THE CITIES IN THE PUBLIC NOTIFICATION PROCESS.

3. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN IN THE DETOUR MAP.

4. THE CONTRACTOR MAY CLOSE VALLEY PARKWAY FOR TWO PERIODS OF TIME LASTING SEVEN (7) AND FOURTEEN (14) DAYS, THESE CLOSURES SHALL BE SEPARATED BY A DURATION OF TWENTY-EIGHT (28) DAYS. THESE DETOURS MAY BE USED IN ANY PHASE OF CONSTRUCTION AT THE DISCRETION OF THE CONTRACTOR.

5. DURING CONSTRUCTION, BROOK PARK ROAD ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES ADJACENT TO AND WITHIN THE PROJECT AREA. THE DETOUR DURATION WILL BE LIMITED TO 90 DAYS. SHOULD THE CONTRACTOR EXCEED THE MAXIMUM DETOUR DURATION, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$5,000 FOR EACH DAY OVER THE MAXIMUM DETOUR DURATION.

6. NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE "NOTICE OF CLOSURE" SIGNS SHALL BE W20-H14 WITH THE FOLLOWING FOUR LINES:

- LINE 1: "ROAD WILL BE"
- LINE 2: "CLOSED -----"
- LINE 3: "FOR __ DAYS"
- LINE 4: "ODOT DISTRICT 12"

THE ABOVE BLANKS SHALL BE FILLED IN BY THE CONTRACTOR.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT 12 OFFICE (216-581-2100), CITY OF FAIRVIEW PARK (440-356-4410), THE CITY OF CLEVELAND (216-664-3195), AND THE CLEVELAND METRO PARKS (216-635-3251) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

BRIDLE TRAIL DETOUR

CLEVELAND METROPARKS (CMP) SHALL SIGN AND ADMINISTER A DETOUR FOR THE BRIDLE TRAIL. ODOT WILL SECURE AN ACCESS PERMIT AND THIS SHALL BE IN PLACE PRIOR TO THE CONTRACTORS BEGINNING OF WORK.

PER THE CMP ACCESS PERMIT, THE CONTRACTOR SHALL NOT DISTURB OR DAMAGE ANY CMP FACILITIES. ANY DAMAGE CAUSED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO ODOT OR THE CMP.

ALL WORK SHALL BE MUST BE COORDINATED WITH RICK DITCH AT THE CLEVELAND METROPARKS.

DRIVEWAY NOTIFICATION

THE CONTRACTOR SHALL KEEP ACCESS TO ALL DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT, AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC, MISC.: SIGNAL TECHNICIAN

ON THE FIRST DAY OF IMPLEMENTATION OF THE BROOK PARK ROAD DETOUR, AND SUBSEQUENTLY WITHIN 24 HOURS OF BEING REQUESTED BY THE ENGINEER, PROVIDE AN IMSA LEVEL 3 TECHNICIAN CAPABLE OF PROGRAMMING THE SIGNAL CONTROLLERS ON THE DETOUR ROUTE.

THE ENGINEER WILL INSTRUCT THE SIGNAL TECHNICIAN TO MAKE ADJUSTMENTS TO SIGNAL TIMING PARAMETERS SUCH AS CLEARANCE INTERVALS, MINIMUMS, MAXIMUMS, PASSAGE TIMES, SPLITS AND OFFSETS FOR COORDINATION PLANS, BEGIN AND END TIMES FOR COORDINATION PLANS.

THE TECHNICIAN SHALL MODIFY SIGNALS AT THE CLAGUE RD INTERSECTION AS WELL AS OTHER SIGNALS, AS NEEDED. THE TECHNICIAN SHALL WORK WITH THE CITY OF CLEVELAND ON MODIFYING THE GRAYTON RD INTERSECTION SIGNAL. ALL OTHER CLEVELAND TRAFFIC SIGNAL CONTROL UNITS SHALL BE MODIFIED BY THE CITY OF CLEVELAND.

FURNISH A COPY OF THE SIGNAL TECHNICIAN'S CURRENT IMSA CERTIFICATION.

METHOD OF MEASUREMENT. THE DEPARTMENT WILL MEASURE SIGNAL TECHNICIAN BY THE NUMBER OF HOURS THE SIGNAL TECHNICIAN IS PHYSICALLY ON SITE AND WORKING AT THE DIRECTION OF THE ENGINEER, PLUS 1 HOUR OF TRAVEL. THE DEPARTMENT WILL PAY A MINIMUM OF 4 HOURS FOR EACH INSTANCE THAT THIS ITEM IS REQUIRED OR REQUESTED.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY IN ORDER TO COMPLETE THIS ITEM OF WORK.

ITEM 614 MAINTAINING TRAFFIC, MISC.:
SIGNAL TECHNICIAN - 20 HOURS

PROJECT FENCE

THE CONTRACTOR SHALL INSTALL FENCE AT BOTH ENDS OF THE PROJECT TO PREVENT PEDESTRIANS FROM ACCESSING THE PROJECT AREA. THE FENCE SHALL BE LOCKED AND SECURED WHEN WORKERS ARE NOT PRESENT.

THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCE BELOW THE STRUCTURE ON METRO PARK PROPERTY. INSTALL FENCE AROUND THE ENTIRE FOOTPRINT OF THE STRUCTURE IN ORDER TO PREVENT PEDESTRIANS FROM ENTERING THE CONSTRUCTION ZONE.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

CONSTRUCTION FLAGGERS

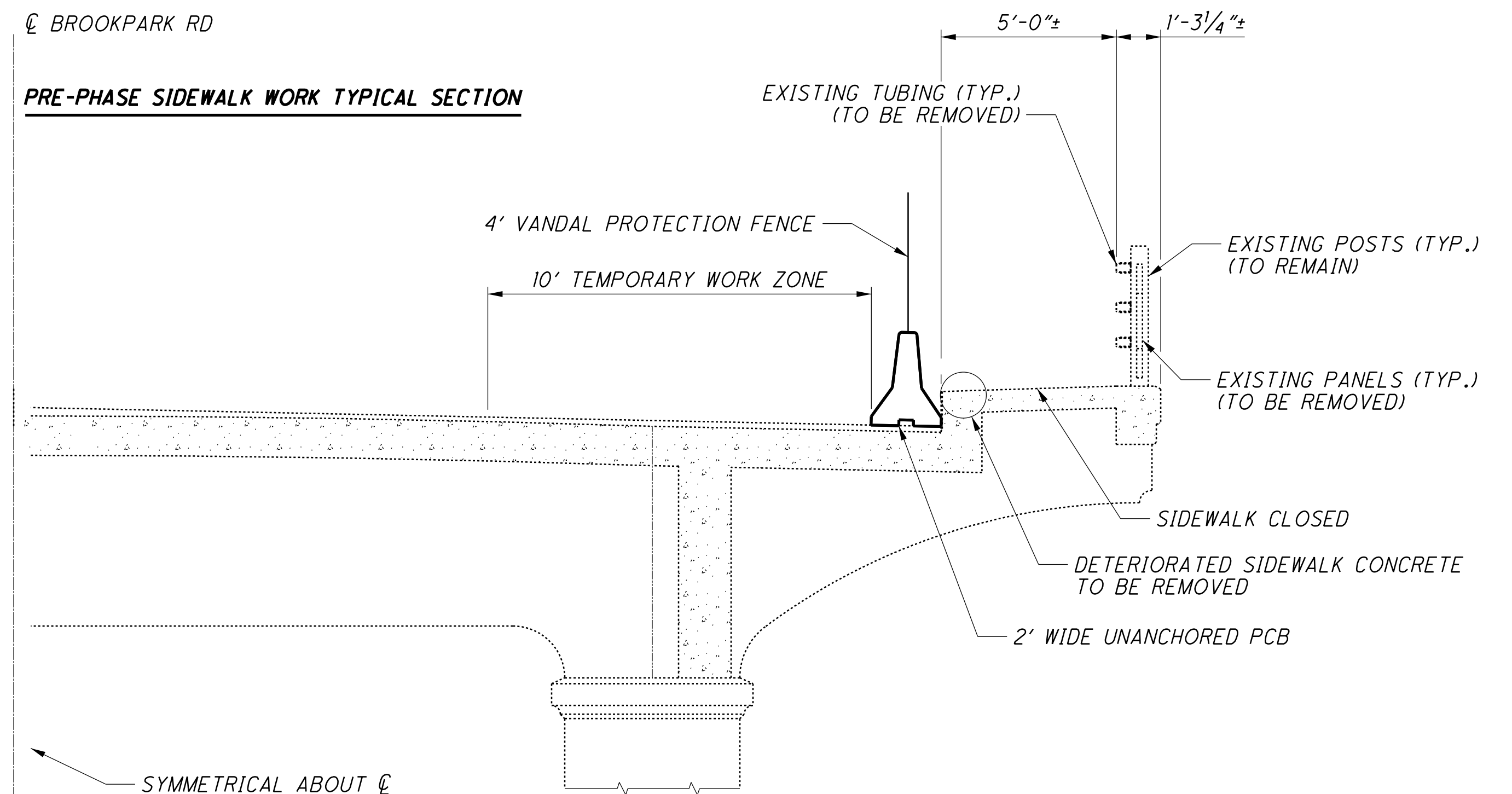
IN ADDITION TO THE FLAGGER REQUIREMENTS SHOWN ON SCD MT-97.10, AN ADDITIONAL FLAGGER SHALL BE PLACED IN BETWEEN THE TWO (2) FLAGGERS ON VALLEY PARKWAY, TO BETTER COORDINATE WORK ZONE ACTIVITIES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

PRE-PHASE SIDEWALK WORK

THE SIDEWALKS SHALL BE CLOSED AND SECURED FROM THE PUBLIC. A TEMPORARY WORK ZONE PER ODOT SCD MT-95.31 SHALL BE IN PLACE IN ORDER TO COMPLETE THIS WORK. THIS LANE CLOSURE SHALL NOT OCCUR DURING THE HOURS OF 6:00 AM TO 9:00 AM FOR THE EASTBOUND LANES, AND 3:00 PM TO 6:00 PM FOR THE WESTBOUND LANES. THIS SHALL BE COMPLETED BY USING 2' WIDE PCB WITH 4' VANDAL PROTECTION FENCE AT THE CURB LINE, AS SHOWN IN THE TYPICAL SECTION BELOW.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.



SEQUENCE OF CONSTRUCTION

PRE-PHASE

THE CONTRACTOR SHALL BEGIN RAILING REMOVAL, SIDEWALK REPAIRS, AND RAILING POST OZEU PAINTING.

THIS WORK SHALL BE COMPLETED DURING THE SPRING OR EARLY SUMMER. FABRICATION OF RAIL ELEMENTS WILL ALSO BE COMPLETED DURING THIS TIME FRAME.

PHASE I

INSTALL DETOUR FOR BROOKPARK ROAD AND VALLEY PARKWAY, AS SHOWN IN THE PLANS.

THE REMAINING BRIDGE WORK SHALL BE COMPLETED DURING THIS PHASE, AND SHALL BE DONE DURING MID-SUMMER AND FALL.

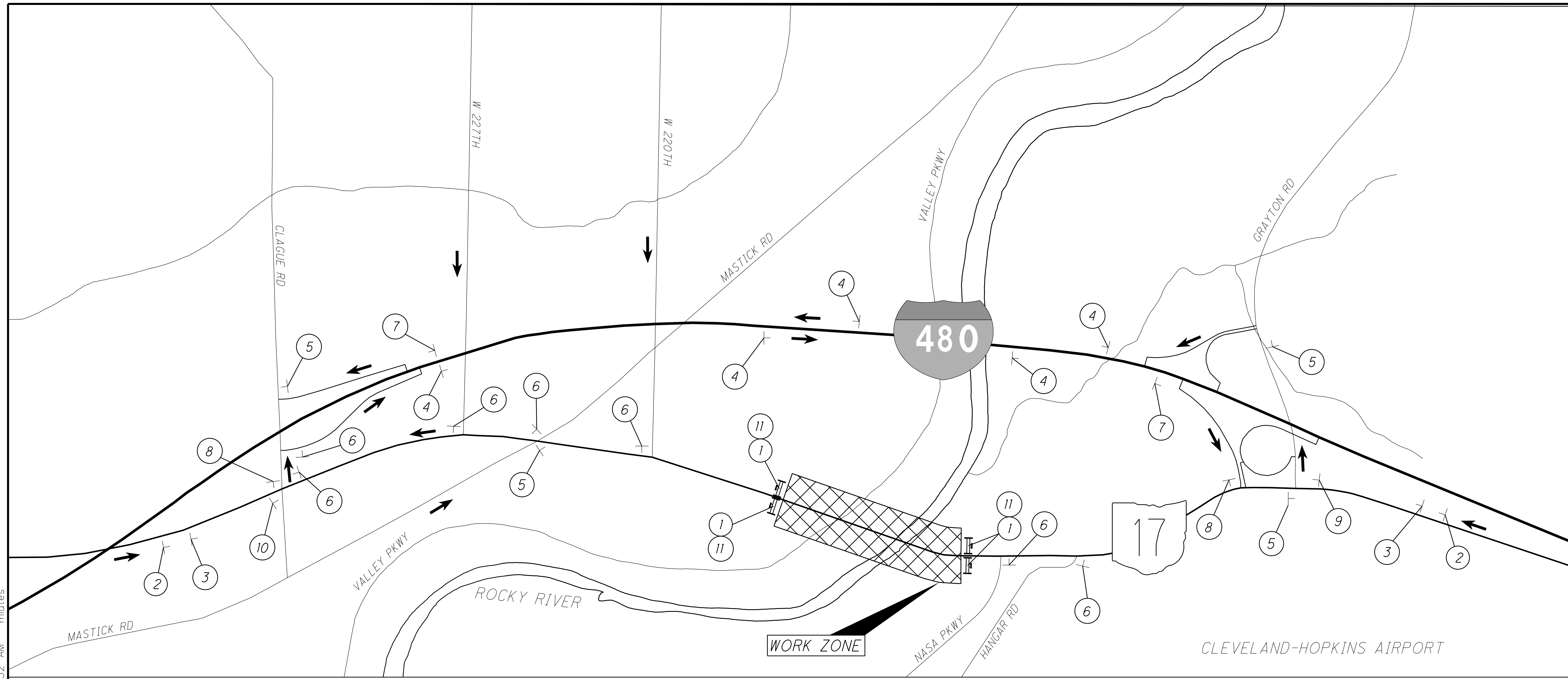
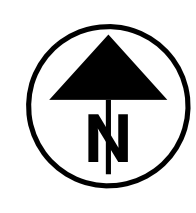
ALL PROPOSED TRAFFIC CONTROL ITEMS SHOWN IN THE TRAFFIC CONTROL PLANS SHALL BE IN PLACE PRIOR TO THE REMOVAL OF THE DETOUR.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

CUY-17-2.83



BROOKPARK RD - DETOUR PLAN

CUY-17-2.83

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LEGEND:

<p>①</p> <p>R11-2-48 MOUNTED ON TYPE III BARRICADE</p>	<p>②</p> <p>W20-3-36</p>	<p>③</p> <p>W20-2-36</p>	<p>④</p> <p>DETOUR M4-8-30 BROOKPARK RD D3-1-VAR ↑ M6-3-30</p>	<p>⑤</p> <p>DETOUR M4-8-24 BROOKPARK RD D3-1-VAR ← M6-1L-21</p>	<p>⑥</p> <p>DETOUR M4-8-24 BROOKPARK RD D3-1-VAR → M6-1R-21</p>	<p>⑦</p> <p>DETOUR M4-8-30 BROOKPARK RD D3-1-VAR ↗ M5-2-30</p>	<p>⑧</p> <p>BROOKPARK RD D3-1-VAR END DETOUR M4-8A-24</p>	<p>⑨</p> <p>BRIDGE OUT 0.6 MILES AHEAD LOCAL TRAFFIC ONLY R11-3B-60 DETOUR → M4-10R-48</p>	<p>⑩</p> <p>BRIDGE OUT 0.5 MILES AHEAD LOCAL TRAFFIC ONLY R11-3B-60 ← DETOUR M4-10L-48</p>
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NOTES:

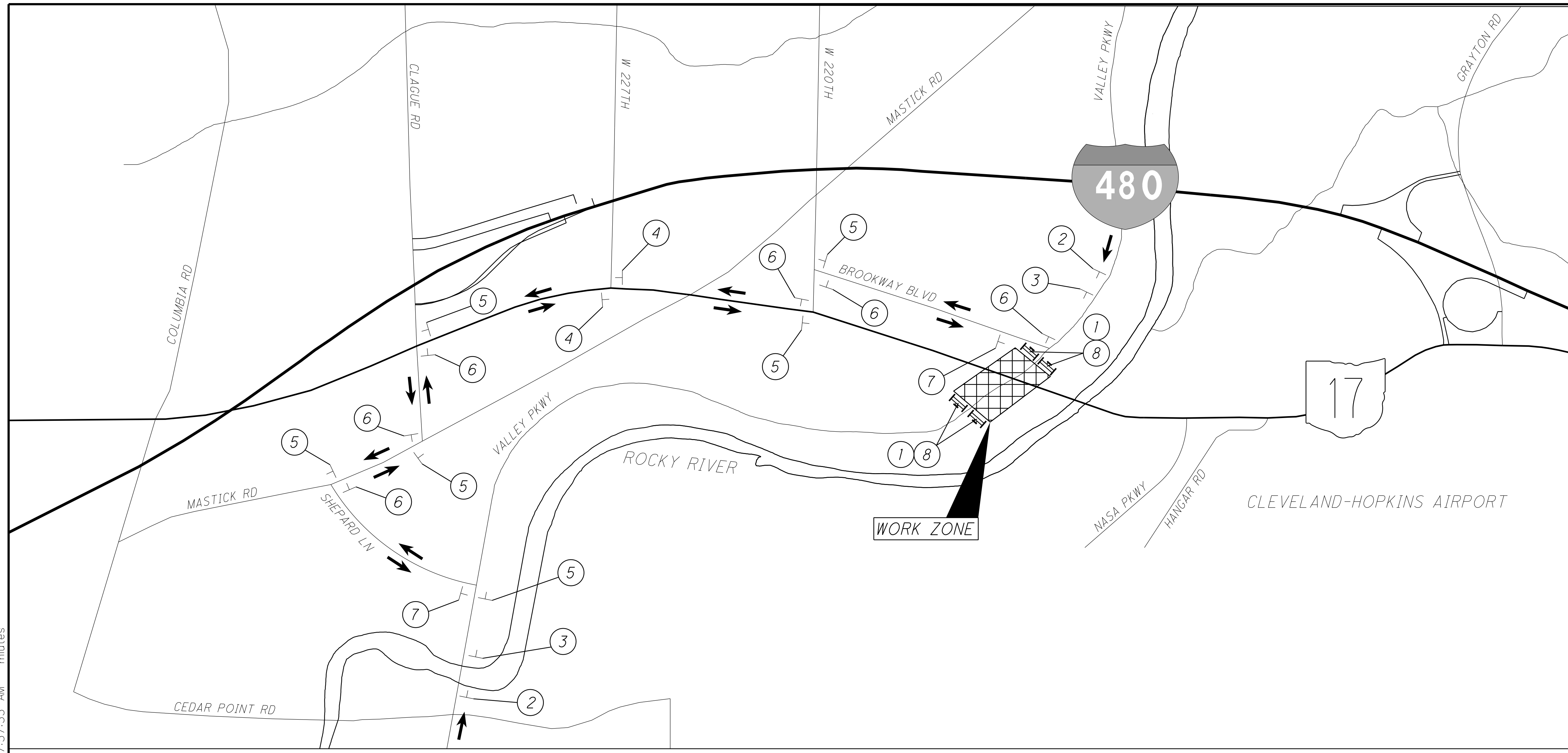
1. THESE DETOURS SHALL BE IN EFFECT IN ORDER TO COMPLETE ALL REMAINING BRIDGE WORK.
2. DETOUR SIGNING LOCATIONS SHALL BE PER OMUTCD AND ROAD CLOSURES SHALL BE PER MT-101.60.
3. DETOUR SIGNS SHALL BE UNCOVERED AND VISIBLE TO TRAFFIC ONLY WHEN THE ROAD CLOSURE IS IN EFFECT.
4. COVER ALL CONFLICTING SIGNING PRIOR TO THE CLOSURE.
5. FOR VALLEY PARKWAY DETOUR, SEE SHEET 6.

⑪
NOTICE OF CLOSURE SIGN
SEE SHEET 4

⊥ SINGLE POST SIGN
≡ TYPE III BARRICADE WITH SIGN

VALLEY PKWY - DETOUR PLAN

CUY-17-2.83



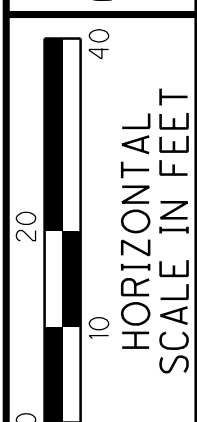
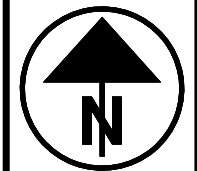
LEGEND:

<p>①</p> <p>R11-2-48 MOUNTED ON TYPE III BARRICADE</p>	<p>②</p> <p>W20-3-36</p>	<p>③</p> <p>W20-2-36</p>	<p>④</p> <p>VALLEY PKWY M4-8-30 D3-1-VAR M6-3-30</p>	<p>⑤</p> <p>VALLEY PKWY M4-8-24 D3-1-VAR M6-1L-21</p>	<p>⑥</p> <p>VALLEY PKWY M4-8-24 D3-1-VAR M6-1R-21</p>	<p>⑦</p> <p>VALLEY PKWY D3-1-VAR END DETOUR M4-8A-24</p>	<p>⑧</p> <p>NOTICE OF CLOSURE SIGN SEE SHEET 4</p>	<p>⊥ SINGLE POST SIGN</p> <p>≡ TYPE III BARRICADE WITH SIGN</p>
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NOTES:

1. THESE DETOURS SHALL BE USED IN ORDER TO ERECT THE NETTING, REMOVE ANY LOOSE CONCRETE AND TO COMPLETE THE OVERLAY REPLACEMENT AND REPAIRS ON THE DECK.
2. DETOUR SIGNING LOCATIONS SHALL BE PER OMTCD AND ROAD CLOSURES SHALL BE PER MT-101.60.
3. DETOUR SIGNS SHALL BE UNCOVERED AND VISIBLE TO TRAFFIC ONLY WHEN THE ROAD CLOSURE IS IN EFFECT.
4. COVER ALL CONFLICTING SIGNING PRIOR TO THE CLOSURE.
5. FOR BROOKPARK RD. DETOUR, SEE SHEET 5.

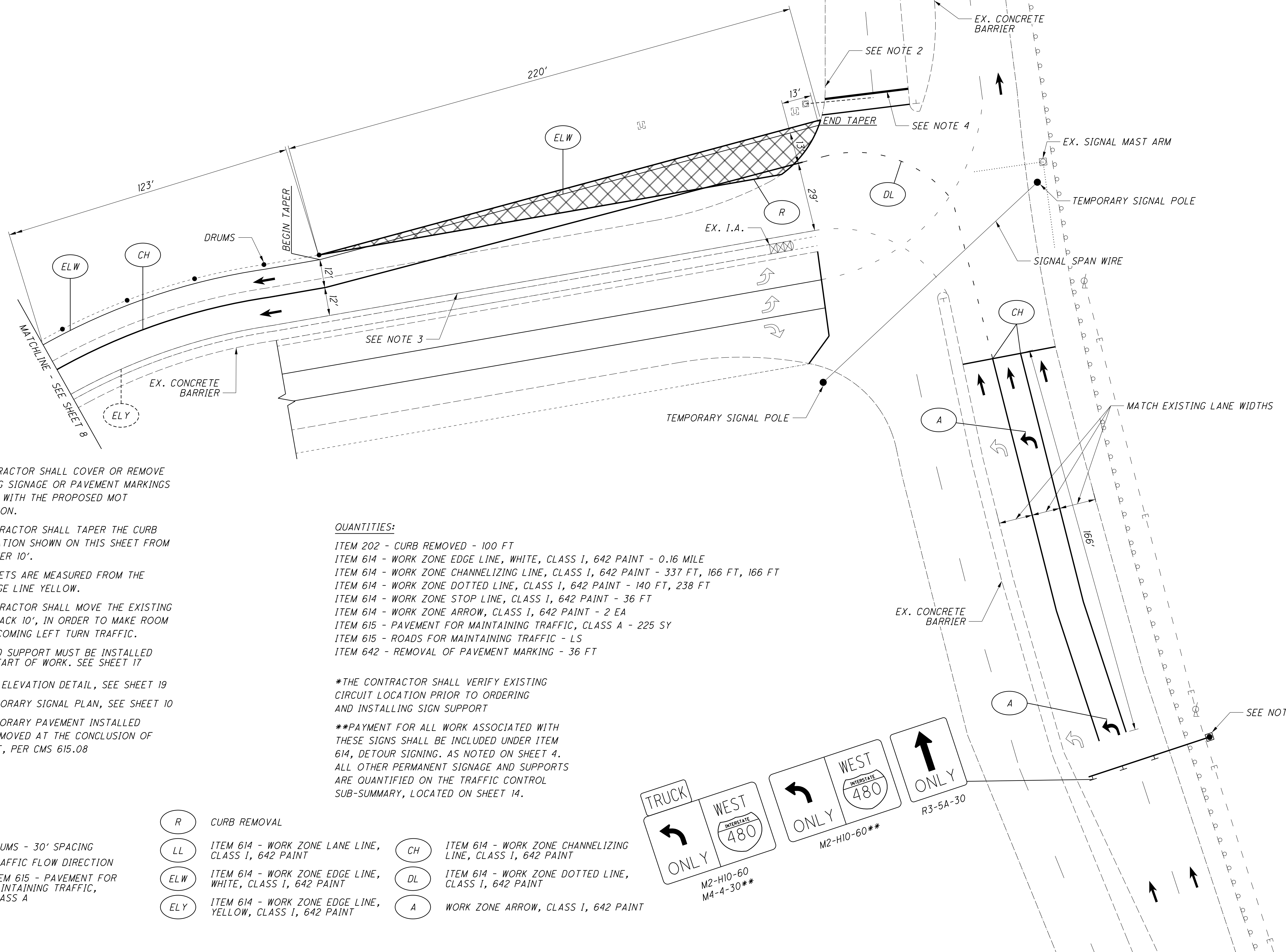
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**INTERSECTION DETAIL
GRAYTON RD. & I.R. 480 RAMP**

CUY-17-2.83



NOTES:

1. THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SIGNAGE OR PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED MOT CONFIGURATION.
2. THE CONTRACTOR SHALL TAPER THE CURB AT THE LOCATION SHOWN ON THIS SHEET FROM 0" TO 6" OVER 10'.
3. ALL OFFSETS ARE MEASURED FROM THE EXISTING EDGE LINE YELLOW.
4. THE CONTRACTOR SHALL MOVE THE EXISTING STOP LINE BACK 10', IN ORDER TO MAKE ROOM FOR THE ONCOMING LEFT TURN TRAFFIC.
5. SIGNS AND SUPPORT MUST BE INSTALLED PRIOR TO START OF WORK. SEE SHEET 17
6. FOR SIGN ELEVATION DETAIL, SEE SHEET 19
7. FOR TEMPORARY SIGNAL PLAN, SEE SHEET 10
8. ANY TEMPORARY PAVEMENT INSTALLED SHALL BE REMOVED AT THE CONCLUSION OF THE PROJECT, PER CMS 615.08

QUANTITIES:

- ITEM 202 - CURB REMOVED - 100 FT
- ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 642 PAINT - 0.16 MILE
- ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT - 337 FT, 166 FT, 166 FT
- ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 642 PAINT - 140 FT, 238 FT
- ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT - 36 FT
- ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT - 2 EA
- ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A - 225 SY
- ITEM 615 - ROADS FOR MAINTAINING TRAFFIC - LS
- ITEM 642 - REMOVAL OF PAVEMENT MARKING - 36 FT

*THE CONTRACTOR SHALL VERIFY EXISTING CIRCUIT LOCATION PRIOR TO ORDERING AND INSTALLING SIGN SUPPORT

**PAYMENT FOR ALL WORK ASSOCIATED WITH THESE SIGNS SHALL BE INCLUDED UNDER ITEM 614, DETOUR SIGNING. AS NOTED ON SHEET 4. ALL OTHER PERMANENT SIGNAGE AND SUPPORTS ARE QUANTIFIED ON THE TRAFFIC CONTROL SUB-SUMMARY, LOCATED ON SHEET 14.

LEGEND:

- DRUMS - 30' SPACING
- TRAFFIC FLOW DIRECTION
- [Hatched Box] ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

- (R) CURB REMOVAL
- (LL) ITEM 614 - WORK ZONE LANE LINE, CLASS I, 642 PAINT
- (ELW) ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 642 PAINT
- (ELY) ITEM 614 - WORK ZONE EDGE LINE, YELLOW, CLASS I, 642 PAINT
- (CH) ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT
- (DL) ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 642 PAINT
- (A) WORK ZONE ARROW, CLASS I, 642 PAINT

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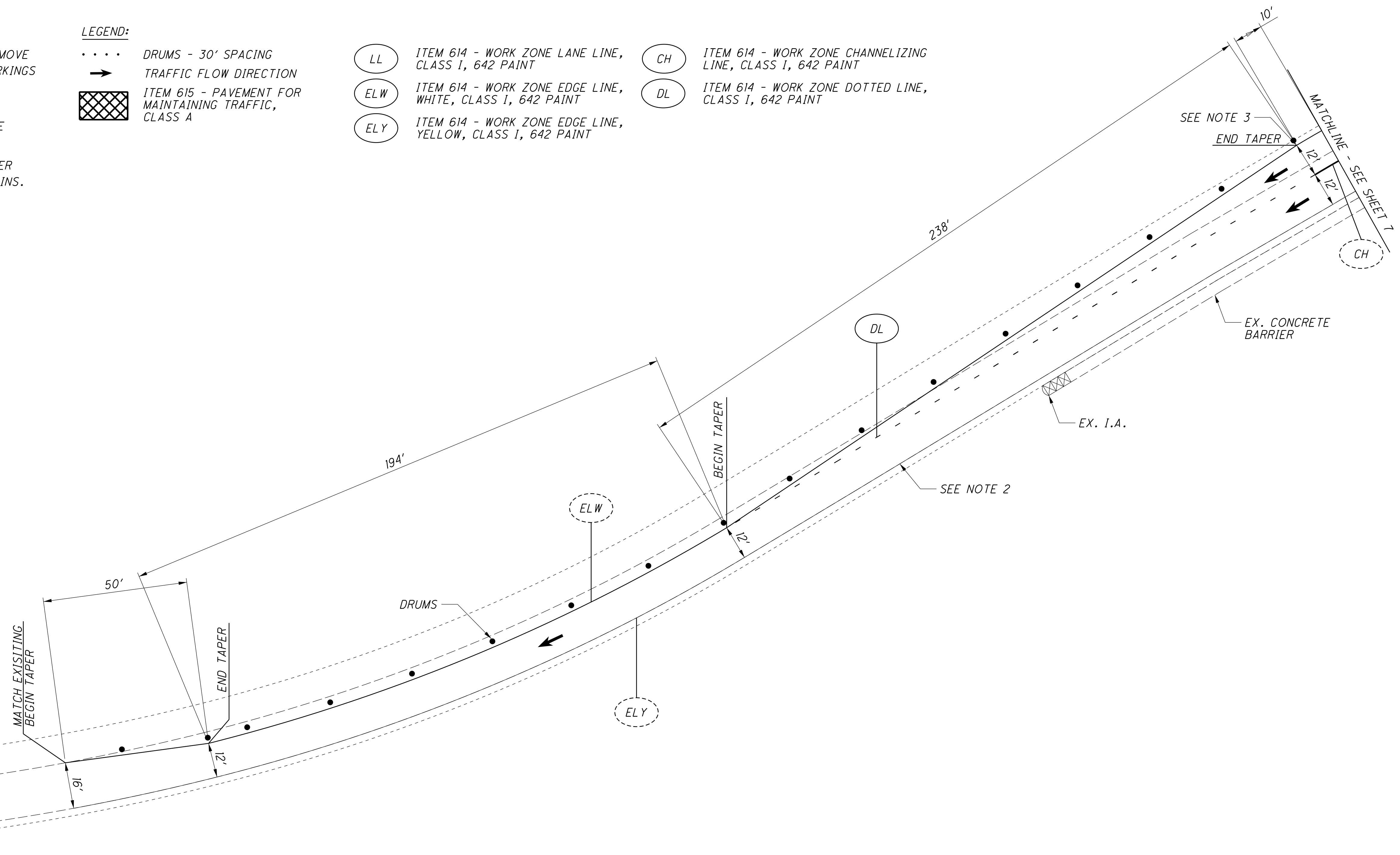
NOTES:

1. THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SIGNAGE OR PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED MOT CONFIGURATION.
2. ALL OFFSETS ARE MEASURED FROM THE EXISTING EDGE LINE YELLOW.
3. THE CONTRACTOR SHALL END THE TAPER BEFORE THE CURVE ALONG THE RAMP BEGINS.

LEGEND:

- DRUMS - 30' SPACING
- TRAFFIC FLOW DIRECTION
- ▨ ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

- LL ITEM 614 - WORK ZONE LANE LINE, CLASS 1, 642 PAINT
- ELW ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS 1, 642 PAINT
- ELY ITEM 614 - WORK ZONE EDGE LINE, YELLOW, CLASS 1, 642 PAINT
- CH ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT
- DL ITEM 614 - WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT



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**INTERSECTION DETAIL
GRAYTON RD. & I.R. 480 RAMP**

CUY-17-2.83

ITEM 614 - MAINTAINING TRAFFIC, MISC.: TEMPORARY SIGNALIZATION

THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN TEMPORARY SIGNALIZATION SHOWN IN THESE PLANS. THIS WORK SHALL ALSO INCLUDE THE REMOVAL OF ALL TEMPORARY SIGNALS INSTALLED UNDER THIS ITEM ONCE THE PERMANENT SIGNAL IS INSTALLED AND OPERATING.

THIS SHALL INCLUDE RELOCATIONS, REMOVALS, COVERING OF VEHICULAR SIGNAL HEADS, TIMING ADJUSTMENTS, SIGNAL PHASING CHANGES AND THE INSTALLATION OF ANY TEMPORARY SIGNAL EQUIPMENT TO SATISFY THE SAFETY AND OPERATIONAL CONDITIONS THROUGHOUT THE PROJECT.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN CONTRACT UNIT PRICE BID PER EACH FOR ITEM 614 - MAINTAINING TRAFFIC, MISC.: TEMPORARY SIGNALIZATION.

ITEM 633 - CONTROLLER MISC.: MODIFY EXISTING CONTROLLER

THE CONTRACTOR SHALL MODIFY THE EXISTING CONTROLLER BY ADDING WIRING, CIRCUITS, ETC. AS TO MAKE IT FULLY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THESE PLANS. THIS INCLUDES, BUT IS NOT LIMITED TO FURNISHING AND INSTALLING ADDITIONAL LOOP DETECTOR HARNESSSES AND LOAD SWITCHES. THE CONFLICT MONITOR SHALL BE PROGRAMMED AS NECESSARY.

PROGRAMMING OF THE EXISTING CONTROLLER SHALL BE COMPLETED BY THE CITY OF CLEVELAND TO MEET THE REQUIREMENTS IN THE PLANS. THESE MODIFICATIONS SHALL BE DONE THROUGH THE CONTACT LISTED BELOW:

ANDREW CROSS, P.E.
CITY OF CLEVELAND - TRAFFIC ENGINEER
PHONE: (216)-664-3194
FAX: (216)-664-3167

PAYMENT FOR ACCEPTED QUANTITIES OF "ITEM 633 - CONTROLLER MISC.: MODIFY EXISTING CONTROLLER" SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH CONTROLLER MODIFIED.

ITEM 809 - STOP-BAR RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A STOP BAR DETECTION UNIT CAPABLE OF INTERSECTION DETECTION CONTROL UTILIZING ABOVE GROUND DIGITAL WAVE RADAR TECHNIQUES. THE UNIT SHALL BE NON-INTRUSIVE AND SHALL DETECT VEHICLES FROM 6 FEET UP TO 140 FEET FROM THE UNIT. THE UNIT SHALL PROVIDE REAL-TIME PRESENCE DATA FOR AT LEAST 4 LANES AT THE STOP LINE. THE UNIT SHALL PROVIDE AT LEAST 16 DETECTION ZONES SIMULTANEOUSLY FOR INTERSECTION CONTROL. ONE UNIT SHALL BE PROVIDED PER APPROACH, WHERE SPECIFIED IN THE PLANS, COVERING MULTIPLE LANES WHERE STOP LINE DETECTION IS REQUIRED. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING LIST OF FEATURES AND CAPABILITIES:

- A. THE UNIT SHALL PROVIDE ACCURATE PRESENCE-DETECTION OF STOPPED AND MOVING VEHICLES. THE UNIT SHALL BE MOUNTED IN A FORWARD-FIRE OR SIDE-FIRE POSITION, LOOKING AT EITHER APPROACHING OR DEPARTING TRAFFIC AND SHALL ONLY DETECT VEHICLES IN ONE DIRECTION OF TRAVEL.
- B. THE UNIT SHALL BE TESTED TO MEET NEMA TS2 ENVIRONMENTAL STANDARDS AND MAINTAIN ACCURATE PERFORMANCE IN THE FOLLOWING OPERATING CONDITIONS:

- RAIN UP TO 1 INCHES PER HOUR
- FREEZING RAIN
- SNOW
- WIND
- DUST
- FOG
- CHANGING TEMPERATURE
- CHANGING LIGHTING

C. THE RADAR DESIGN FOR EACH UNIT SHALL CONFORM TO THE FOLLOWING:

- OPERATING FREQUENCY: 24.0-24.25 GHZ (K-BAND)
- NO MANUAL TUNING TO CIRCUITRY
- TRANSMITS MODULATED SIGNALS GENERATED DIGITALLY
- NO TEMPERATURE BASED COMPENSATION NECESSARY
- BANDWIDTH STABLE WITH 1%
- RF CHANNELS: 7 MINIMUM
- SELF-TEST FOR VERIFYING HARDWARE FUNCTIONALITY
- DIAGNOSTIC MODE FOR VERIFYING SYSTEM FUNCTIONALITY

D. THE UNIT SHALL INCLUDE A SIMPLE SETUP ROUTINE THAT SHALL AUTOMATICALLY CONFIGURE AND CALIBRATE THE UNIT FOR PROPER OPERATION DURING INSTALLATION. THE UNIT SHALL ALSO BE CAPABLE OF BEING PROGRAMMED AND UPDATED FROM A LAPTOP COMPUTER OR OTHER PORTABLE PROGRAMMING DEVICE, SUCH AS A POCKET PC, VIA A LOCAL OR REMOTE ETHERNET CONNECTION USING VENDOR SUPPLIED SOFTWARE. THE SOFTWARE SHALL SUPPORT TCP/IP CONNECTIVITY, UNIT CONFIGURATION BACK-UP AND RESTORE, AND REAL-TIME TRAFFIC VISUALIZATION FOR PERFORMANCE VERIFICATION AND TRAFFIC DISPLAY. THE GRAPHICAL USER INTERFACE SHALL OPERATE ON A WINDOWS PLATFORM.

E. THE UNIT SHALL HAVE THE ABILITY TO UPGRADE FIRMWARE OVER ANY COMMUNICATION PORT.

F. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

G. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER, SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

H. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET. THE UNIT SHALL CONSUME LESS THAN 10 WATTS AND OPERATE FROM A DC INPUT BETWEEN 9 VDC AND 28 VDC. COMPLETE AND AUTOMATIC RECOVERY FROM A POWER FAILURE SHALL BE WITHIN 15 SECONDS AFTER RESUMPTION OF NORMAL POWER.

I. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

J. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION, AND MAINTENANCE OF THE UNIT.

K. THE STOP BAR DETECTION RADAR SHALL BE FURNISHED WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY, WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT LOCATION. ENSURE THAT EACH STOP BAR DETECTION RADAR HAS A PERMANENT LABEL OR STAMP INDICATING DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 STOP-BAR RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

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TEMPORARY SIGNAL GENERAL NOTES

CUY-17-2.83

PROP. COORDINATION TIMING

	PATTERN 1	PATTERN 2	PATTERN 3
CYCLE LENGTH (SEC.)	75	100	150
PHASE 1 SPLIT (SEC.)	25	24	36
PHASE 2 SPLIT (SEC.)	32	43	65
PHASE 4 SPLIT (SEC.)	18	33	49
PHASE 6 SPLIT (SEC.)	57	67	101
PERMISSIVE (SEC.)	AUTO	AUTO	AUTO
OFFSET (SEC.)	0	0	0
TIME OF DAY SCHEDULE	9 AM-2 PM 6 PM-6:30 AM MON-SAT	6:30 AM-9 AM MON-SAT	2 AM-6 PM MON-SAT

SIGNAL SHALL OPERATE FREE ALL OTHER TIMES.

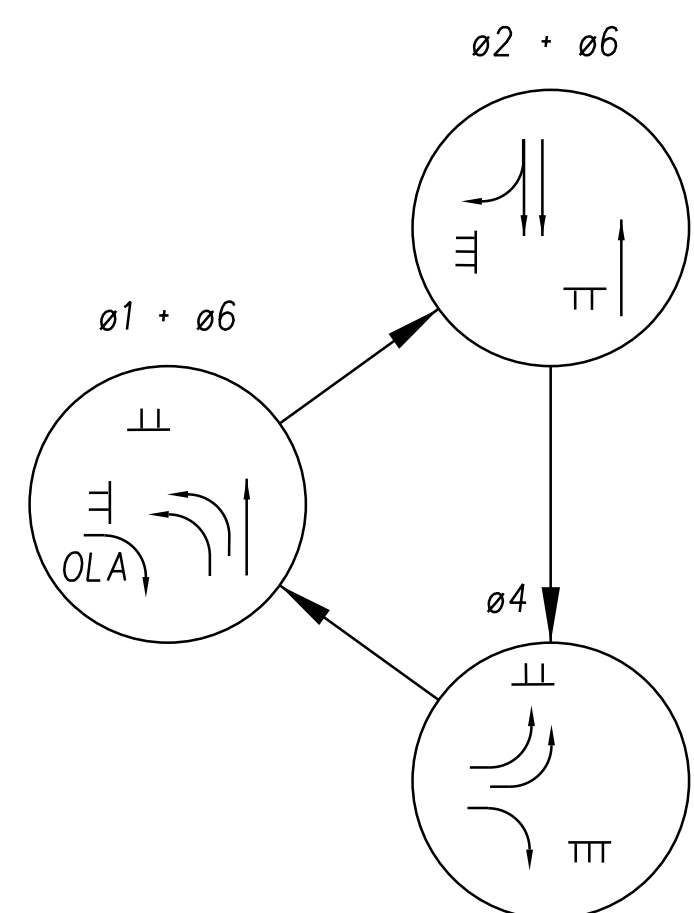
NOTES:

1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED
2. INHIBIT MAX DURING COORDINATION
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2 & 6 GREEN

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL SUPPLY, INSTALL, MAINTAIN AND REMOVE TEMPORARY SIGNALIZATION. COST FOR TEMPORARY SIGNALIZATION SHALL BE INCLUDED IN THE COST OF ITEM 614 MAINTAINING TRAFFIC MISC.: TEMPORARY SIGNALIZATION.
2. THE CONTRACTOR SHALL SUPPLY AND INSTALL 2-30' WOOD POLES, CLASS 5, SPAN WIRE MOUNTED AT 26.8', 2" CONDUIT RISER ON WPI, 7 VEHICULAR SIGNAL HEADS, N3, N4, N5, N6, E4, E5 & E6, 3 SIG OP CHANGED SIGNS, 5 CONDUCTOR CABLE, MESSENGER WIRE AND DOWN GUYS. ALL SIGNAL HEADS SHALL BE WIRED BACK TO THE EXISTING CONTROLLER.
3. THE CONTRACTOR SHALL BAG EXISTING SIGNAL HEADS N1, N2, E1, E2 & E3.
4. THE CONTRACTOR SHALL TRENCH AND INSTALL A 15' PIECE OF 2" CONDUIT (725.04) FROM RISER ON WPI TO EXIST. PULLBOX PBI.
5. THE CONTRACTOR SHALL INSTALL A RADAR DETECTION UNIT ON WOOD POLE WP2 FOR THE NEWLEY ESTABLISHED N.B. LEFT TURN LANE, WIRED BACK TO THE EXIST. CONTROLLER.
6. THE CONTRACTOR SHALL ESTABLISH A 6' X 35' DETECTION AREA AT THE STOP LINE FOR THE NEWLEY ESTABLISHED N.B. LEFT TURN LANE.
7. THE CITY OF CLEVELAND SHALL MODIFY THE EXISTING CONTROLLER TO INCLUDE THE NEW TEMPORARY PHASING, SIGNAL TIMING AND RADAR DETECTION INCLUDED ON THIS PLAN.

PROP. PHASING DIAGRAM



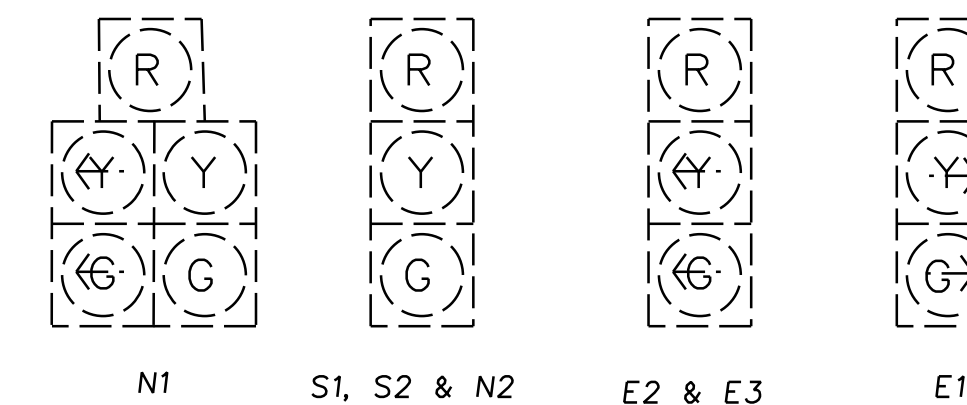
SIGNAL REMAINS IN ø2 + ø6 WHEN THERE IS NO VEHICLE DEMAND.

PROP. SIGNAL TIMING

START-UP	DUAL ENTRY ○							
START IN: Y/R FLASH ● : ALL RED ○	REST IN RED: RING 1 ○ : RING 2 ○							
TIME FOR FLASH OR ALL RED 8	OVERLAP: NO				A	B	C	D
FIRST PHASE (S) 2 & 0	PHASES							
COLOR DISPLAYED: GREEN ● : YELLOW ○	1+4							
INTERVAL OR FEATURE	PHASE NO.							
	1	2	3	4	5	6	7	8
INTERSECTION MOVEMENT	NBLT	SB	-	EB	-	NB	-	-
MINIMUM GREEN (INITIAL) (SEC.)	10	26	-	10	-	26	-	-
PASSAGE TIME (SEC.)	4.0	4.0	-	4.0	-	4.0	-	-
MAXIMUM GREEN I (SEC.)	20	26	-	13	-	46	-	-
MAXIMUM GREEN II (SEC.)	0	0	-	0	-	0	-	-
YELLOW CHANGE (SEC.)	3.0	4.2	-	3.0	-	4.2	-	-
ALL RED CLEARANCE (SEC.)	2.0	2.0	-	2.0	-	2.0	-	-
WALK (SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	-	OFF	-	OFF	-
	MINIMUM (ON/OFF)	OFF	ON	-	OFF	-	ON	-
	PEDESTRIAN (ON/OFF)	OFF	OFF	-	OFF	-	OFF	-
MEMORY	(ON/OFF)	ON	ON	-	OFF	-	ON	-

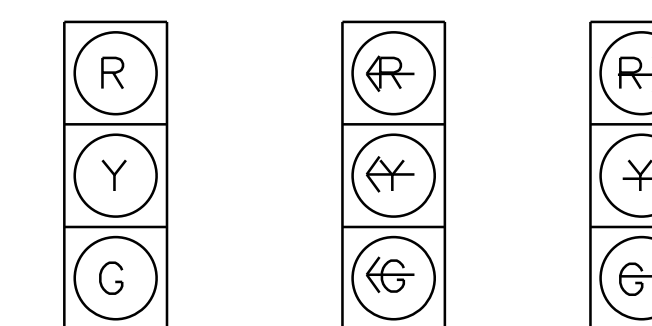
* PULL BACK WIRING FOR EXISTING SIGNAL HEADS N1, N2, E1, E2 & E3 INTO PULLBOX PBI TO MAKE ROOM IN CONDUIT TO CONTROLLER.

EXIST. SIGNALS



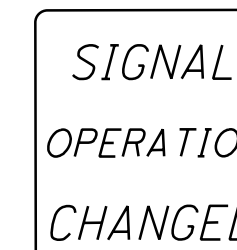
ALL HEADS ARE 12" POLY

TEMP. SIGNALS



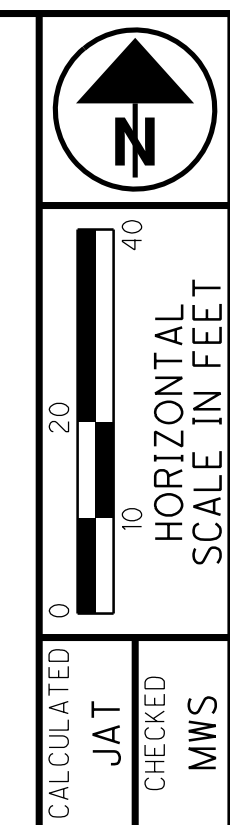
ALL HEADS ARE 12" POLY

TEMP. SIGNS



W3-H10-30
QTY = 3

①



TEMPORARY SIGNAL PLAN
GRAYTON RD. & I.R. 480 RAMP

CUY-17-2.83

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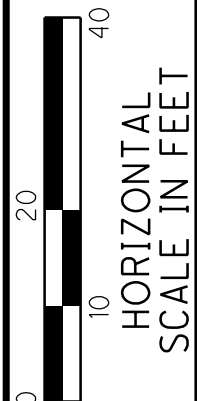
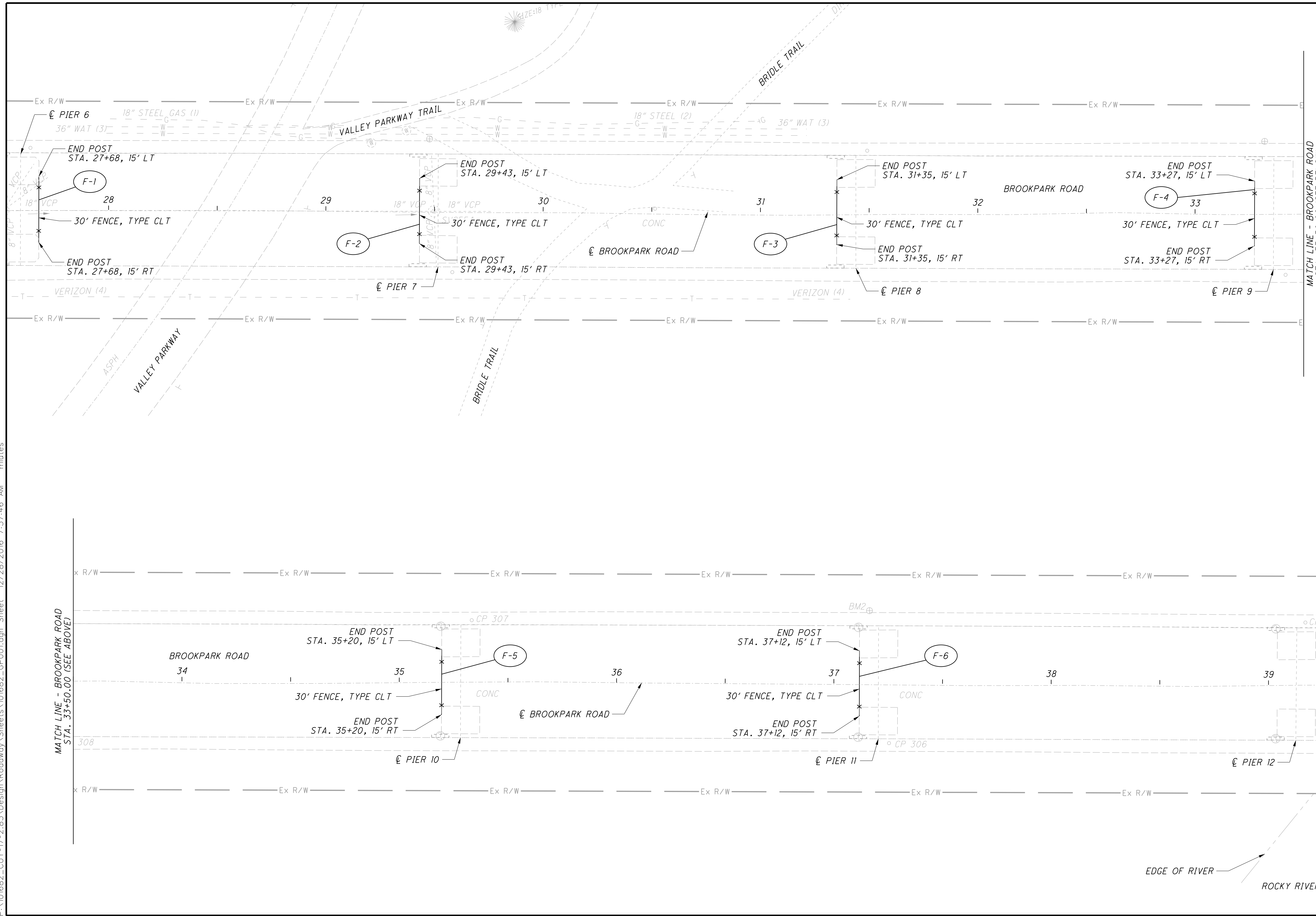
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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	MLL	CHECKED	JTW
3	4	7	9	12	14	23						01/S>2/BR	EXT	TOTAL								
		100											100	202	32000	100	FT	ROADWAY				
				180									180	607	23000	180	FT	CURB REMOVED				
				180									180	607	70000	180	FT	FENCE, TYPE CLT				
					100								100	609	24510	100	FT	FENCELINE SEEDING AND MULCHING				
																		EROSION CONTROL				
													5,000	832	30000	5,000	EACH	EROSION CONTROL				
																		TRAFFIC CONTROL				
					200								200	630	02100	200	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				
					1								1	630	11206	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 13				
					3								3	630	79200	3	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM				
					12								12	630	79500	12	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED				
					114								114	630	80100	114	SF	SIGN, FLAT SHEET				
					1								1	630	84510	1	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION				
		36											36	642	30000	36	FT	REMOVAL OF PAVEMENT MARKING				
					0.16								0.16	646	10010	0.16	MILE	EDGE LINE, 6"				
					0.77								0.77	646	10100	0.77	MILE	LANE LINE, 4"				
					0.36								0.36	646	10200	0.36	MILE	CENTER LINE				
					100								100	646	10300	100	FT	CHANNELIZING LINE, 8"				
					36								36	646	10400	36	FT	STOP LINE				
																		TRAFFIC SIGNALS				
			LS									LS	633	99300	LS			CONTROLLER ITEM, MISC.: MODIFY EXISTING CONTROLLER				9
			1									1	809	69101	1	EACH	STOP-BAR RADAR DETECTION, AS PER PLAN				9	
																		STRUCTURE OVER 20 FOOT SPAN (CUY-17-2.83)				
					LS							LS	202	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				21
					21,700							21,700	509	20001	21,700	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				21	
					2,674							2,674	512	10050	2,674	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					
					764							764	512	10100	764	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
					289,036							289,036	513	10201	289,036	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN				21	
					11,131							11,131	514	00050	11,131	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL					
					11,131							11,131	514	00056	11,131	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT					
					11,131							11,131	514	00060	11,131	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT					
					43,476							43,476	514	00066	43,476	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT					
					1,819							1,819	514	27710	1,819	FT	FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES				21,30	
					32,345							32,345	SPECIAL	51480100	32,345	SF	SHOP PAINTING OF STRUCTURAL STEEL				21	
					748							748	516	10900	748	FT	ELASTOMERIC COMPRESSION SEAL					
					185							185	519	11101	185	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN				22	
					18,030							18,030	SPECIAL	53000600	18,030	SF	STRUCTURES - STRUCTURE DEBRIS NETTING				22	
					375							375	SPECIAL	53001100	375	CY	STRUCTURES - ARCH SPAN SLAB REPLACEMENT				21,24,27,28	
					3,702							3,702	SPECIAL	53001300	3,702	FT	STRUCTURES - NETTING SUPPORT CABLE SYSTEM				22,32,33	
					11,085							11,085	847	10000	11,085	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY (1 1/2" THICKNESS)					
					165							165	847	20000	165	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY					
					LS							LS	847	30000	LS		TEST SLAB					
					320							320	847	30201	320	CY	FULL DEPTH REPAIR, AS PER PLAN				22	
					11,085							11,085	847	30401	11,085	SY	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (1 1/2" THICKNESS)				22	
					250							250	847	50000	250	SY	HAND CHIPPING					
																	MAINTENANCE OF TRAFFIC					
	LS	LS										LS	614	12420	LS		DETOUR SIGNING					
	20											20	614	18020	20	HOUR	MAINTAINING TRAFFIC, MISC.: SIGNAL TECHNICIAN				4	
			LS									LS	614	18002	LS		MAINTAINING TRAFFIC, MISC.: TEMPORARY SIGNAL				9	
		0.16										0.16	614	22100	0.16	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT					
		669										669	614	23200	669	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT					
		378										378	614	24200	378	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT					
		36										36	614	26200	36	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT					
		2										2	614	30200	2	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT					
		LS										LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC					
		225										225	615	20000	225	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A					
																	INCIDENTALS					
	LS											LS	108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS					
												LS	614	11000	LS		MAINTAINING TRAFFIC					
												LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING					
												LS	624	10000	LS		MOBILIZATION					

GENERAL SUMMARY

CUY-17-2.83

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**FENCE PLAN - BROOKPARK ROAD
STA. 27+52.95 TO STA. 33+63.67**

CUY-17-2.83

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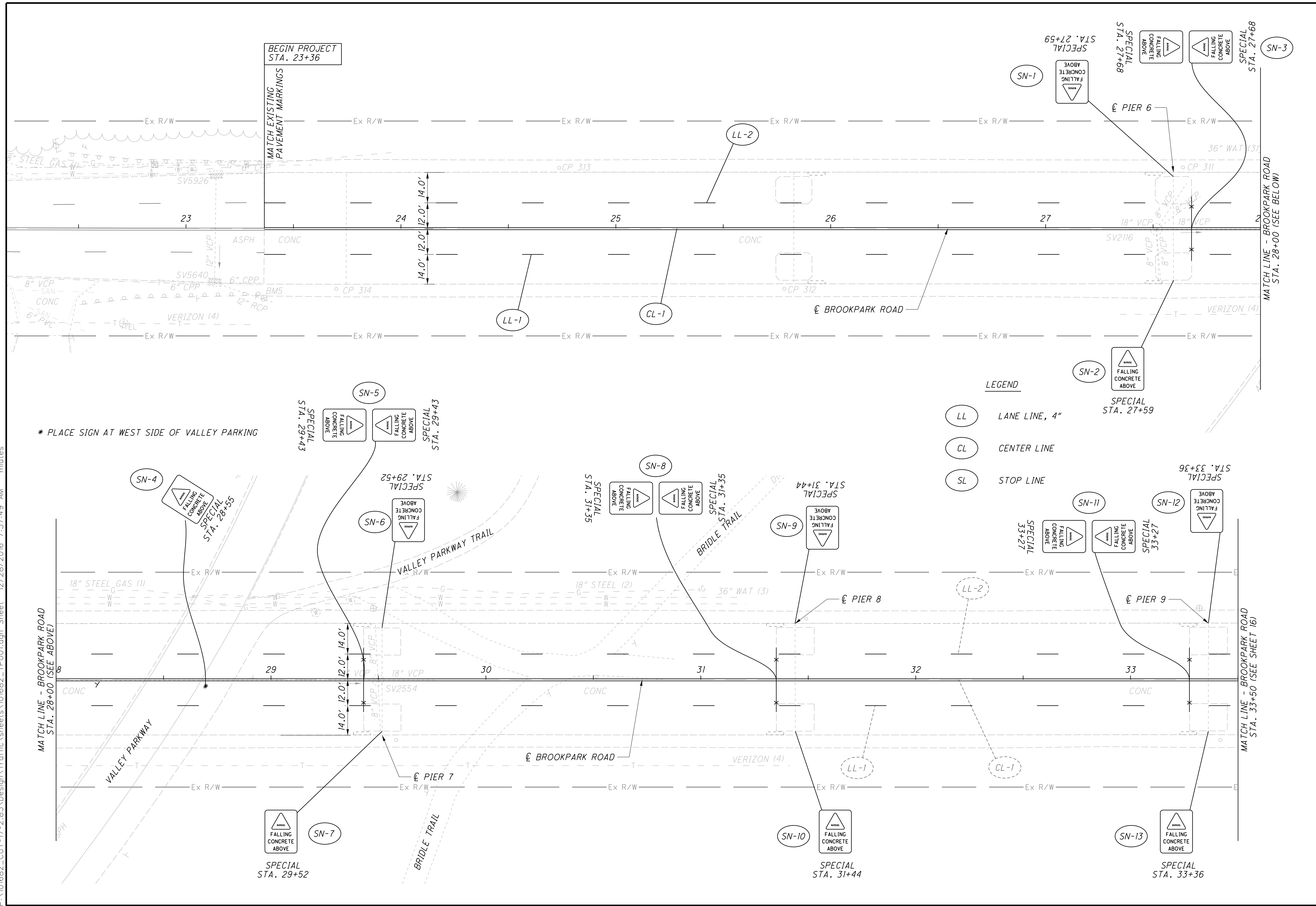
SHEET NO.	REFERENCE NO.	STATION		SIDE	CODE	SIZE (INCHES)	609							630					646				
		FROM	TO				FT	FT	EA	SO FT	EA	EA	EA	FT	FT	FT	FT	FT					
CUY-17-2.83																							
15-16	LL-1	23+36	42+53	RT																			
15-16	LL-2	23+36	42+53	LT														1917					
15-16	CL-1	23+36	42+53	CL														1917					
15	SN-1	27+59		LT	SPECIAL	18x24		12.5		3													
15	SN-2	27+59		RT	SPECIAL	18x24		12.5		3													
15	SN-3	27+68		CL	SPECIAL	18x24			2	6													
15	SN-4	28+55		LT	SPECIAL	18x24		12.5		3													
15	SN-5	29+43		CL	SPECIAL	18x24			2	6													
15	SN-6	29+52		LT	SPECIAL	18x24		12.5		3													
15	SN-7	29+52		RT	SPECIAL	18x24		12.5		3													
15	SN-8	31+35		CL	SPECIAL	18x24			2	6													
15	SN-9	31+44		LT	SPECIAL	18x24		12.5		3													
15	SN-10	31+44		RT	SPECIAL	18x24		12.5		3													
15	SN-11	33+27		CL	SPECIAL	18x24			2	6													
15	SN-12	33+36		LT	SPECIAL	18x24		12.5		3													
15	SN-13	33+36		RT	SPECIAL	18x24		12.5		3													
16	SN-14	35+20		CL	SPECIAL	18x24			2	6													
16	SN-15	35+28		RT	SPECIAL	18x24		12.5		3													
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16	SN-19	37+21		LT	SPECIAL	18x24		12.5		3													
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16	SN-21	39+13		LT	SPECIAL	18x24		12.5		3													
16	SN-22	39+13		RT	SPECIAL	18x24		12.5		3													
17-18	ELW-1																						
17	C-1						100																
17	SL-2																						
17	CH-1																	50					
17	CH-2																	50					
17	LL-3																						
17	LL-4																	120					
17	SN-23				M2-H10-60	60x36				15													
					R3-5A-30	30x36				7.5	1			1									
					R3-5A-30	30x36				7.5				1									
TOTALS CARRIED TO GENERAL SUMMARY							100		200.0	12	114.0	1	3	1		0.16 (MILE)	0.77 (MILE)	100	0.36 (MILE)	36			

TRAFFIC CONTROL SUBSUMMARY

CUY-17-2.83

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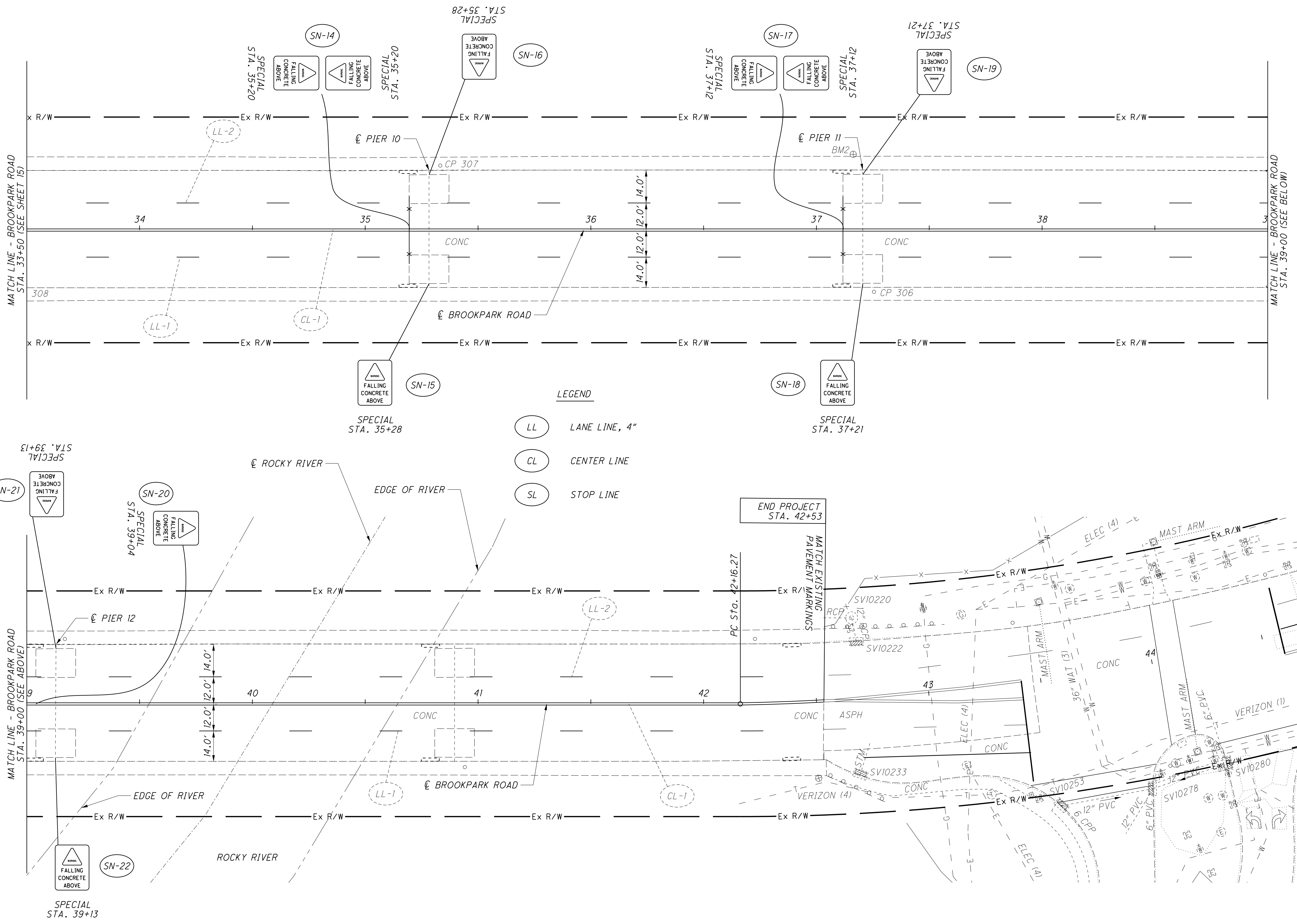
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- CL CENTER LINE
- TS STOP LINE

CALCULATED SWC
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0 20 40
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN SHEET
BROOKPARK ROAD - STA. 22+16 TO STA. 33+50

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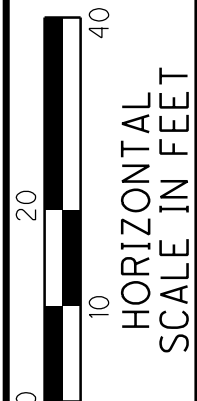
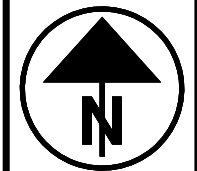
LEGEND

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- CL CENTER LINE
- SL STOP LINE

CALCULATED SWC
CHECKED JTJ

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HORIZONTAL SCALE IN FEET

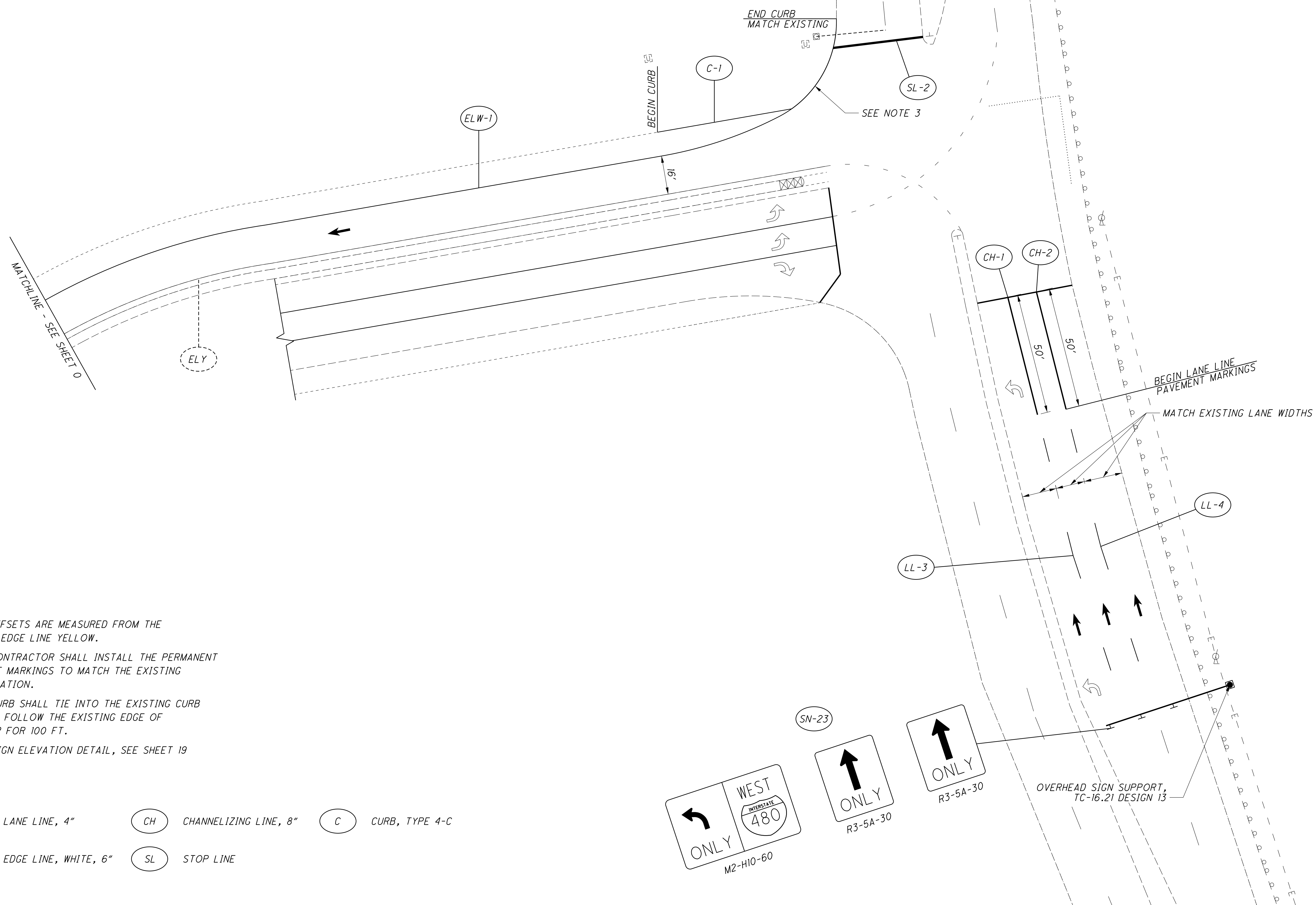
TRAFFIC CONTROL PLAN SHEET
BROOKPARK ROAD - STA. 33+50 TO STA. 44+84



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TRAFFIC CONTROL PLAN SHEET
GRAYTON RD. & I.R. 480 RAMP

CUY-17-2.83



NOTES:

1. ALL OFFSETS ARE MEASURED FROM THE EXISTING EDGE LINE YELLOW.
2. THE CONTRACTOR SHALL INSTALL THE PERMANENT PAVEMENT MARKINGS TO MATCH THE EXISTING CONFIGURATION.
3. THE CURB SHALL TIE INTO THE EXISTING CURB AND THEN FOLLOW THE EXISTING EDGE OF SHOULDER FOR 100 FT.
4. FOR SIGN ELEVATION DETAIL, SEE SHEET 19

LEGEND:

- | | | |
|---------------------------------|---------------------------------|-------------------------|
| LL LANE LINE, 4" | CH CHANNELIZING LINE, 8" | C CURB, TYPE 4-C |
| ELW EDGE LINE, WHITE, 6" | SL STOP LINE | |

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NOTES:

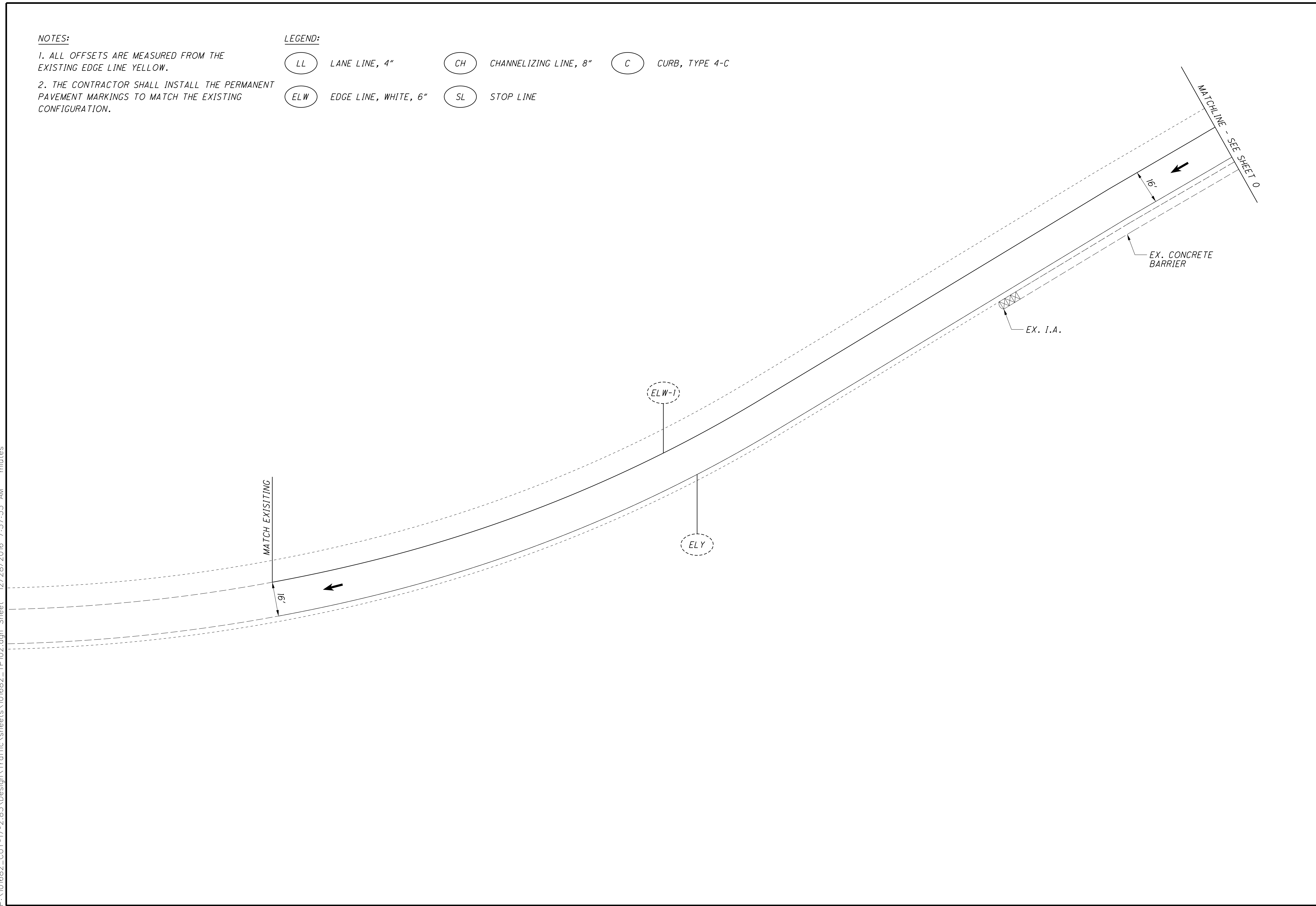
1. ALL OFFSETS ARE MEASURED FROM THE EXISTING EDGE LINE YELLOW.

2. THE CONTRACTOR SHALL INSTALL THE PERMANENT PAVEMENT MARKINGS TO MATCH THE EXISTING CONFIGURATION.

LEGEND:

- LL LANE LINE, 4"
- CH CHANNELIZING LINE, 8"
- C CURB, TYPE 4-C
- ELW EDGE LINE, WHITE, 6"
- SL STOP LINE

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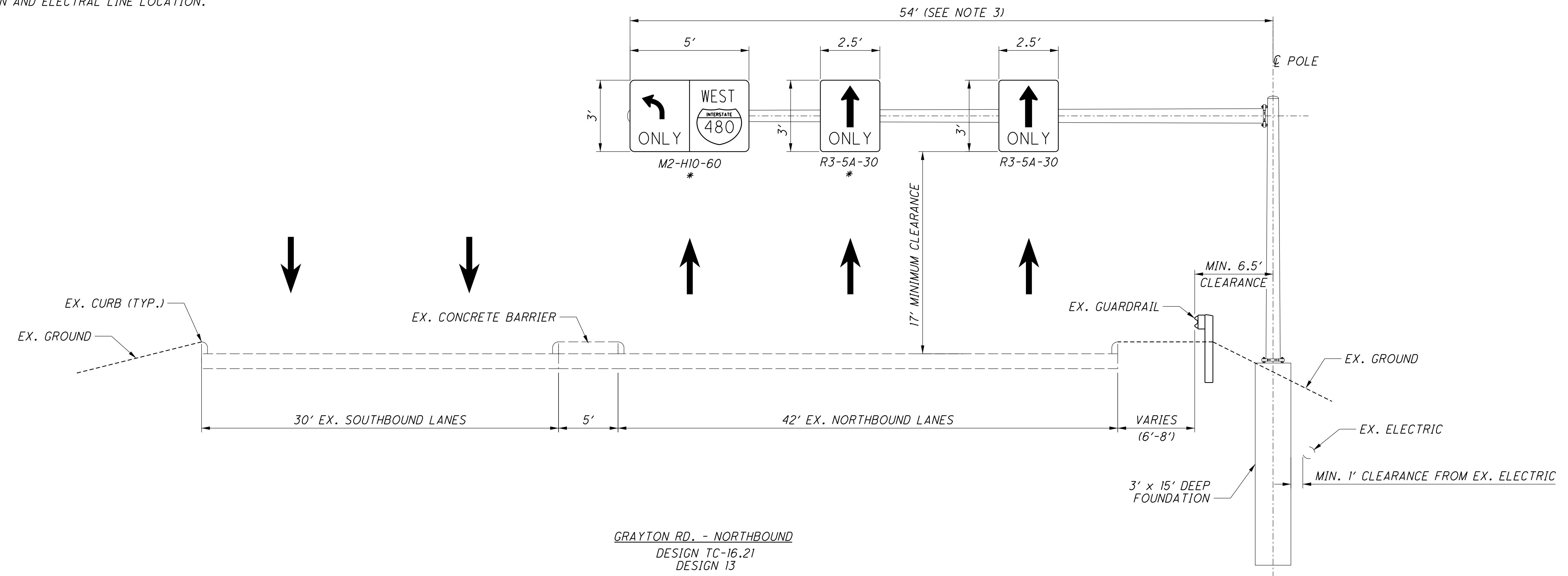
0 10 20 40
HORIZONTAL
SCALE IN FEET

**TRAFFIC CONTROL PLAN SHEET
GRAYTON RD. & I.R. 480 RAMP**

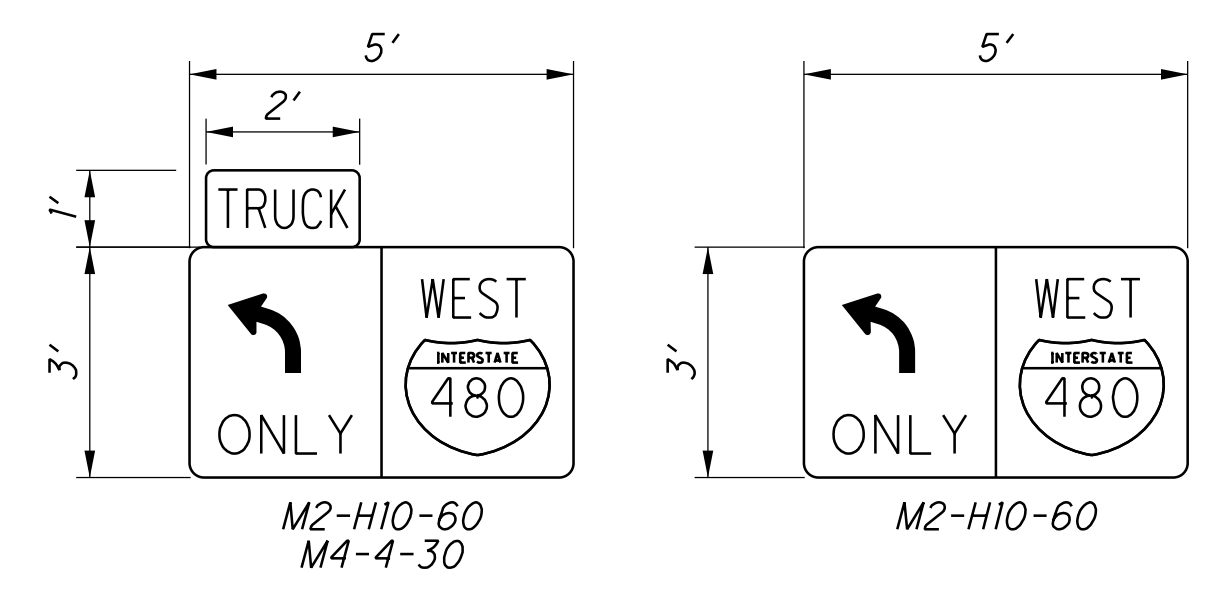
CUY-17-2.83

NOTES:

1. ALL SIGNS SHALL BE CENTERED IN EACH LANE BASED ON PROPOSED OR EXISTING CONFIGURATION.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING ELECTRICAL LINE AND BASE ALL SIGN DESIGN CRITERIA OFF OF THIS INFORMATION.
3. ACTUAL LENGTH TO BE DETERMINED BY CONTRACTOR, BASED ON FOUNDATION AND ELECTRICAL LINE LOCATION.

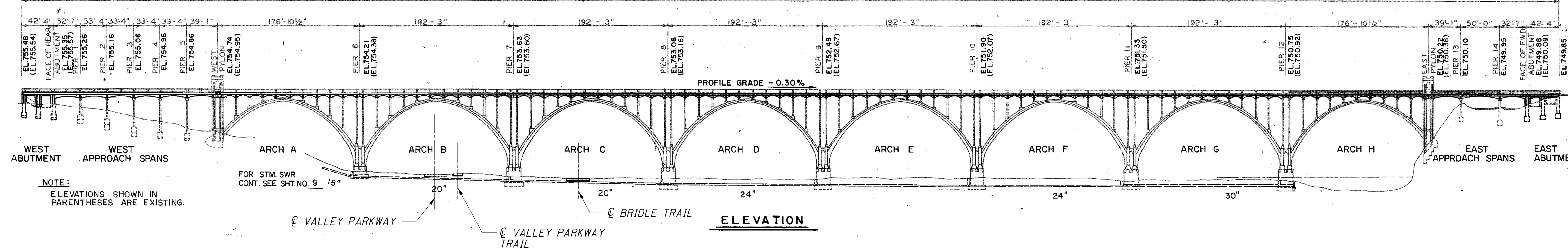
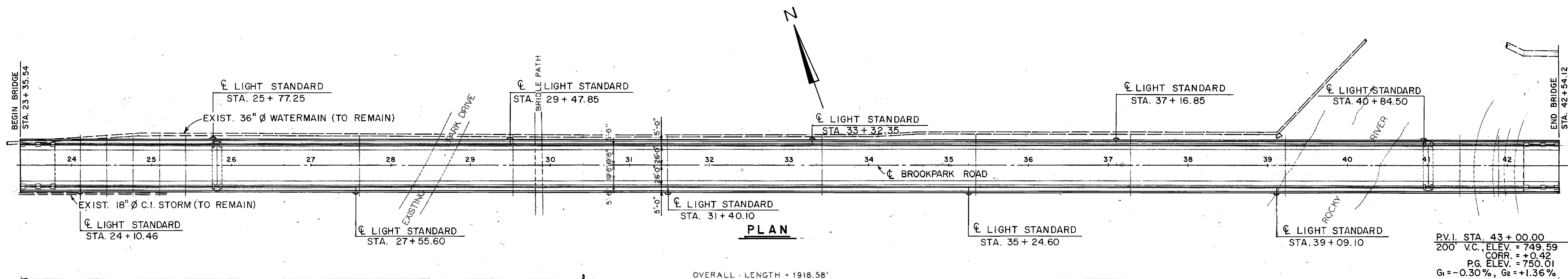


***TEMPORARY SIGN DETAILS**



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NOTE:
ELEVATIONS SHOWN IN PARENTHESES ARE EXISTING.

EXISTING STRUCTURE

TYPE: 8 SPAN OPEN SPANDREL, REINFORCED CONCRETE ARCH BRIDGE WITH NINE APPROACH SPANS AND FOUR CELLULAR ABUTMENT SPANS

SPANS: WEST APPROACH: 32'-7"±, 4 @ 33'-4"±, 39'-1"±
 ARCH SPANS: 176'-10 1/2"±, 6 @ 192'-3"±, 176'-10 1/2"±
 EAST APPROACH: 39'-1"±, 50'-0"±, 32'-7"±

ROADWAY: 52'-0"± F/F CURB AND TWO 5'-0"± SIDEWALKS

LOADING: HS 20-44

SKEW: NONE

APPROACH SLABS: AS-1-81 (MODIFIED)

ALIGNMENT: TANGENT AND 6° CURVE LEFT

CROWN: 0.02 FT/FT

STRUCTURE FILE NUMBER: 1802046

DATE BUILT: 1933, REHABILITATED 1989

DISPOSITION: TO BE REHABILITATED

WEARING SURFACE: LMC VARIABLE THICKNESS

PROPOSED WORK

- REMOVE AND REPLACE CONCRETE OVERLAY
- PERFORM ARCH SPAN SLAB REPLACEMENT AND FULL DEPTH DECK REPAIR AS DIRECTED BY THE ENGINEER
- REMOVE EXISTING HORIZONTAL RAIL TUBES, DECORATIVE RAILING PANELS AND THEIR CONNECTIONS
- CLEAN AND PAINT THE EXISTING POSTS AND NEW CONNECTIONS (OZEU SYSTEM)
- INSTALL COATED, GALVANIZED HORIZONTAL RAIL TUBES AND DECORATIVE PANELS
- PAINT NEW HORIZONTAL RAIL TUBES AND DECORATIVE PANELS WITH SAME FINISH COAT AS POSTS
- CLEAN AND PAINT THE STEEL CURB PLATES
- PATCH AND SEAL THE TOP AND EDGE OF SIDEWALKS
- REMOVE LOOSE CONCRETE AND PLACE STRUCTURE DEBRIS NETTING AT ORIGINAL SLAB UNDERSIDES IN ARCH SPANS B AND C
- REMOVE AND REPLACE THE COMPRESSION JOINT SEALS

LIST OF ABBREVIATIONS AND SYMBOLS:

- ABUT. - ABUTMENT
- APPR. - APPROACH
- BOT. - BOTTOM
- C/C - CENTER TO CENTER
- CLR. - CLEAR
- CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
- CONSTR. - CONSTRUCTION
- EIPS - EXTRA IMPROVED PLOW STEEL
- EX. - EXISTING
- F/F - FACE TO FACE
- FT - FEET
- IWRC - INDEPENDENT WIRE ROPE CORE
- JT. - JOINT
- LONGIT. - LONGITUDINAL
- LMC - LATEX MODIFIED CONCRETE
- MSC - MICRO-SILICA MODIFIED CONCRETE
- O/O - OUT TO OUT
- RD - ROAD
- SF - SQUARE FEET
- SS - SUPPLEMENTAL SPECIFICATION
- TYP. - TYPICAL
- ℄ - CENTERLINE
- °F - DEGREES FAHRENHEIT
- φ - DIAMETER

NOTES:

1. THE PLAN AND ELEVATION ARE TAKEN FROM THE 1986 REHABILITATION PLANS.
2. PROPOSED WORK IS NOT INTENDED TO BE ALL INCLUSIVE NOR NECESSARILY IN SEQUENCE AS LISTED.

DESIGN AGENCY: **E.L. ROBINSON ENGINEERING**
 1489 West 9th Street - Cleveland, Ohio 44113
 www.elrobinsonengineering.com

DATE: 10/27/2016
 REVIEWED: RER
 STRUCTURE FILE NUMBER: 1802046

DRAWN: AEF
 CHECKED: JOL

CUYAHOGA COUNTY
 STA. 23+35.54
 STA. 42+54.12

SITE PLAN
 BRIDGE NO. CUY-17-2.83
 BROOKPARK ROAD OVER ROCKY RIVER

CUY-17-02.83
 PID No. 101682

1/15
 20/34

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD DRAWING(S):
EXJ-3-82 REVISED 1-18-13

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
800 DATED: JANUARY 20, 2017
847 DATED: JULY 15, 2016

DESIGN STRESSES:

CONCRETE QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60. MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
MICRO-SILICA, MODIFIED CONCRETE OVERLAY

EXISTING STRUCTURE PLANS:

EXISTING STRUCTURE PLANS MAY BE EXAMINED AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12, 5500 TRANSPORTATION BLVD, GARFIELD HEIGHTS, OHIO 44125, OR ON THE ODOT FTP SITE.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

SEQUENCE OF RAILING WORK:

ONCE THE THE EXISTING HORIZONTAL RAIL TUBES, DECORATIVE PANELS AND THEIR CONNECTION BENT PLATES HAVE BEEN REMOVED AND THE EXISTING WELDS ON THE POSTS HAVE BEEN GROUND SMOOTH, CLEAN THE SURFACE OF THE POSTS AND WELD THE NEW CONNECTION ANGLES.

PREPARE THE SURFACES OF THE POSTS AND CONNECTION ANGLES AND PAINT THEM WITH AN ORGANIC ZINC PRIMER AND AN EPOXY INTERMEDIATE COAT AS PER CMS 514. CAULK THE ANGLES AS SHOWN IN THE PLANS. CAULK IS INCLUDED IN ITEM 514, FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES.

INSTALL THE NEW GALVANIZED, DECORATIVE PANELS. THEN INSTALL THE NEW GALVANIZED, HORIZONTAL RAIL TUBES. THESE MEMBERS WILL HAVE A COAT OF PAINT PER ITEM 514, SPECIAL - SHOP PAINTING OF STRUCTURAL STEEL.

APPLY THE FINAL FINISH COAT TO THE POSTS, CONNECTION ANGLES, DECORATIVE PANELS AND RAIL TUBES PER CMS 514 AND COMPATIBLE TO ITEM 514, SPECIAL - SHOP PAINTING OF STRUCTURAL STEEL.

ITEM 202. PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK CONSISTS OF THE REMOVAL OF LOOSE CONCRETE IN THE BOTTOM OF THE DECK IN ARCH SPANS B AND C, LOOSE CONCRETE AT THE EXTERIOR FACE OF SIDEWALK ALONG THE BASES OF RAILING POSTS, THE HORIZONTAL TUBE RAILS AND THEIR CONNECTIONS, THE DECORATIVE RAILING PANELS AND THEIR CONNECTIONS AND THE COMPRESSION JOINT SEALS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES:

THE CONTRACTOR SHALL DETERMINE THE AREAS OF LOOSE AND DELAMINATED CONCRETE THAT ARE TO BE REMOVED FROM THE BOTTOM OF THE SLABS IN ARCH SPANS B AND C, SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ACCESS TO AND SOUND THE DECK BOTTOM. THE CONTRACTOR SHALL MAKE PROVISIONS TO ENSURE PUBLIC SAFETY WHILE REMOVING LOOSE AND DELAMINATED CONCRETE. THE REMOVED CONCRETE SHALL BE DISPOSED OF OFF SITE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL POLLUTION CONTROL LAWS.

PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35 -POUND [16 KILOGRAM] CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE REMOVAL OF THE EXISTING TUBE RAILS, DECORATIVE PANELS AND THEIR CONNECTION BENT PLATES SHALL NOT DAMAGE THE EXISTING STEEL POSTS TO REMAIN. ALL WELDS SHALL BE GROUND SMOOTH.

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 509. REINFORCING STEEL. REPLACEMENT OF EXISTING STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

THIS ITEM IS ONLY FOR ANY NECESSARY REINFORCING REPLACEMENT FOR ITEM 847, FULL DEPTH REPAIR. THE PLANS SHOW AN ESTIMATED QUANTITY OF REINFORCING REPLACEMENT UNDER THIS ITEM OF 21,700 POUNDS FOR BIDDING PURPOSES ONLY. THE FINAL QUANTITY SHALL BE DETERMINED BY THE ENGINEER. ANY NECESSARY REINFORCING REPLACEMENT FOR ITEM 530 SPECIAL - STRUCTURES: ARCH SPAN SLAB REPLACEMENT IS INCLUDED IN THAT ITEM.

ITEM 513. STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

THIS ITEM CONSISTS OF SUPPLYING THE GALVANIZED HORIZONTAL RAIL TUBE SECTIONS, GALVANIZED DECORATIVE PANELS, THE CONNECTION ANGLES AND GALVANIZED FASTENERS, AND THEIR PLACEMENT ON THE BRIDGE. THIS ITEM SHALL CONFORM TO CMS 513, EXCEPT AS MODIFIED BELOW:

THE CONNECTION ANGLES SHALL BE ASTM A709 STEEL, PRIMED WITH THE EXISTING STEEL POSTS, AFTER WELDING. THE CONNECTION ANGLES SHALL NOT BE GALVANIZED.

THE TUBE RAILS SHALL BE ASTM A500 GRADE B HOLLOW STRUCTURAL STEEL MEMBERS IN THE SIZES AND LENGTHS AS SHOWN IN THE PLANS. THE DECORATIVE PANELS SHALL BE ASTM A709 PLATE STEEL. THE BOLTS AND HARDWARE SHALL BE F3125 HIGH STRENGTH BOLTS (PREVIOUSLY A325). THE TUBE RAILS, DECORATIVE PANELS AND BOLT HARDWARE SHALL BE HOT DIPPED GALVANIZED AS PER CMS 711.02.

ITEM 514. SPECIAL - SHOP PAINTING OF STRUCTURAL STEEL

THIS ITEM APPLIES TO THE PAINTING OF HOT DIPPED GALVANIZED STEEL MEMBERS WITH AN EPOXY PAINT AND SHALL CONFORM TO CMS 514 EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES:

THE SURFACES OF GALVANIZED STEEL SHALL BE PREPARED IN ACCORDANCE WITH ASTM D6386 AND THE PAINT MANUFACTURER'S SPECIFICATIONS TO MAXIMIZE ADHESION BETWEEN THE PAINT AND GALVANIZED STEEL. ADHESION SHALL BE TESTED USING ASTM D3359 WITH 5A OR 5B TAPE (SPECIFY WHICH TAPE USED). THE EPOXY PAINT SHALL BE SPECIFICALLY INTENDED FOR USE OVER GALVANIZED STEEL. THE REQUIRED THICKNESS OF THE COAT DIRECTLY APPLIED TO THE GALVANIZED SURFACE SHALL BE 4 MILS MINIMUM. SUBMIT TWO SAMPLE COUPONS, EACH 2"x4" x 3/8" THICK AND PAINT MANUFACTURER PRODUCT DATA SHEETS TO THE ENGINEER FOR APPROVAL. THE SAMPLE COUPONS SHALL MATCH THE COLOR OF THE RAILING TUBES AND DECORATIVE PANELS. COAT ALL EXTERIOR SURFACES OF PANELS AND TUBES, AND 12 INCHES OF THE INTERIOR FACES OF EACH END OF THE RAIL TUBES.

THE MANUFACTURER SHALL BE THE SAME AS THE ORGANIC ZINC EPOXY URETHANE SYSTEM FOR THE EXISTING POSTS.

PAYMENT FOR SURFACE PREPARATION AND COATING OF GALVANIZED STEEL SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER SQUARE FOOT FOR ITEM 514, SPECIAL - SHOP PAINTING OF STRUCTURAL STEEL.

ITEM 514. FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

THE FINISH COAT FOR THE RAILING SYSTEM (INCLUDING THE POSTS, RAIL TUBES, DECORATIVE PANELS AND THEIR CONNECTIONS) SHALL BE SPECIAL BROWN (FS-595C, 20140), WITH A SEMI-GLOSS SHEEN.

THE FINISH COAT FOR THE CURB PLATES SHALL BE SPECIAL BROWN (FS-595C, 30140), WITH A MATTE/FLAT SHEEN.

THE CONTRACTOR SHALL SUBMIT COLOR SAMPLES OF EACH TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING PAINT.

THE ESTIMATED QUANTITIES SHOW A TOTAL FOR THE FINISH COAT, BUT FOR THE CONTRACTOR'S INFORMATION, THE FOLLOWING IS A SUBTOTAL OF EACH TYPE OF SHEEN:

RAILING SYSTEM SEMI-GLOSS: 39,639 SF
CURB PLATE FLAT: 3837 SF

ITEM 514. FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES

THIS ITEM INCLUDES THE CAULKING OF THE RAIL TUBE AND PANEL CONNECTION ANGLES AS SHOWN IN THE PLANS, AT THE EDGES OF THE ANGLES THAT ARE NOT WELDED TO THE POSTS. THE CAULK SHALL CONFORM TO CMS 514.02 AND SHALL BE APPLIED AFTER THE INTERMEDIATE COAT CURES AND BEFORE THE APPLICATION OF THE FINISH COAT.

PAYMENT FOR CAULKING MATERIALS AND LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER FOOT FOR ITEM 514, FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES.

ITEM 519. PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM SHALL CONFORM TO CMS 519 EXCEPT AS MODIFIED BELOW:

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 530 SPECIAL - STRUCTURES: ARCH SPAN SLAB REPLACEMENT

THIS ITEM CONSISTS OF REMOVING THE EXISTING CONCRETE SLAB IN THE ARCH SPANS, PROTECTING THE PUBLIC BELOW FROM FALLING DEBRIS DURING OPERATIONS, PROVIDING FALSEWORK AND FORMS, FURNISHING AND PLACING NEW EPOXY COATED REINFORCING STEEL, REPLACING ANY DETERIORATED EXISTING REINFORCING STEEL PER THE DIRECTION OF THE ENGINEER, DOWEL HOLES AND NONSHRINK, NONMETALLIC GROUT, PLACING CLASS QC2 CONCRETE FROM FLOOR BEAM TO FLOOR BEAM, AND REMOVING THE FORMS.

THE EXISTING CONCRETE FACES AND REINFORCING TO REMAIN SHALL BE PREPARED AND CLEANED PER SS 847.20.

REMOVALS:
THE CONTRACTOR SHALL EXERCISE CARE IN THE CONCRETE REMOVAL TO AVOID DAMAGING ANY FLOOR BEAMS, DRAINAGE TROUGHS OR JACK ARCHES, OR INJURING PEDESTRIANS BELOW. RESTRICTIONS FROM DAMAGING ADJACENT CONCRETE AND REINFORCING STEEL TO REMAIN FOR LAPPING PURPOSES ARE TO CONFORM TO ITEM 202 BUT ARE INCLUDED FOR PAYMENT IN THIS ITEM.

PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND [16 KILOGRAM] CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

(CONTINUED NEXT SHEET)

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DESIGN AGENCY
E.L. ROBINSON
ENGINEERING
1468 West 9th Street - Cleveland, Ohio 44113
www.elrobinsonengineering.com

REVIEWED DATE
RER 10/27/2016
STRUCTURE FILE NUMBER
1802046

DRAWN NBR
NBR
CHECKED JOL

STRUCTURE GENERAL NOTES - 1
BRIDGE NO. CUY-17-2.83
BROOKPARK ROAD OVER ROCKY RIVER

CUY - 17 - 02.83
PID No. 101682

2 / 15

21
34

(CONTINUED FROM PREVIOUS SHEET)

MATERIALS:

EPOXY COATED REINFORCING STEEL SHALL CONFORM TO CMS 509. BAR SIZES AND PLACEMENT OF REINFORCING SHALL BE PER THE DETAILS IN THESE PLANS. DOWELS HOLES AND NONSHRINK, NONMETALLIC GROUT SHALL BE PER CMS 510. SUPERSTRUCTURE CONCRETE SHALL BE CLASS OC2 (4500 PSI) AND CONFORM TO CMS 511. PROVIDE FORMS AS PER CMS 508.

MEASUREMENT AND PAYMENT:

THE PLANS HAVE ESTIMATED THE QUANTITY OF ARCH SPAN SLAB REPLACEMENT OF 375 CUBIC YARDS FOR BIDDING PURPOSES. THE FINAL QUANTITY SHALL BE DETERMINED BY THE ENGINEER AFTER THE EXISTING OVERLAY HAS BEEN REMOVED. THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK UNTIL LIMITS OF WORK HAVE BEEN DETERMINED BY THE ENGINEER. PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR COMPLETING THIS WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 530 SPECIAL - STRUCTURES: ARCH SPAN SLAB REPLACEMENT.

ITEM 530 SPECIAL - STRUCTURES: STRUCTURE DEBRIS NETTING

THIS WORK SHALL CONSIST OF A "STACKED" DEBRIS NETTING SYSTEM TO BE PLACED UNDER PORTIONS OF ARCH SPANS B AND C SLABS BETWEEN THE JACK ARCHES AS SHOWN IN THE PLANS. THE STRUCTURE NETTING SHALL BE INSTALLED FOR THE PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC BELOW AND SHALL MEET ALL APPLICABLE GUIDELINES AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

THE DEBRIS NETTING SYSTEM SHALL BE FROM THE FOLLOWING MANUFACTURERS OR AN APPROVED EQUAL:

NETTINGNOW, LLC 885 MAIN STREET, UNIT #445 SOUTH GLASTONBURY, CT 06073 PHONE: 800-481-9534 WWW.NETTINGNOW.COM	FALLPROOF NETWORK SYSTEMS, INC. 61 SECOND AVENUE TRENTON, NJ 08619 PHONE: 1-855-279-2000 WWW.FALLPROOF.COM
---	--

THE COMBINATION OF THE HEAVY DEBRIS NETTING MESH TOGETHER WITH THE LIGHTWEIGHT NETTING OR DEBRIS LINER SPECIFIED SHALL BE CONSIDERED A "SYSTEM". THE "SYSTEM" SHALL BE UTILIZED AS SPECIFIED IN THESE NOTES AND SHALL BE CONSIDERED A UNIT. THE LIGHTWEIGHT DEBRIS LINER SHALL BE INSTALLED ABOVE THE HEAVY DEBRIS NETTING MESH.

THE DEBRIS NETTING SYSTEM SHALL INCLUDE ALL ASSOCIATED HARDWARE NECESSARY TO SECURELY FASTEN THE NETTING TO THE CABLE SUPPORT SYSTEM. THE CABLE SUPPORT SYSTEM IS PROVIDED IN A SEPARATE PAY ITEM. THE NETTING CONNECTORS TO THE CABLE SUPPORT SYSTEM SHALL BE SPRING SNAP HOOKS OR CARABINERS THAT ARE REMOVABLE AND REUSABLE. THE NETTING CONNECTORS SHALL BE AT ABOUT 2 FEET SPACING AND CONNECTED TO A NETTING WEB BORDER WITH GROMMETS.

SPECIFICATIONS FOR HEAVY DUTY NETTING:

STYLE: RASCHEL KNOTLESS MONOFILAMENT FIBER NETTING
FIBER: HIGH TENACITY POLYPROPYLENE (HTPP)
COLOR: BLACK

NAME/DESCRIPTION	TEST DESIGNATION (IF APPLICABLE)	ACCEPTANCE RANGE
CORD DIAMETER		3/16"
MESH SIZE		2.5"x2.5" TO 4"x4"
MESH BREAK	ASTM D5034	GREATER THAN 700 LBF
DYNAMIC DROP TEST	ANSI 10.11	350 LB DROPPED 34.5 FT

SPECIFICATIONS FOR LIGHT DUTY NETTING OR DEBRIS LINER:

STYLE: RASCHEL KNOTLESS MONOFILAMENT FIBER NETTING
FIBER: KNIT POLYESTER
COLOR: BLACK

NAME/DESCRIPTION	TEST DESIGNATION (IF APPLICABLE)	ACCEPTANCE RANGE
MESH SIZE		3/8" x 3/8"
BREAKING STRENGTH	ASTM D5034	233 PSI WARP/79PSI FILL
BURSTING STRENGTH	ASTM D3787	170 PSI
FLAME RETARDANT TEST	NFPA-701 CRITERIA	METHOD 1 MUST PASS

EACH STRUCTURE NETTING PANEL SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING INFORMATION:

- 1) NAME OF MANUFACTURER
- 2) IDENTIFICATION OF NET MATERIAL
- 3) DATE OF MANUFACTURE

MEASUREMENT AND PAYMENT:

EACH DEBRIS LINER SHALL COVER THE ENTIRE AREA SPECIFIED IN THE PLAN DRAWINGS AND SHALL ALLOW FOR A 12" TO 24" OVERLAP OF NET SECTIONS. OVERLAP IS NOT TO BE CONSIDERED IN THE QUANTITY FOR PAYMENT IN THE UNIT PRICE BID FOR THIS ITEM. EACH DEBRIS NETTING PANEL SHALL BE SECURED FROM MOVING LONGITUDINALLY ALONG THE LENGTH OF THE BRIDGE.

MEASUREMENT WILL INCLUDE THE ENTIRE HORIZONTAL AREA FROM THE WEST END FLOOR BEAM OF ARCH SPAN B TO THE EAST END FLOOR BEAM OF ARCH SPAN C AS SHOWN IN THE PLANS, INCLUDING THE BOTTOM 3 FEET OF VERTICAL FACES AT BOTH SIDES OF EACH FLOOR BEAM WITHIN THE LIMITS. ANY SAG IN THE NETTING SHALL NOT BE INCLUDED IN THE HORIZONTAL MEASUREMENT.

ALL WORK VEHICLES, EQUIPMENT, AND RIGGING NECESSARY TO ACCESS THE UNDERSIDE OF THE STRUCTURE SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE DEBRIS NETTING INSTALLATION. CARE SHALL BE TAKEN WHEN WORKING AROUND THE ROAD AND PARK TRAIL AND ANY AREAS WHERE THE GENERAL PUBLIC MAY HAVE ACCESS TO THE UNDERSIDE OF THE STRUCTURE AND ASSOCIATED RIGHT-OF-WAY.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT FOR INSTALLING THE DEBRIS NETTING AND NETTING CONNECTORS SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER SQUARE FOOT FOR ITEM SPECIAL - STRUCTURE, MISC.: STRUCTURE DEBRIS NETTING.

ITEM 530 SPECIAL - STRUCTURES: NETTING SUPPORT CABLE SYSTEM

THIS ITEM CONSISTS OF DRILLING HOLES IN THE CONCRETE FLOOR BEAMS, FURNISHING AND INSTALLING THREADED STUDS, ROUND PLATE WASHERS, NUTS, JAM NUTS, EYE BOLTS, WIRE ROPE, THIMBLES, WIRE ROPE CLIPS, AND TURNBUCKLES AS SHOWN IN THE PLANS IN ORDER TO SUPPORT THE STRUCTURE DEBRIS NETTING.

THE WIRE ROPE SHALL HAVE A NOMINAL BREAKING STRENGTH OF 41,200 POUNDS. THE ROPE SHALL BE A 5/8" DIAMETER, 6x19 IWRC, EIPS GRADE ROPE, COMPRISED OF GALVANIZED DRAWN WIRE. THE ROPE SHALL NOT BE GALVANIZED AT FINISHED SIZE. THE SAG IN THE CABLE SHALL BE 6" AT MIDSPAN AS SHOWN IN THE PLANS.

THE WIRE ROPE CLIPS SHALL BE GALVANIZED, DROP FORGED U-BOLT ROPE CLIPS FOR 5/8" DIAMETER ROPES. THE THIMBLES SHALL BE GALVANIZED AND SIZED FOR THE ROPE DIAMETER.

TURNBUCKLES SHALL HAVE A WORKING LOAD LIMIT OF 7200 POUNDS AND BE A 7/8" JAW-JAW OR JAW-EYE WITH 12 INCH TAKE UP. THE COTTERS SHALL BE STAINLESS STEEL AND SECURELY PLACED AND EPOXIED ON BOTH SIDES OF PIN.

THE EYE NUTS SHALL HAVE A WORKING LOAD LIMIT OF 7200 POUNDS. THEY SHALL BE HOT DIPPED GALVANIZED, MADE OF FORGED STEEL AND TAPPED FOR A 7/8" BOLT. THEY SHALL BE ORIENTED AS SHOWN IN THE PLANS.

BOTH THE TURNBUCKLE AND THE EYE NUT SHALL BE LOADED FOR IN-LINE PULL AS CLOSE AS IS POSSIBLE. THE NETTING SHALL NOT BE ATTACHED DIRECTLY TO THE EYE NUT.

THE SWIVELS SHALL HAVE A WORKING LOAD LIMIT OF 7200 POUNDS. THEY SHALL BE HOT DIPPED GALVANIZED, MADE OF FORGED STEEL AND HAVE A NOMINAL SIZE OF 3/4".

SURFACES OF HARDWARE AND WIRE ROPE SHALL BE SMOOTH AND FREE OF SHARP EDGES TO AVOID TEARING THE ATTACHED NETTING.

THE 7/8" DIAMETER THREADED STUDS AND NUTS SHALL BE GALVANIZED ASTM F3125 (PREVIOUSLY A325) HIGH STRENGTH BOLTS. THE ROUND PLATE WASHERS SHALL BE HOT DIPPED GALVANIZED, LOW CARBON STEEL AND HAVE A 3/2" OUTSIDE DIAMETER.

MEASUREMENT SHALL BE BY THE HORIZONTAL FOOT OF WIRE ROPES, INCLUDING THE IN-LINE ANCHORS. THE 6" SAG OF THE LONGITUDINAL ROPES AND ANY SAG IN THE TRANSVERSE ROPES SHALL NOT BE INCLUDED IN THE HORIZONTAL FOOT MEASUREMENT. THE ADDITIONAL FLOOR BEAM END ANCHORS SHALL BE INCIDENTAL TO THIS ITEM.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER HORIZONTAL FOOT OF CABLE FOR ITEM 530 SPECIAL - STRUCTURES: NETTING SUPPORT CABLE SYSTEM.

ITEM 847. MICROSILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY

THIS ITEM SHALL CONFORM TO SS 847 AND SHALL INCLUDE THE VARIABLE THICKNESS OF OVERLAY BELOW THE 1/2" NOMINAL THICKNESS, AS WELL AS ANY ADDITIONAL MATERIAL REQUIRED FOR PARTIAL DEPTH REPAIRS. SEE THE TYPICAL SECTIONS OF THESE PLANS FOR THE DEPTHS AND LIMITS OF THE PROPOSED OVERLAY ON SHEETS [6/15] AND [7/15].

ITEM 847. FULL DEPTH REPAIR, AS PER PLAN

THE LIMITS AND LOCATIONS OF WORK FOR THIS ITEM SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER ONCE THE OVERLAY HAS BEEN REMOVED AND SHALL BE PER ITEM 847 WITH THE FOLLOWING MODIFICATIONS:

IN THE ARCH SPANS, THE FORMS MAY BE SUPPORTED FROM THE EXISTING REINFORCING FOR AREAS UP TO 2 SQUARE FEET. AREAS LARGER THAN 2 SQUARE FEET SHALL BE SUPPORTED FROM PRIMARY MEMBERS OR FROM BELOW. WHEN REPAIRING THE DECK IN THE APPROACH SPANS, SS847 SHALL APPLY WITHOUT MODIFICATION.

THE PLANS SHOW AN ESTIMATED QUANTITY OF FULL DEPTH REPAIR OF 320 CUBIC YARDS FOR BIDDING PURPOSES. THE FINAL QUANTITY SHALL BE DETERMINED BY THE ENGINEER AFTER THE EXISTING OVERLAY HAS BEEN REMOVED. THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK UNTIL LIMITS OF WORK HAVE BEEN DETERMINED BY THE ENGINEER. PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR COMPLETING THIS WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 847 FULL DEPTH REPAIR, AS PER PLAN.

ITEM 847. EXISTING CONCRETE OVERLAY REMOVED 1-1/2" NOMINAL THICKNESS, AS PER PLAN

THIS ITEM SHALL CONFORM TO SS 847 WITH THE FOLLOWING EXCEPTION:

THE EXISTING LMC WEARING SURFACE HAS A VARIABLE DEPTH RANGING FROM 1/2" TO 2 7/8" MAXIMUM. THE THICKNESSES LARGER THAN 1/2" SHALL ALSO BE REMOVED WITHIN THE LIMITS SHOWN IN THESE PLANS IN THE TYPICAL SECTION - REMOVAL, ON SHEET [6/15].

NO ADDITIONAL PAYMENT WILL BE MADE FOR REMOVAL OF THICKNESSES GREATER THAN THE NOMINAL 1/2" DIMENSION.

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CUY - 17 - 02.83 PID No. 101682	STRUCTURE GENERAL NOTES - 2 BRIDGE NO. CUY-17-2.83 BROOKPARK ROAD OVER ROCKY RIVER	DESIGNED NBR CHECKED JOL	DRAWN NBR REVISED	REVIEWED RER STRUCTURE FILE NUMBER 1802046	DATE 10/27/2016	DESIGN AGENCY E.L. ROBINSON ENGINEERING 6488 West 9th Street - Cleveland, Ohio 44113 www.elrobinsonengineering.com	
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MADE BY: NBR		DATE: 10/26/2016		ESTIMATED QUANTITIES						STRUCTURE FILE NUMBER: 1802046	
CHECKED BY: JOL		DATE: 10/27/2016									
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT	PIER	SUPER	GEN	REFERENCE SHEET NO.		
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2/15		
509	20001	** 21,700	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			21,700		2/15		
512	10050	2,674	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			2,674				
512	10100	764	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			764				
512	74000	764	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			764				
513	10201	289,036	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			289,036		2/15		
514	00050	11,131	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			11,131				
514	00056	11,131	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			11,131				
514	00060	11,131	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			11,131				
514	00066	43,476	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			43,476				
514	27710	1,819	FT	FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES			1,819		2/15, 11/15		
SPECIAL	51480100	32,345	SF	SHOP PAINTING OF STRUCTURAL STEEL			32,345		2/15		
516	10900	748	FT	ELASTOMERIC COMPRESSION SEAL			748				
519	11101	** 185	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN			185		3/15		
SPECIAL	53000600	18,030	SF	STRUCTURES - STRUCTURE DEBRIS NETTING				18,030	3/15		
SPECIAL	53001100	** 375	CY	STRUCTURES - ARCH SPAN SLAB REPLACEMENT			375		2/15, 5/15, 8/15, 9/15		
SPECIAL	53001300	3,702	FT	STRUCTURES - NETTING SUPPORT CABLE SYSTEM				3,702	3/15, 13/15, 14/15		
847	10000	11,085	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY (1 1/2" THICKNESS)			11,085				
847	20000	** 165	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			165				
847	30000	LS		TEST SLAB							
847	30201	** 320	CY	FULL DEPTH REPAIR, AS PER PLAN			320		3/15		
847	30401	11,085	SY	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (1 1/2" THICKNESS)			11,085		3/15, 6/15		
847	50000	250	SY	HAND CHIPPING			250				

** NOTE: THESE QUANTITIES ARE "CONTINGENCY" QUANTITIES IN THE SENSE THAT THEY REQUIRE FINAL DETERMINATION IN THE FIELD WITH THE APPROVAL OF THE ENGINEER.



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DESIGNED BY: NBR
 CHECKED BY: JOL
 DRAWN BY: AEF
 REVISED BY:
 REVIEWED BY: RER
 DATE: 10/27/2016
 STRUCTURE FILE NUMBER: 1802046

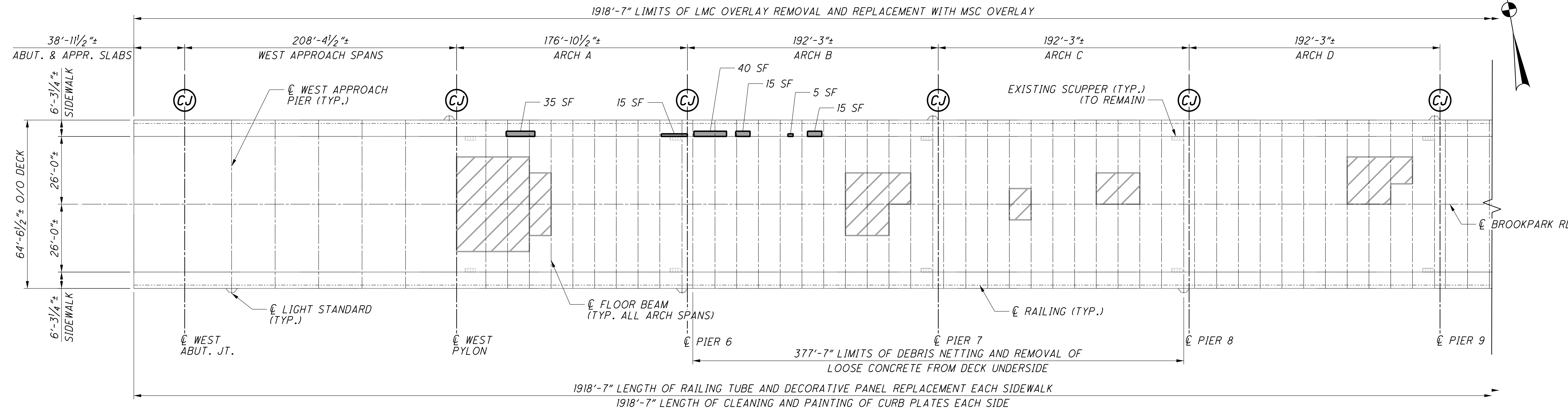
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 BRIDGE NO. CUY-17-2.83
 BROOKPARK ROAD OVER ROCKY RIVER

CUY-17-02.83
 PID No. 101682

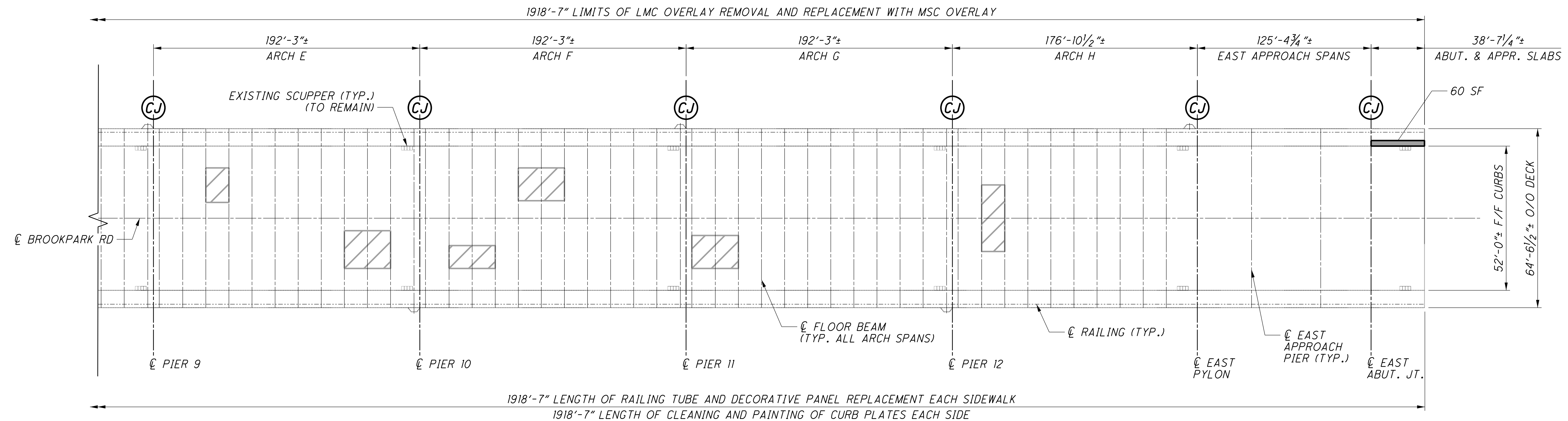
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TOP OF DECK WORK LOCATION PLAN
(NOT TO SCALE)



TOP OF DECK WORK LOCATION PLAN
(NOT TO SCALE)

LEGEND:

- PATCHING OF SIDEWALK PER CMS 519 WITH AREA INDICATED ON PLAN. EACH AREA HAS BEEN INCREASED BY 50 PERCENT OVER FIELD MEASURED AREAS.
- FULL WIDTH COMPRESSION JOINT SEAL REPLACEMENT
- TENTATIVE AREAS OF DECK SLAB REPLACEMENT PER ITEM 530 SPECIAL - STRUCTURES: ARCH SPAN SLAB REPLACEMENT. FINAL LOCATION(S) AND LIMITS TO BE DETERMINED IN THE FIELD BY THE ENGINEER AFTER THE WEARING SURFACE HAS BEEN REMOVED.

NOTES:

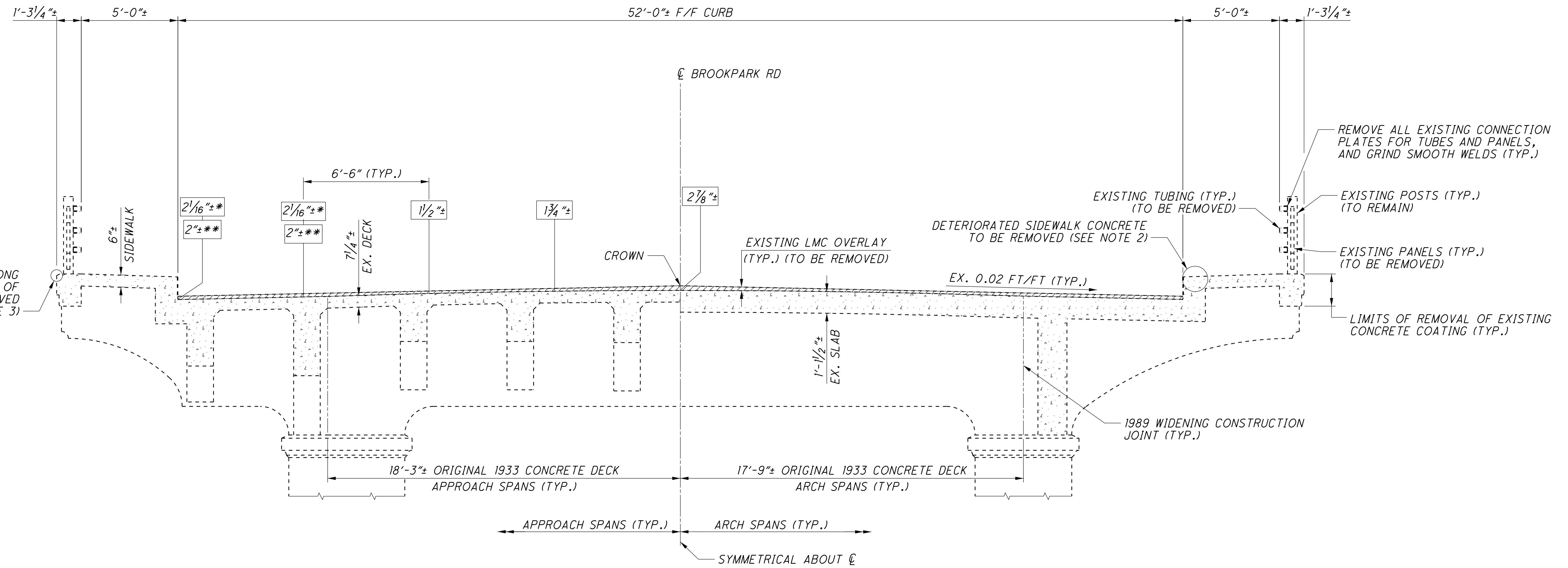
1. FOR NOTES ON THE ARCH SPAN SLAB REPLACEMENT SEE THE GENERAL NOTES, SHEET [2/15](#). FOR DETAILS, SEE SHEETS [8/15](#) AND [9/15](#).

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REVIEWED	RER	DATE	10/27/2016
STRUCTURE FILE NUMBER	1802046		

WORK LOCATION PLAN
BRIDGE NO. CUY-17-2.83
BROOKPARK ROAD OVER ROCKY RIVER

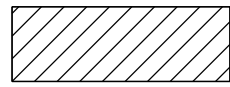
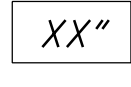
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PID No. 101682

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* AT APPROACH SPANS
 ** AT ARCH SPANS

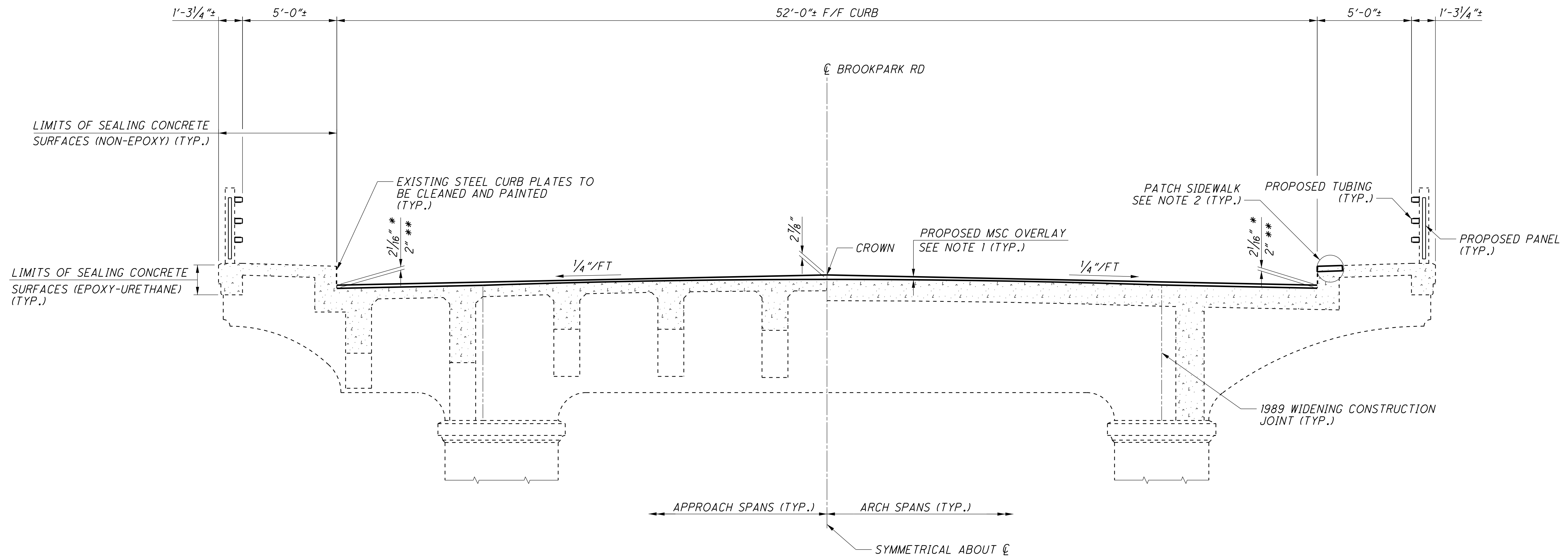
EXISTING TYPICAL SECTION
 (EXISTING DECK THICKNESSES SHOWN EXCLUDE THE OVERLAY THICKNESSES)

- LEGEND:**
-  - REMOVAL OF LMC OVERLAY BY SCARIFICATION AS PER ITEM 847, EXISTING CONCRETE OVERLAY REMOVED (1 1/2" THICKNESS), AS PER PLAN
 -  - THICKNESS OF OVERLAY TO BE REMOVED. SEE NOTE 1. THE THICKNESSES ARE GIVEN AT 6'-6" INTERVALS AND ARE SYMMETRICAL ABOUT THE CL.

- NOTES:**
1. THE EXISTING LMC OVERLAY IS VARIABLE IN THICKNESS DUE TO AN EXISTING STRAIGHT CROSS SLOPE PLACED ABOVE A PORTION OF THE 1933 ORIGINAL PARABOLIC CROWN.
 2. SEE SHEET [5/15] FOR LOCATIONS OF SIDEWALK PATCHING. REMOVAL OF DETERIORATED CONCRETE FOR PATCHING IS INCLUDED IN ITEM 519, PATCHING CONCRETE STRUCTURES.
 3. REMOVAL OF LOOSE CONCRETE AT EXTERIOR EDGE ALONG THE BASE OF THE POSTS, REMOVAL OF THE HORIZONTAL TUBE RAILS AND DECORATIVE PANELS IS INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

	DESIGN AGENCY E.L. ROBINSON ENGINEERING <small>1468 West 9th Street - Cleveland, Ohio 44113 www.erobinsonengineering.com</small>	REVIEWED RER DATE 10/27/2016 STRUCTURE FILE NUMBER 1802046	DRAWN LAH REVISIONS CHECKED JOL	DESIGNED NBR CHECKED JOL
TYPICAL SECTION - REMOVAL BRIDGE NO. CUY-17-2.83 BROOKPARK ROAD OVER ROCKY RIVER				
CUY-17-02.83		PID No. 101682		
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 ** AT ARCH SPANS

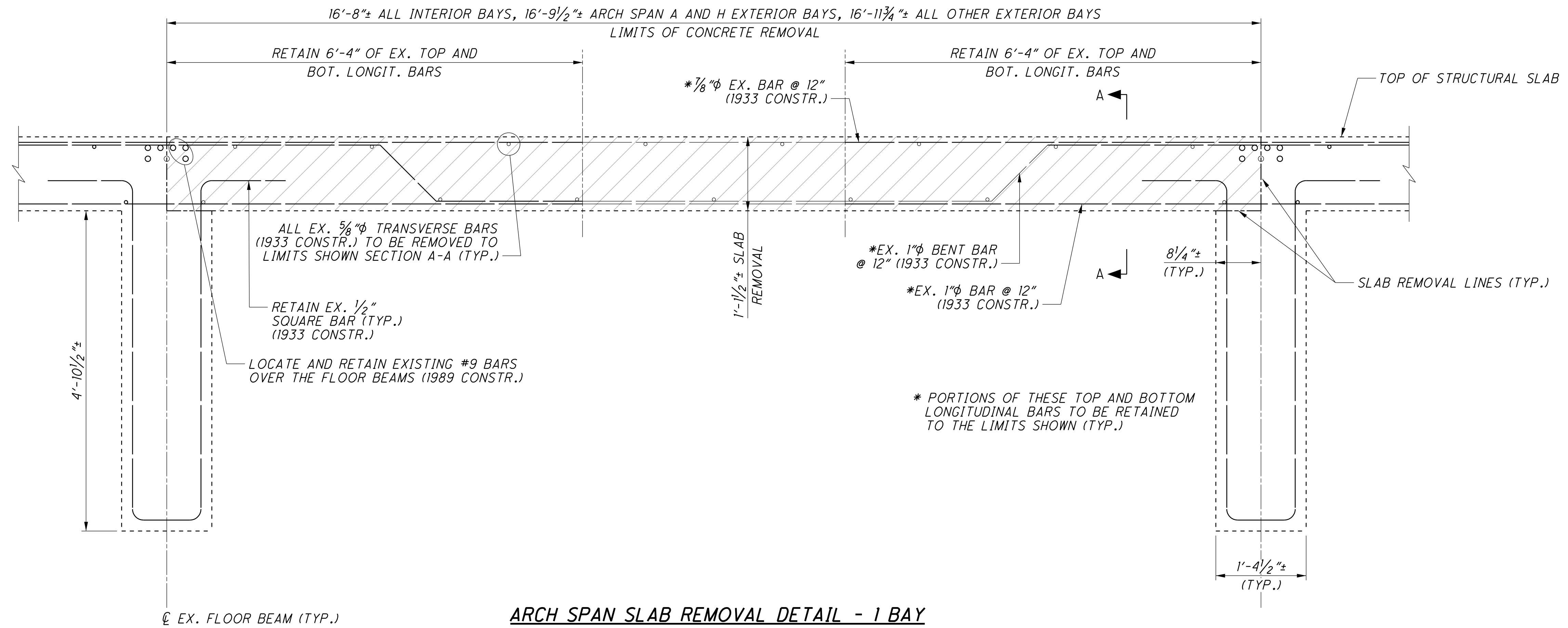
PROPOSED TYPICAL SECTION

NOTES:

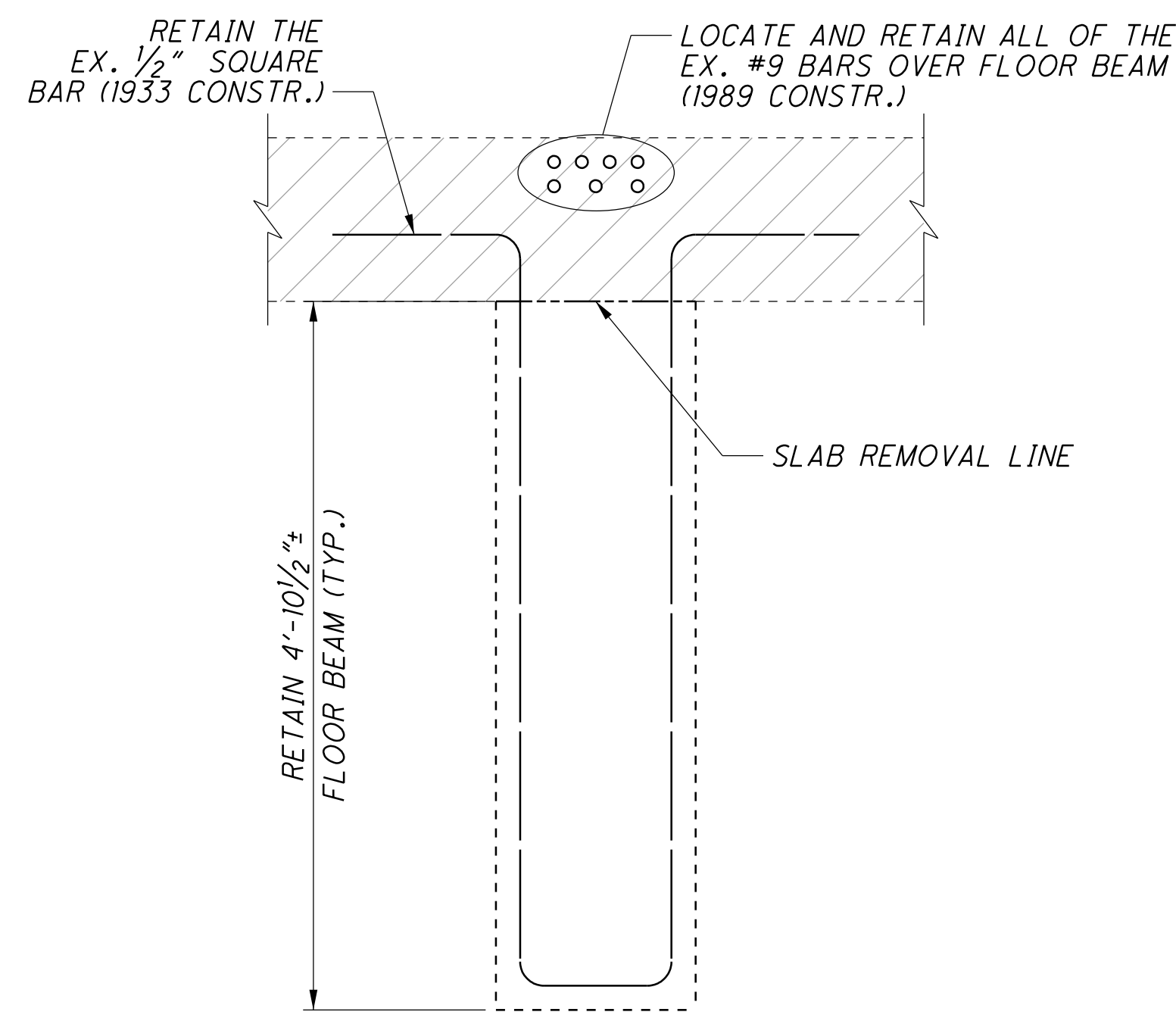
1. THE OVERLAY THICKNESS VARIES FROM 1 1/2" MIN. TO 2 7/8" DUE TO THE ORIGINAL DECK'S PARABOLIC CROWN. SEE SHEET [5/15] FOR MORE INFORMATION.
2. SEE SHEET [5/15] FOR LOCATIONS OF SIDEWALK PATCHING AND QUANTITIES.

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TYPICAL SECTION - PROPOSED BRIDGE NO. CUY-17-2.83 BROOKPARK ROAD OVER ROCKY RIVER							
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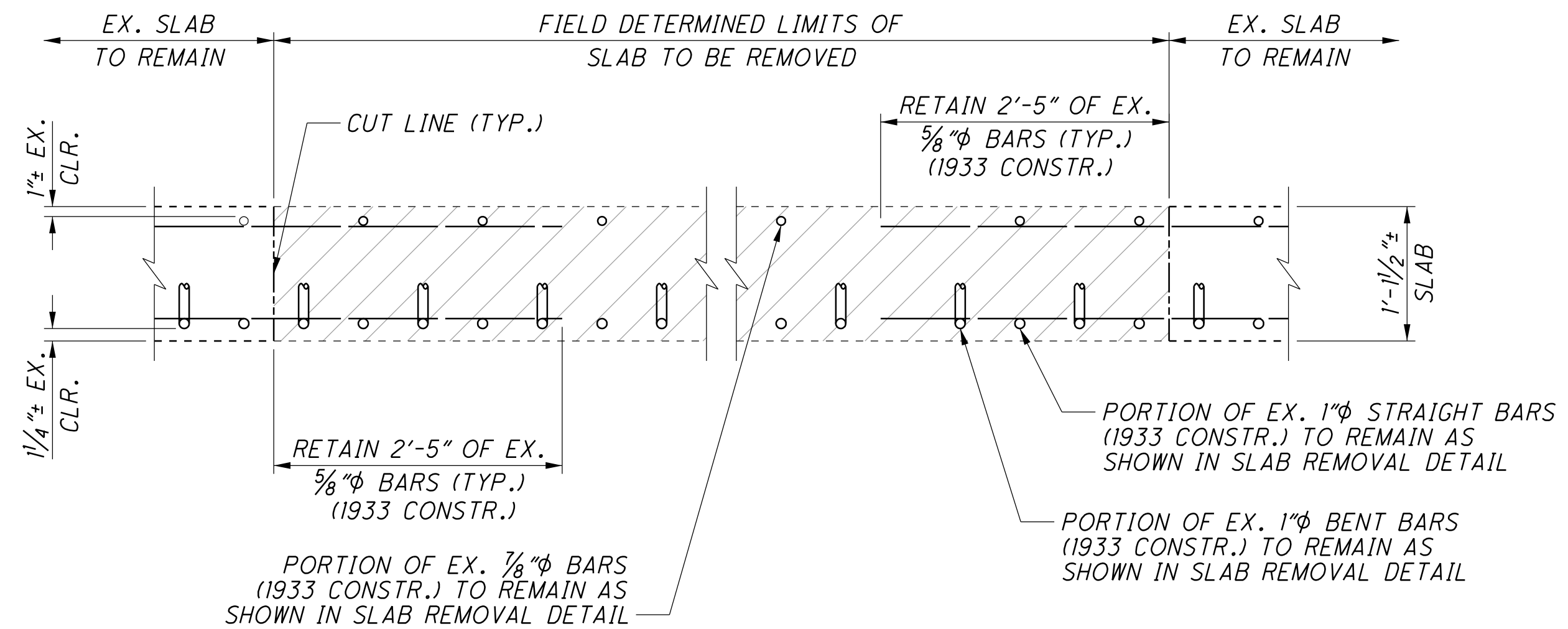
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ARCH SPAN SLAB REMOVAL DETAIL - 1 BAY
 (DETAIL SHOWN IS FOR ONE BAY, MULTIPLE ADJACENT BAYS SIMILAR EXCEPT AS SHOWN IN CONTINUOUS REMOVAL OVER FLOOR BEAM DETAIL)



CONTINUOUS REMOVAL OVER FLOOR BEAM DETAIL



SECTION A-A

NOTES:

1. ALL WORK, INCLUDING PROTECTING AREAS BELOW REPLACEMENT, CONCRETE AND REINFORCING REMOVALS AND SAFELY REMOVING THE MATERIALS ARE INCLUDED IN ITEM 530 SPECIAL - STRUCTURES: ARCH SPAN SLAB REPLACEMENT.
2. ALL WORK LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER, ONCE THE EXISTING OVERLAY HAS BEEN REMOVED.

LEGEND:



- LIMITS OF SLAB REMOVAL AND PORTIONS OF REINFORCING REMOVAL PER DETAILS IN THIS SHEET, INCLUDED IN ITEM 530 - STRUCTURES: ARCH SPAN SLAB REPLACEMENT

ARCH SPAN DECK REMOVAL DETAILS FOR REPLACEMENT

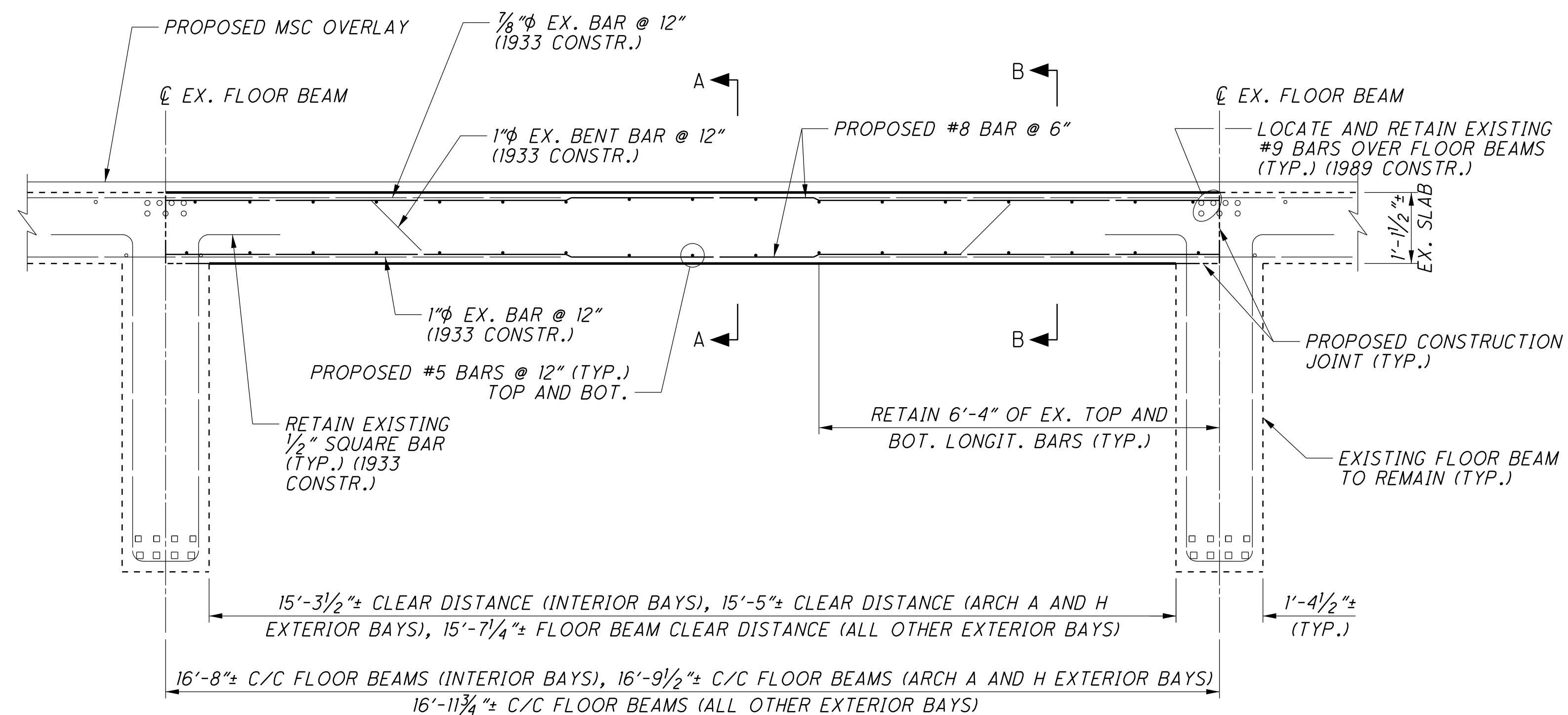
CUY - 17 - 02.83
PID No. 101682

BRIDGE NO. CUY-17-2.83
 BROOKPARK ROAD OVER ROCKY RIVER

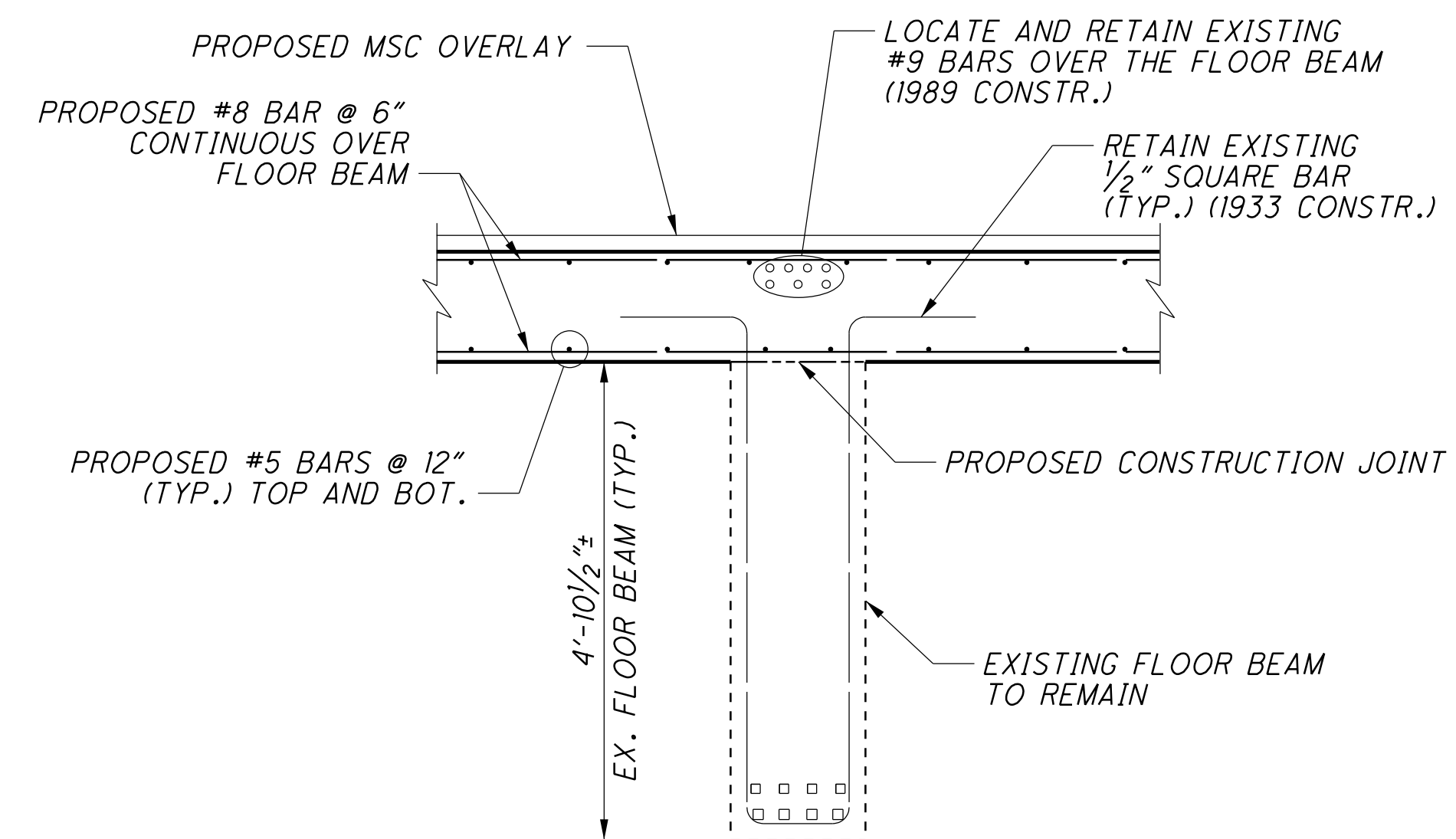
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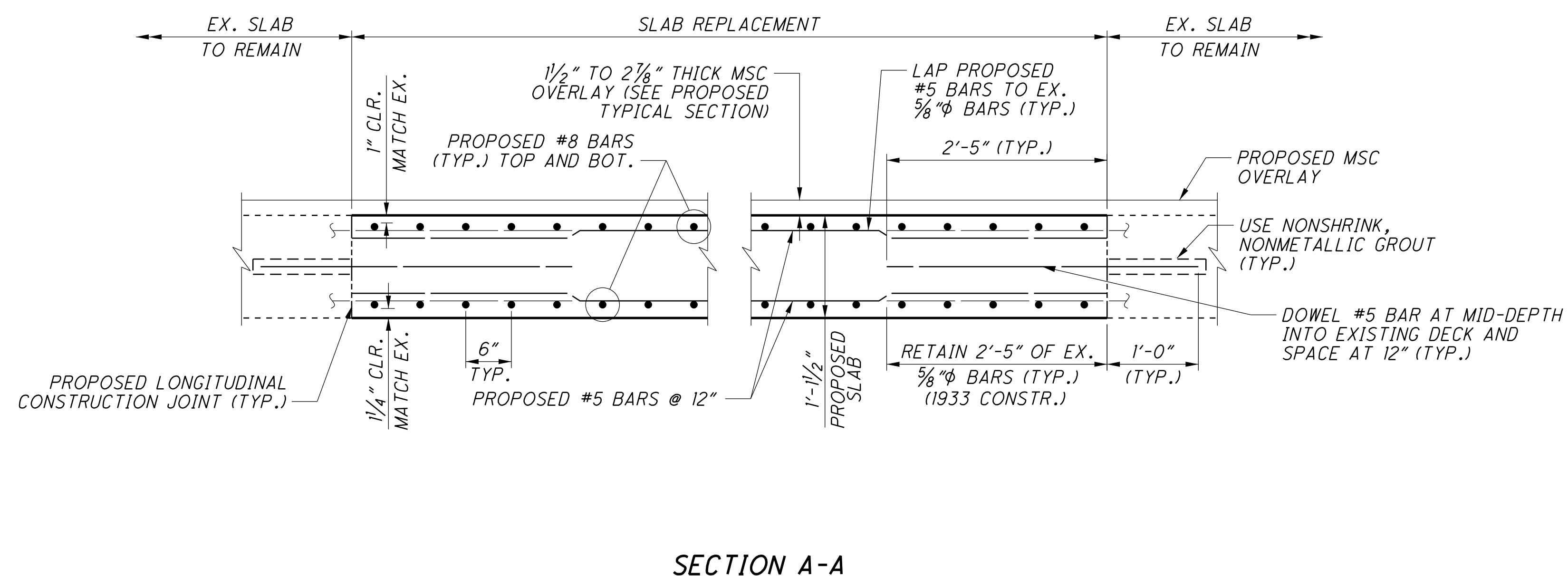
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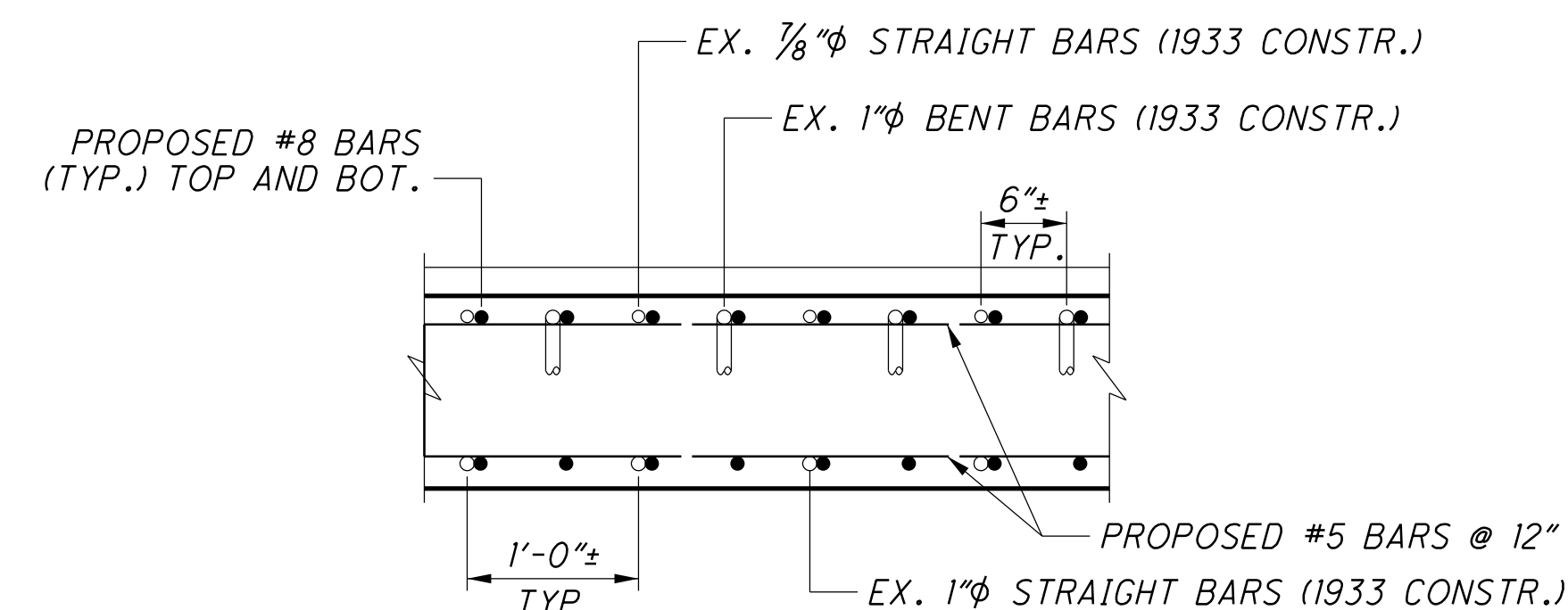
TYPICAL ARCH SPAN BAY SLAB REPLACEMENT
(PARTIAL LONGITUDINAL SECTION OF ARCH SLAB ALONG BRIDGE)



TYPICAL ARCH SPAN SLAB REPLACEMENT OVER EXISTING FLOOR BEAMS



SECTION A-A



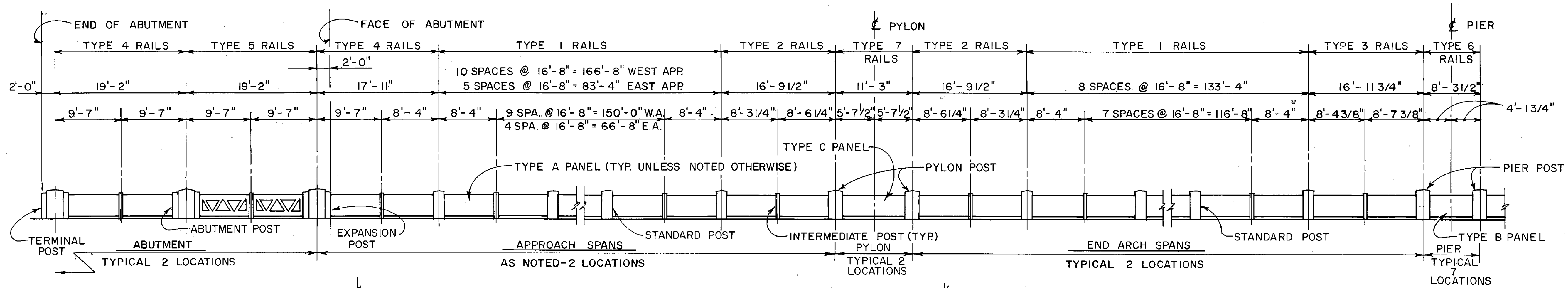
SECTION B-B

(SEE SECTION A-A FOR INFORMATION NOT SHOWN)

NOTES:

- FOR TENTATIVE LOCATION OF ARCH SPAN SLAB REPLACEMENT, SEE SHEET 5/15; HOWEVER, THE FINAL LOCATIONS AND LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER ONCE THE EXISTING OVERLAY HAS BEEN REMOVED.

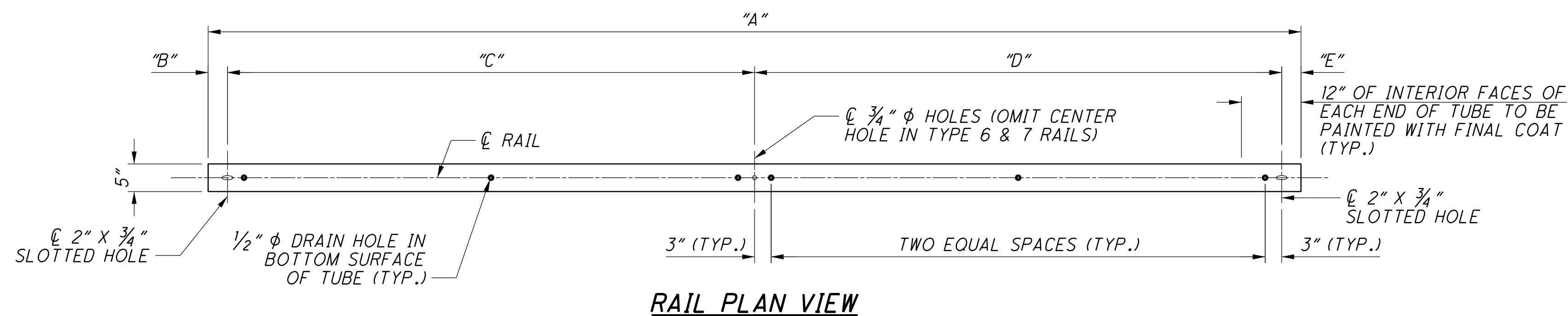
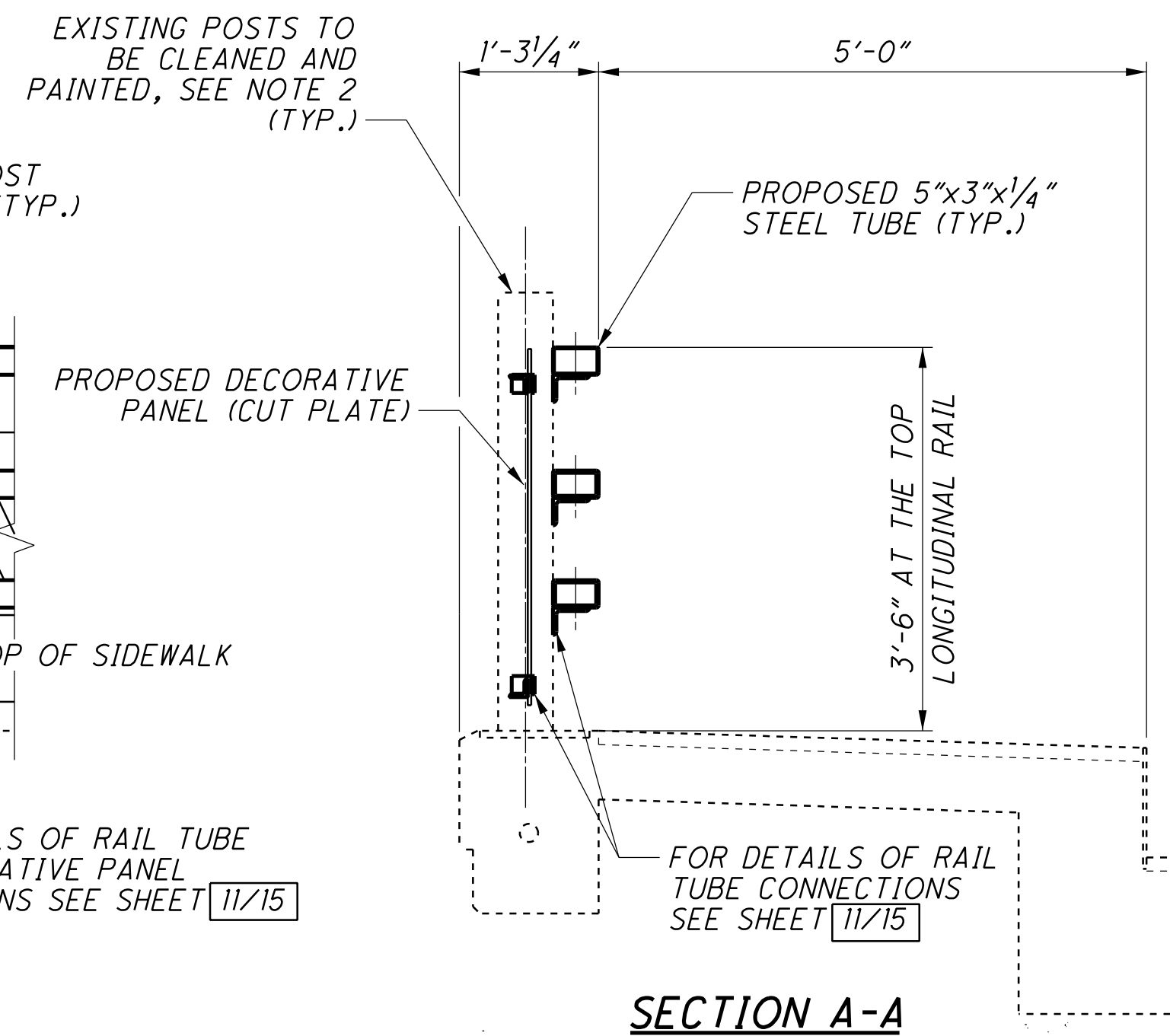
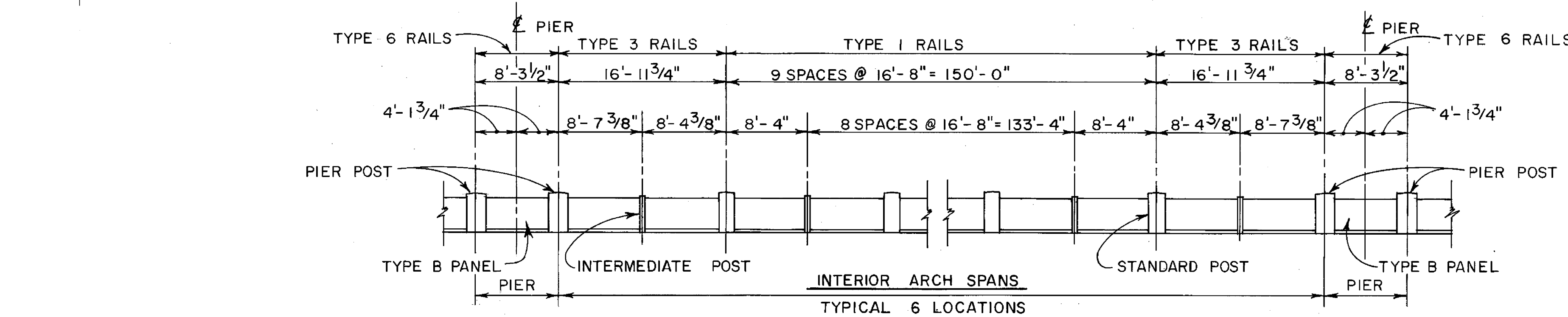
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NOTES:

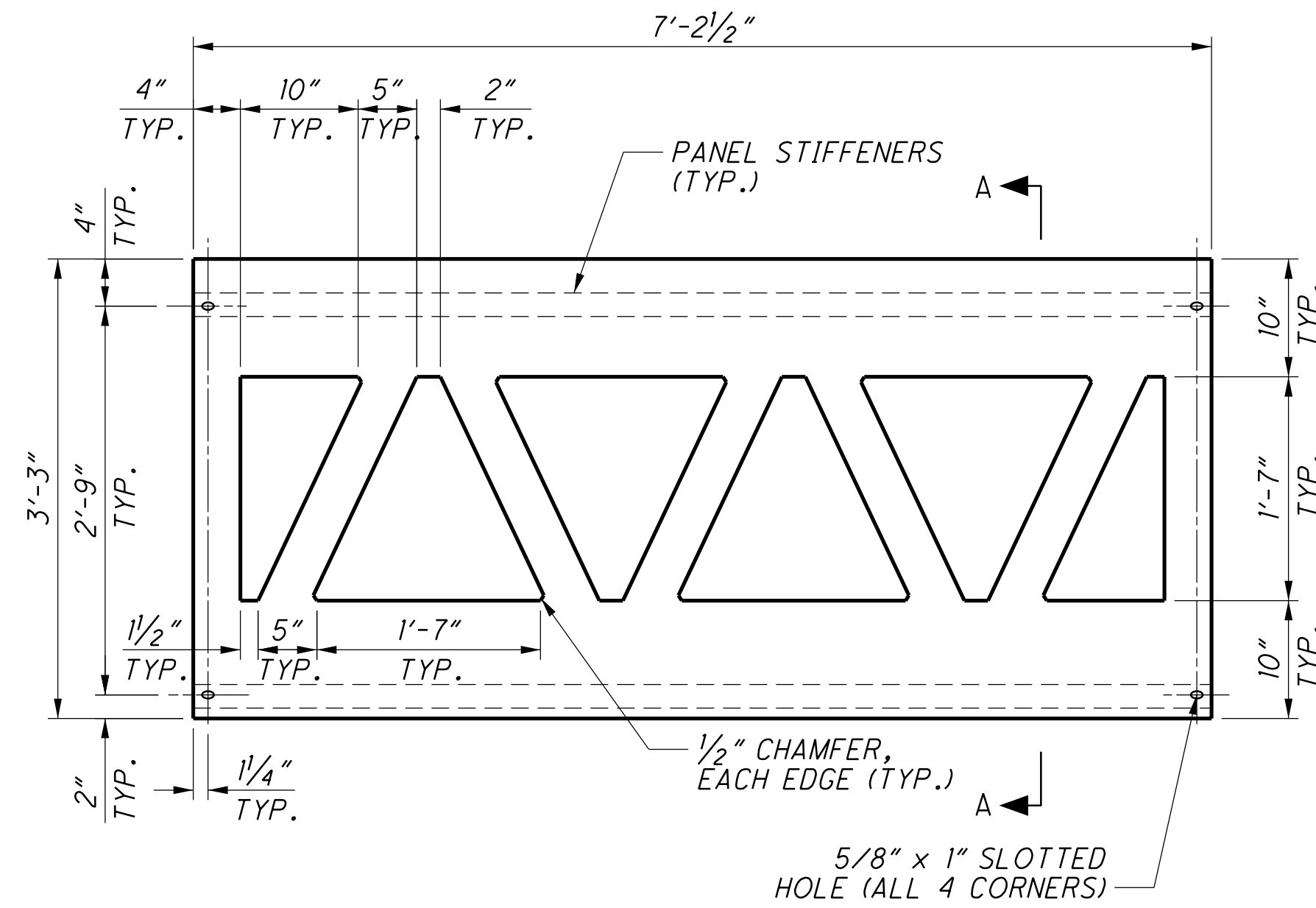
- THE NEW RAILING STEEL TUBES, DECORATIVE PANELS AND CONNECTIONS ARE INCLUDED IN ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN. FOR ADDITIONAL NOTES, SEE THE GENERAL NOTES ON SHEET [2/15].
- THE EXISTING POSTS TO REMAIN, THE NEW RAILING CONNECTION ANGLES AND NEW PANEL CONNECTION ANGLES SHALL BE CLEANED AND COATED WITH A PRIME AND INTERMEDIATE OZEU COATING SYSTEM. ONCE NEW RAIL TUBES AND PANELS ARE INSTALLED, ALL RAILING SURFACES SHALL RECEIVE THE SAME COLOR FINAL COAT. 12" OF THE INTERIOR FACES AT EACH END OF RAIL TUBE TO BE PAINTED WITH THE FINAL COAT.

THE EPOXY SHOP COAT ON THE TUBES WILL ALSO INCLUDE 12" OF THE INTERIOR FACES OF EACH END OF THE TUBE. SEE THE GENERAL NOTES ON SHEET [2/15].
- FOR NEW DECORATIVE RAILING PANEL DETAILS, SEE SHEET [11/15].
- THE RAILING POST SPACING DETAILS AND THE TABLE OF RAIL DIMENSIONS ARE TAKEN FROM THE 1986 REHABILITATION PLANS. ALL DIMENSIONS SHOULD BE CONSIDERED "+".



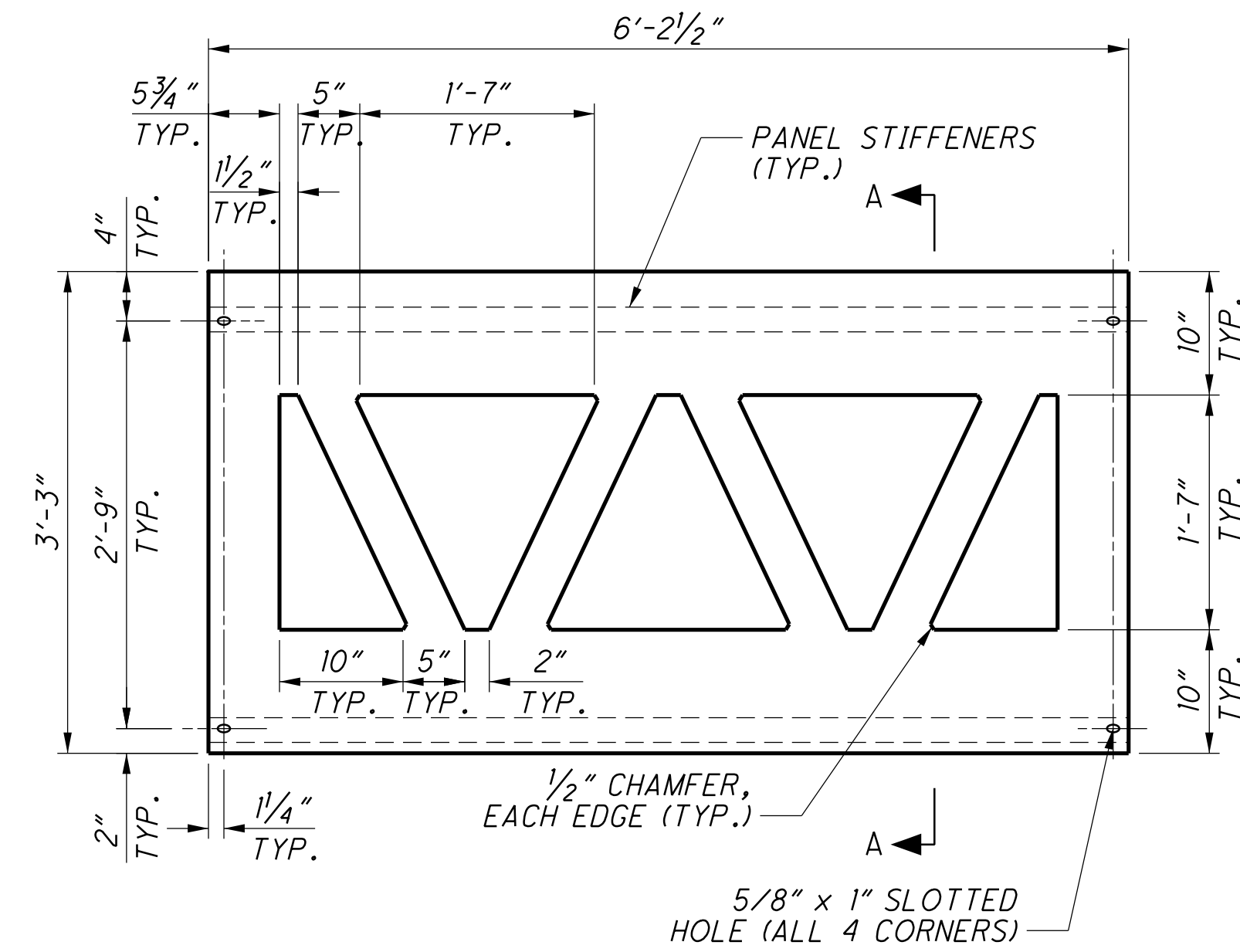
RAIL TYPE	DIMENSION (SEE NOTE 4)					NO. REQ'D.		
	"A"	"B"	"C"	"D"	"E"	TOP	CENTER	BOT.
1	16'-6"	3 1/2"	7'-11 1/2"	7'-11 1/2"	3 1/2"	170	170	170
2	16'-7 1/2"	3 1/2"	7'-10 3/4"	8'-0 1/4"	5"	8	8	8
3	16'-10"	3 1/2"	7'-11 7/8"	8'-1 3/8"	5"	28	28	28
4	17'-9"	3 1/2"	7'-11 1/2"	8'-8 1/2"	9 1/2"	8	8	8
5	19'-0"	9 1/2"	8'-8 1/2"	8'-8 1/2"	9 1/2"	4	4	4
6	8'-11 1/2"	5"			5"	14	14	14
7	11'-1"	5"			5"	4	4	4

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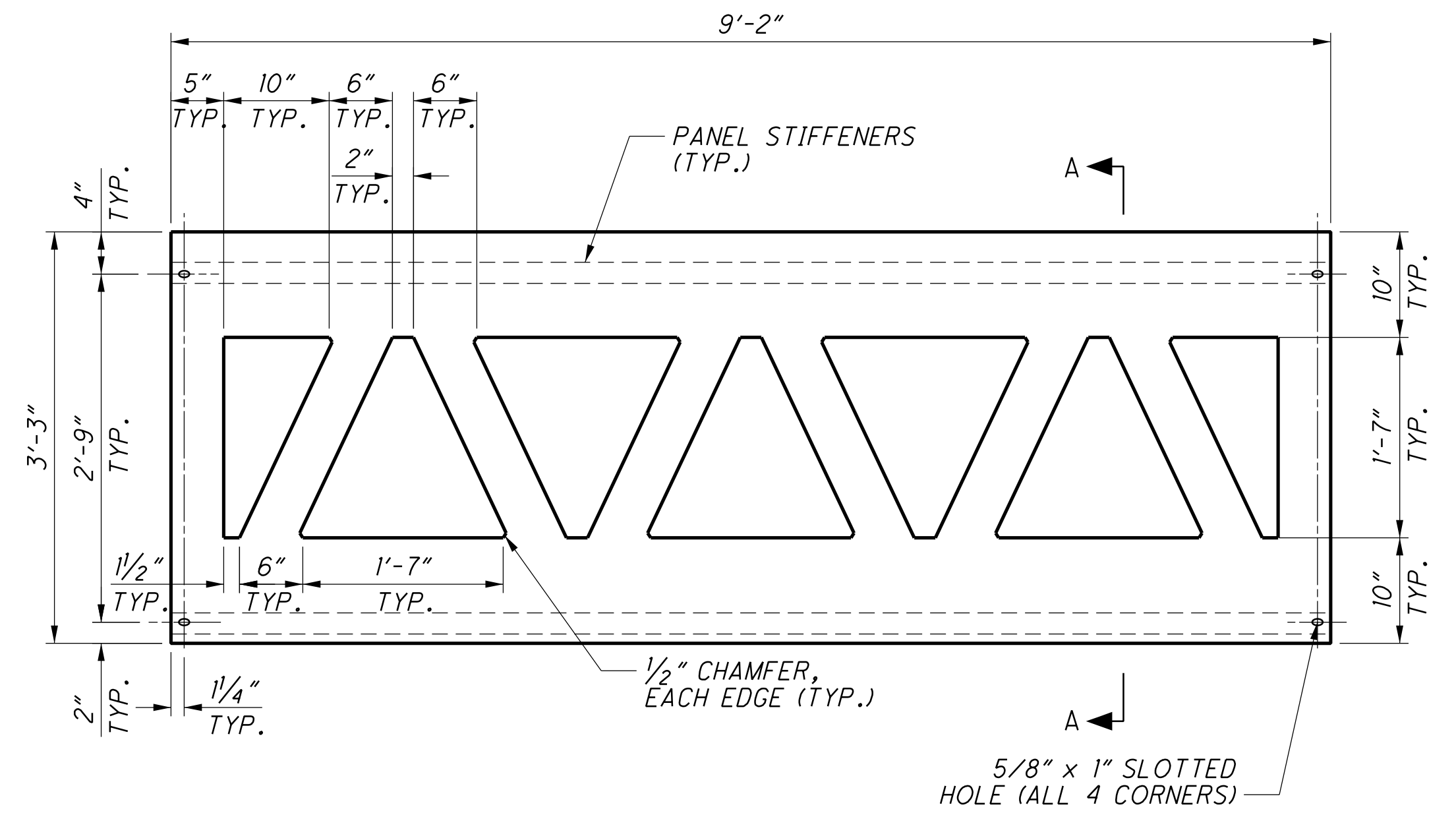
RAILING PANEL - TYPE A

436 REQUIRED



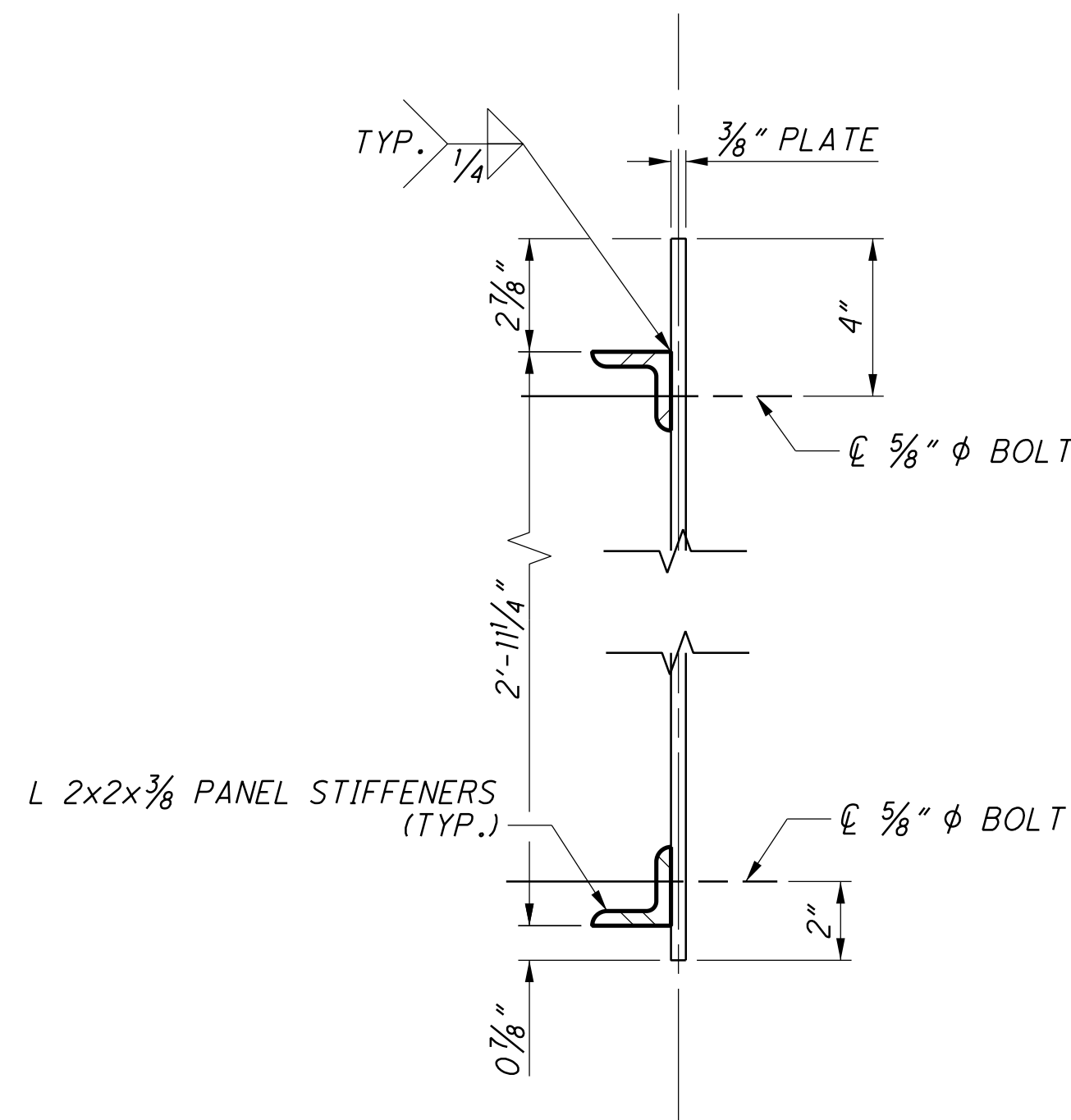
RAILING PANEL - TYPE B

USE AT PIERS - 14 REQUIRED

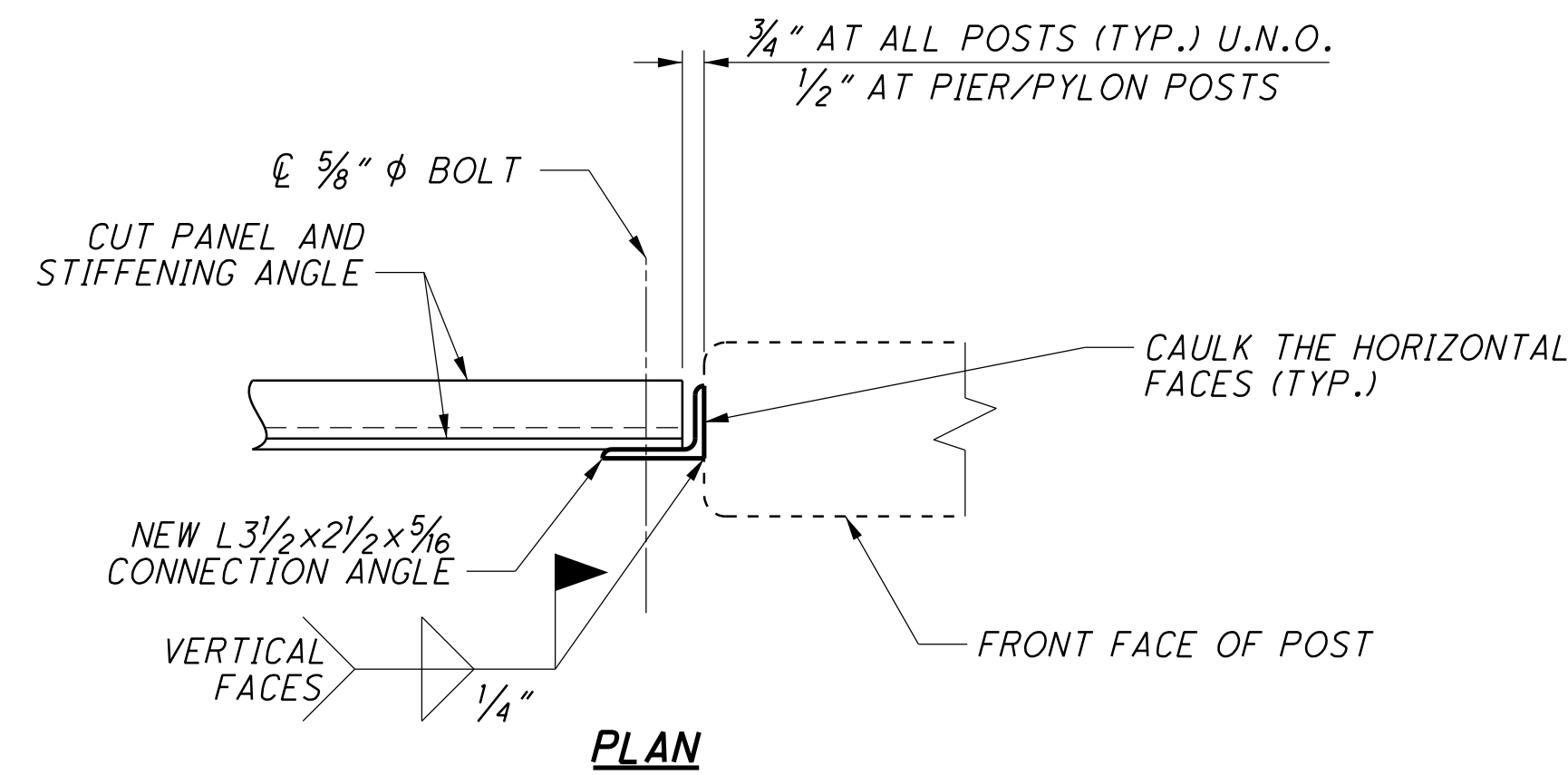


RAILING PANEL - TYPE C

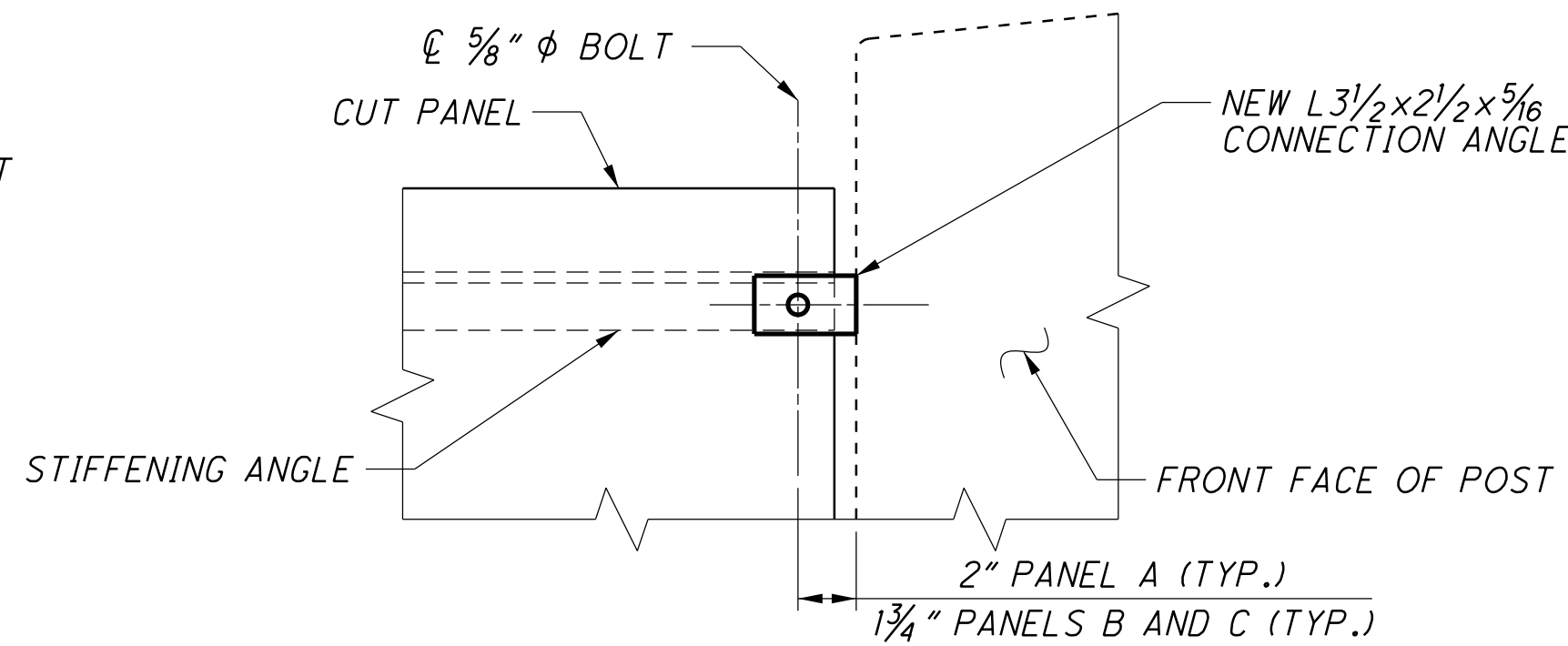
USE AT PYLONS - 4 REQUIRED



SECTION A-A



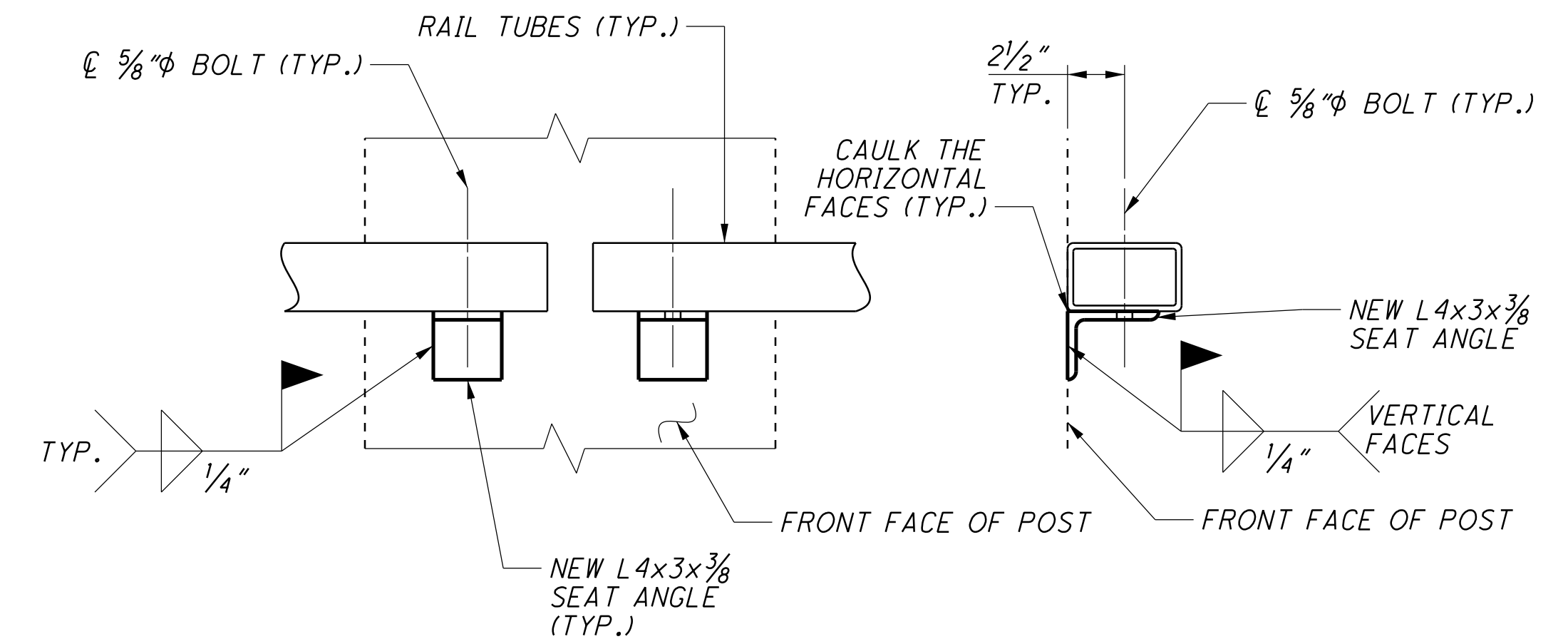
PLAN



ELEVATION

DETAIL OF PANEL AT CONNECTION ANGLE

(SEE NOTE 4)



DETAIL OF RAIL TUBES AT SEAT ANGLE CONNECTION

(SEE NOTE 4)

NOTES:

1. THE RAILING PANELS, CONNECTION ANGLES AND BOLTS ARE INCLUDED IN ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UP, AS PER PLAN. FOR ADDITIONAL NOTES SEE THE GENERAL NOTES, SHEET [2/15].
2. HIGH STRENGTH BOLTS SHALL BE 5/8" F3125 (PREVIOUSLY A325).
3. ALL EDGES OF PANELS AND CUTOUTS SHALL BE GROUND SMOOTH.
4. FOR PLACEMENT OF PANEL TYPES A, B, AND C, SEE SHEET [10/15].
5. FOR DETAILS OF THE DECORATIVE PANEL CONNECTION ANGLES AND RAIL TUBE CONNECTION ANGLES, AND THEIR LOCATIONS ON THE EXISTING POSTS, SEE SHEET [12/15].
6. CAULKING ALONG THE PANEL AND RAIL TUBE CONNECTION ANGLES IS INCLUDED IN ITEM 514, FIELD PAINTING, MISC.: CAULKING CONNECTION ANGLES. FOR ADDITIONAL NOTES, SEE THE GENERAL NOTES ON SHEET [2/15].

PROPOSED RAILING DETAILS - 2
BRIDGE NO. CUY-17-2.83
BROOKPARK ROAD OVER ROCKY RIVER

CUY-17-02.83
PID No. 101682

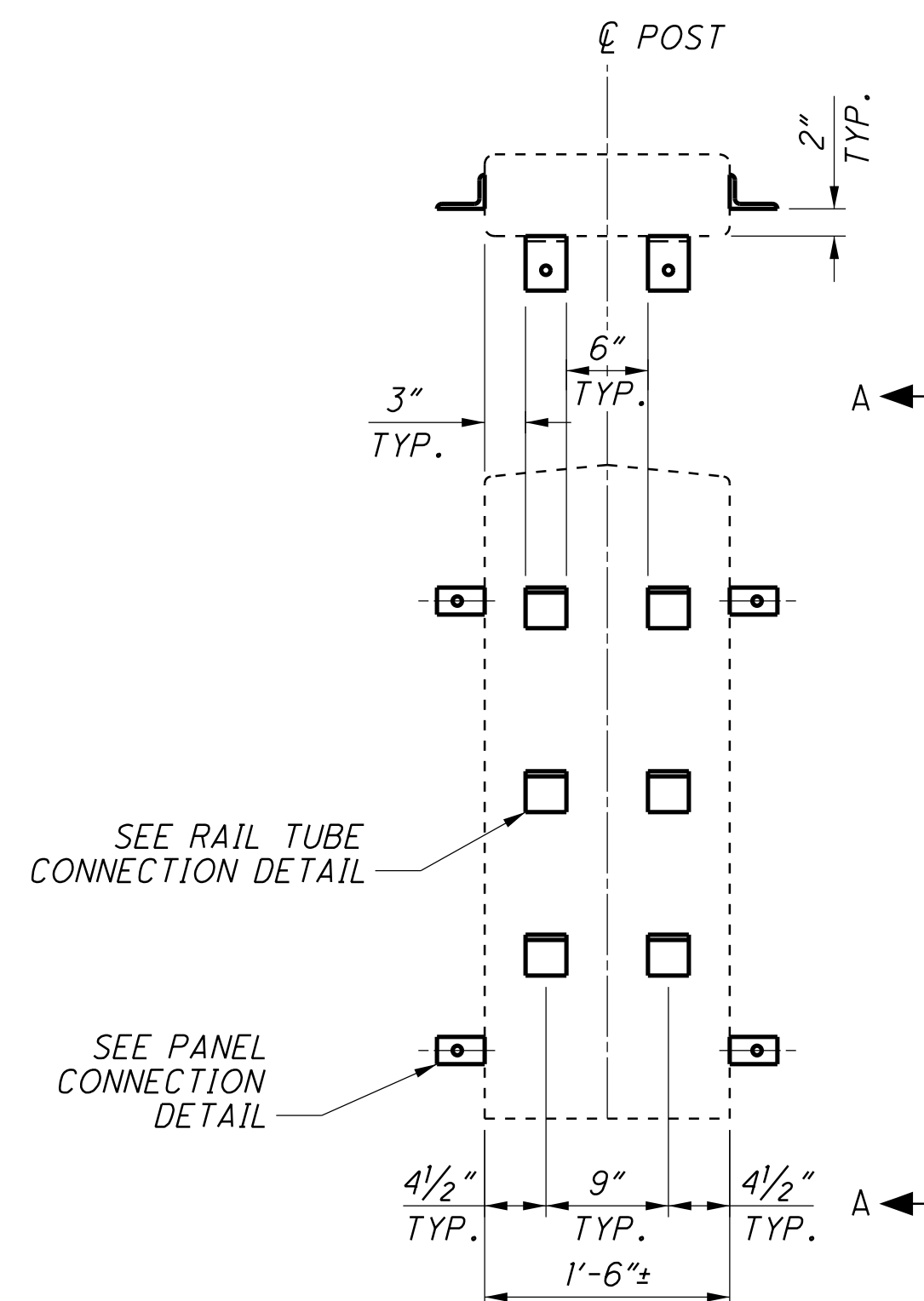
11 / 15

30
34

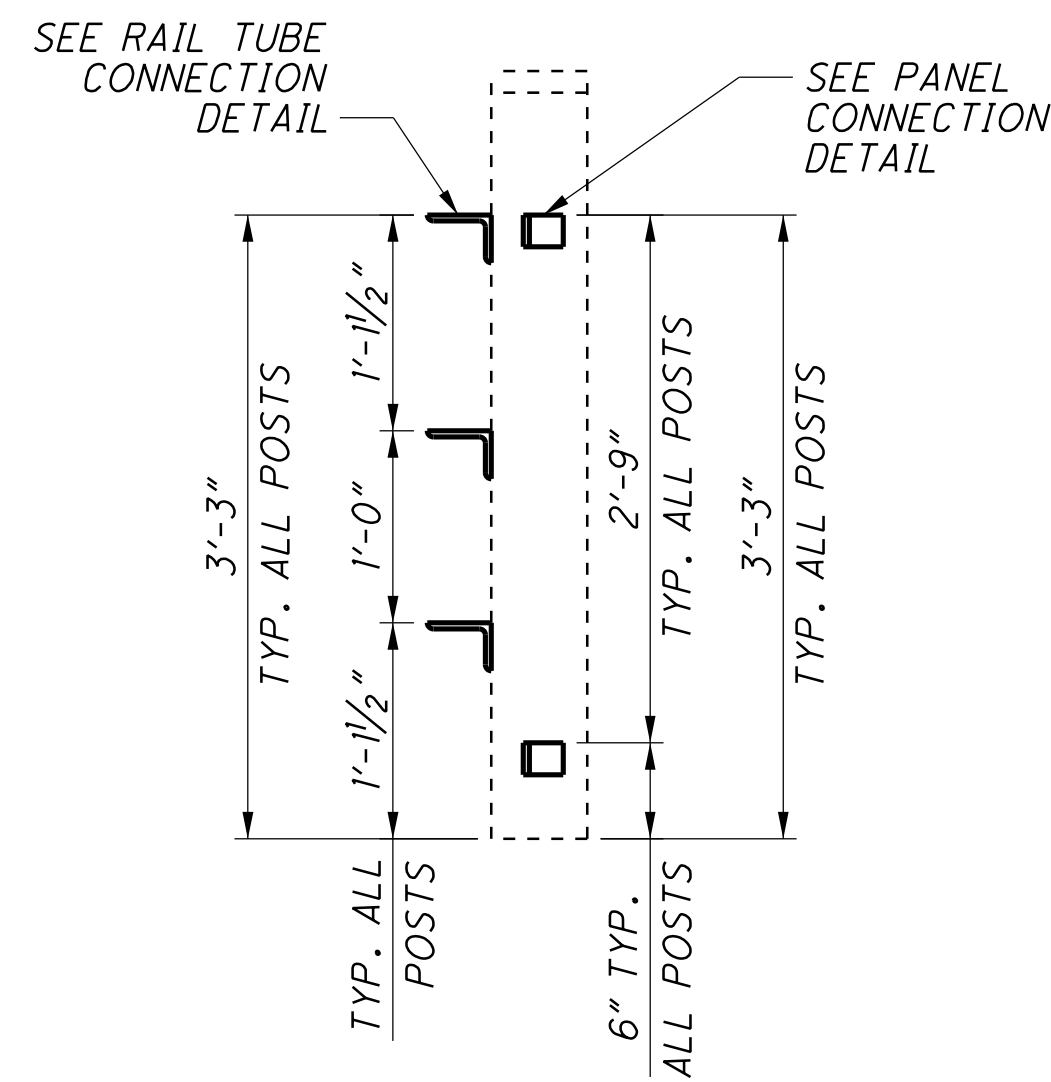
DESIGN AGENCY
E.L. ROBINSON
ENGINEERING
1488 West 9th Street - Cleveland, Ohio 44113
www.elrobinsonengineering.com

DESIGNED BY AEF/NBR
CHECKED BY JOL
DRAWN BY AEF
REVISED BY
REVIEWED BY RER
DATE 10/27/2016
STRUCTURE FILE NUMBER 1802046

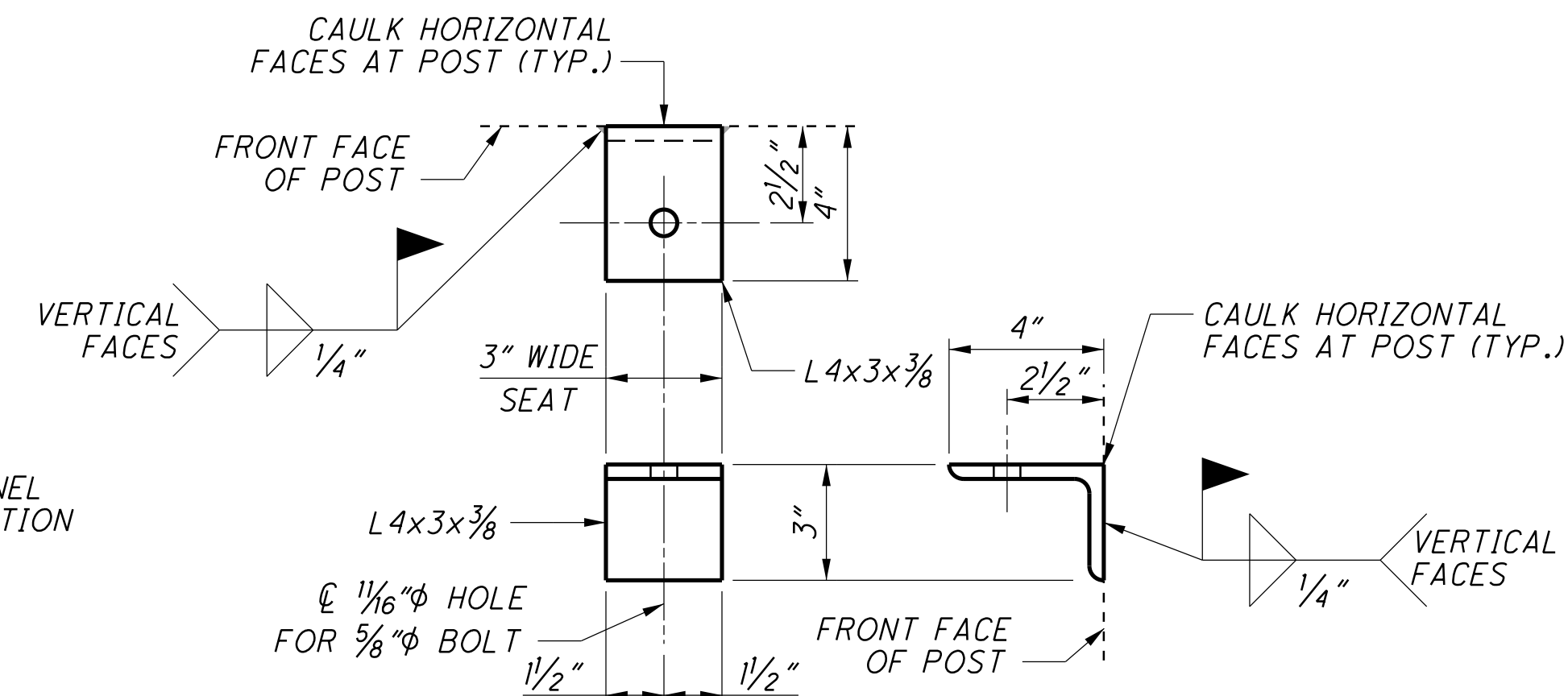
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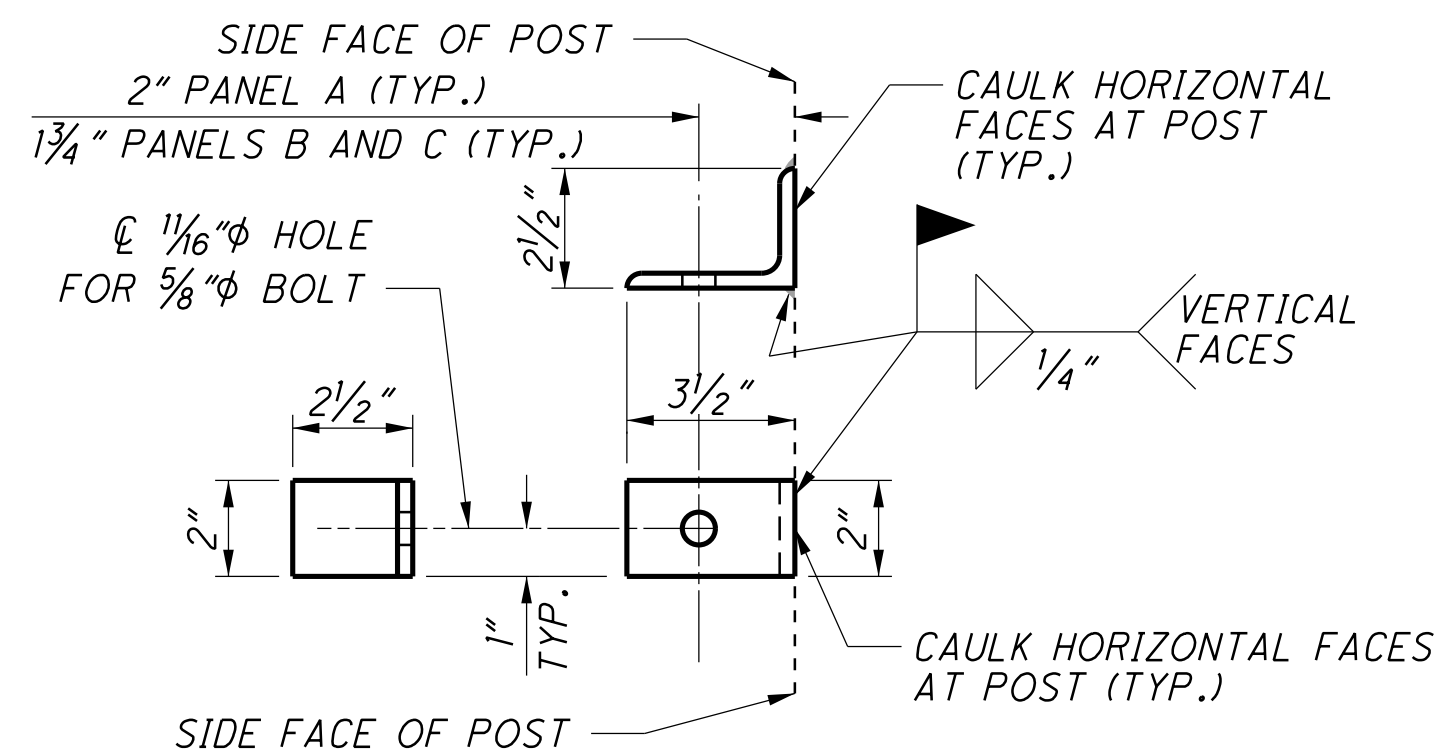
STANDARD POST CONNECTION LAYOUT
(PLAN AND FRONT FACE ELEVATION)



VIEW A-A
(STANDARD POST SHOWN,
OTHERS SIMILAR)



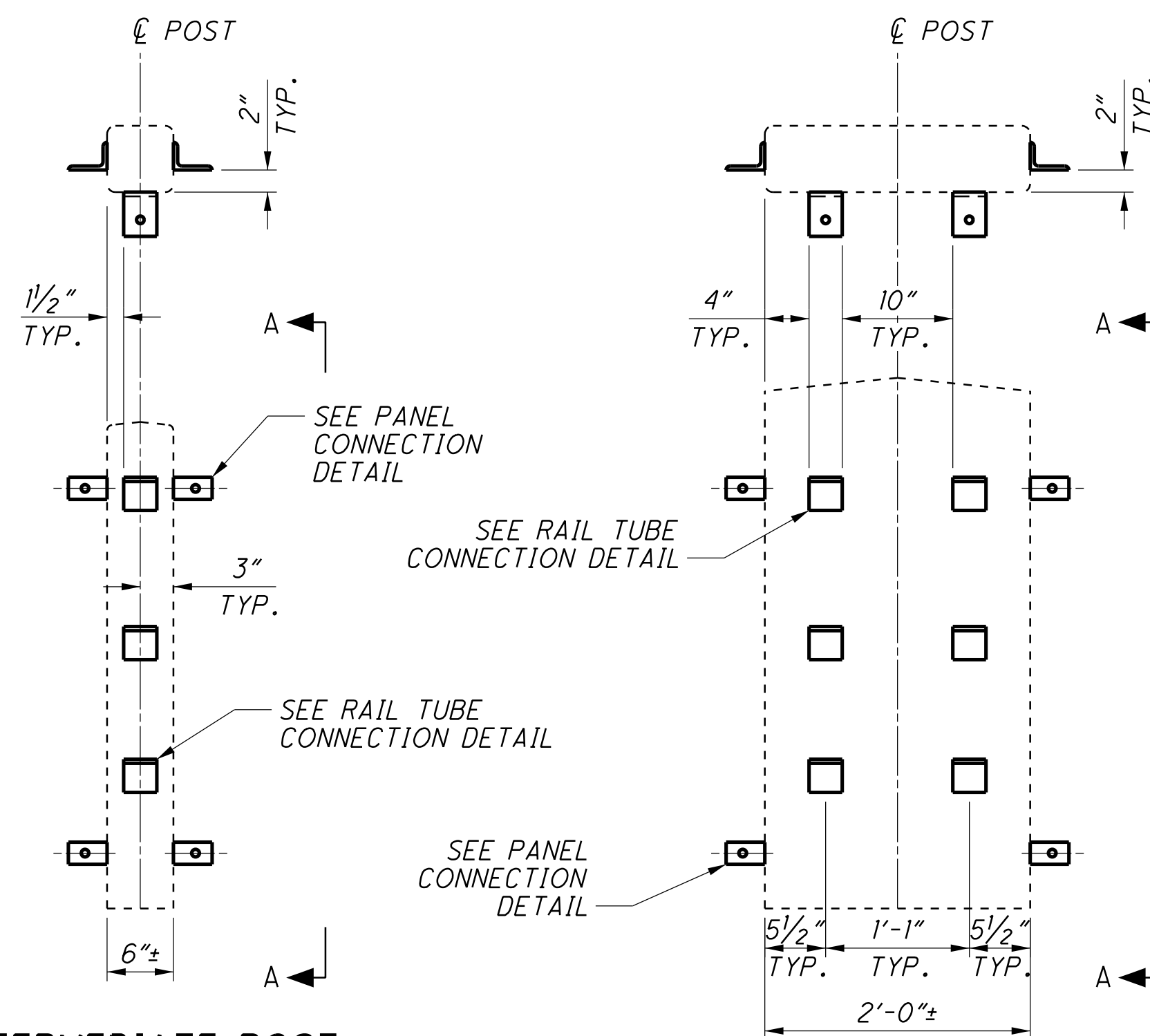
RAIL TUBE CONNECTION DETAIL
L4x3x3/8 SEAT ANGLE



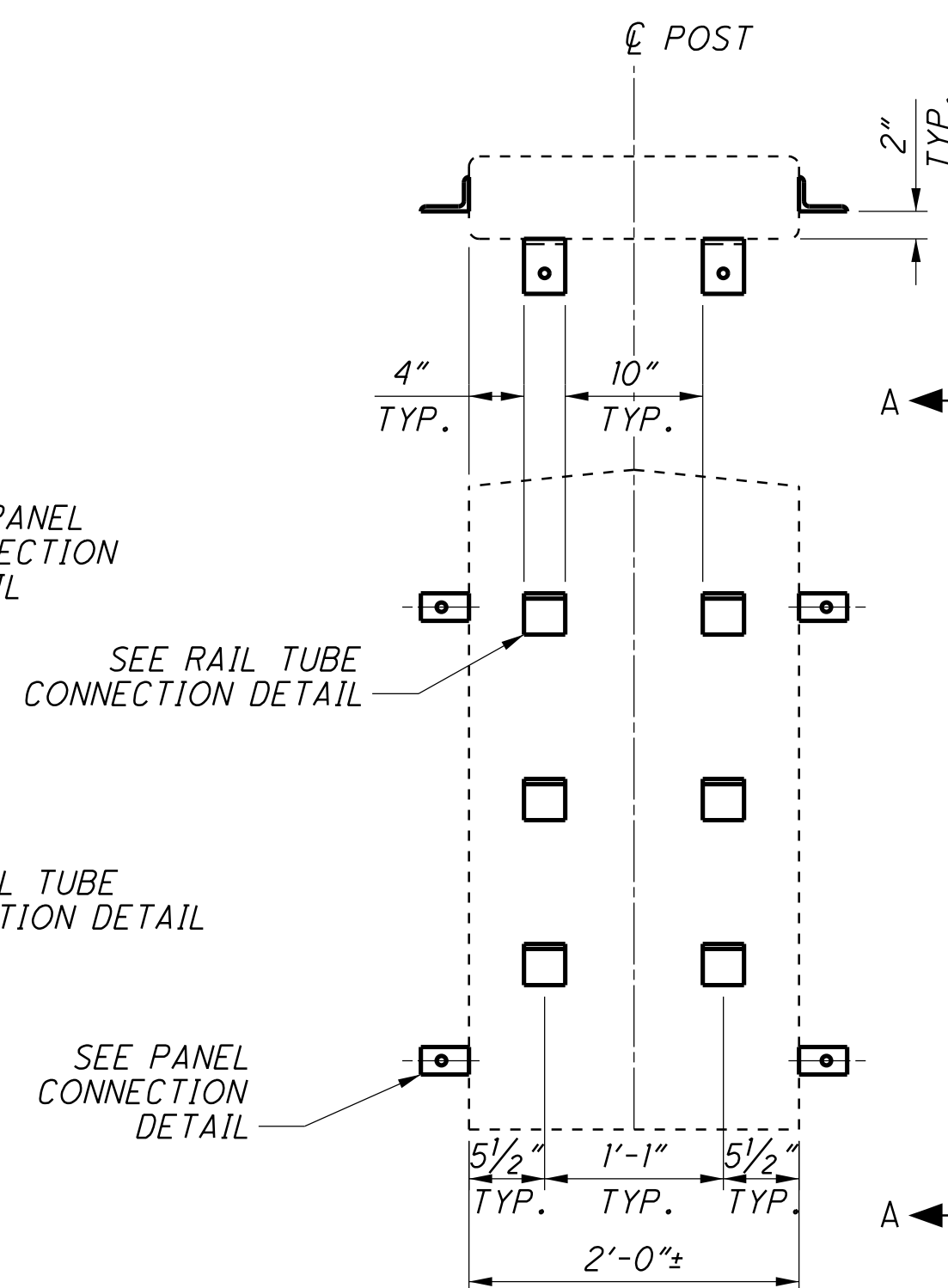
PANEL CONNECTION DETAIL
L3 1/2 x 2 1/2 x 5/16 CONNECTION ANGLE

NOTES:

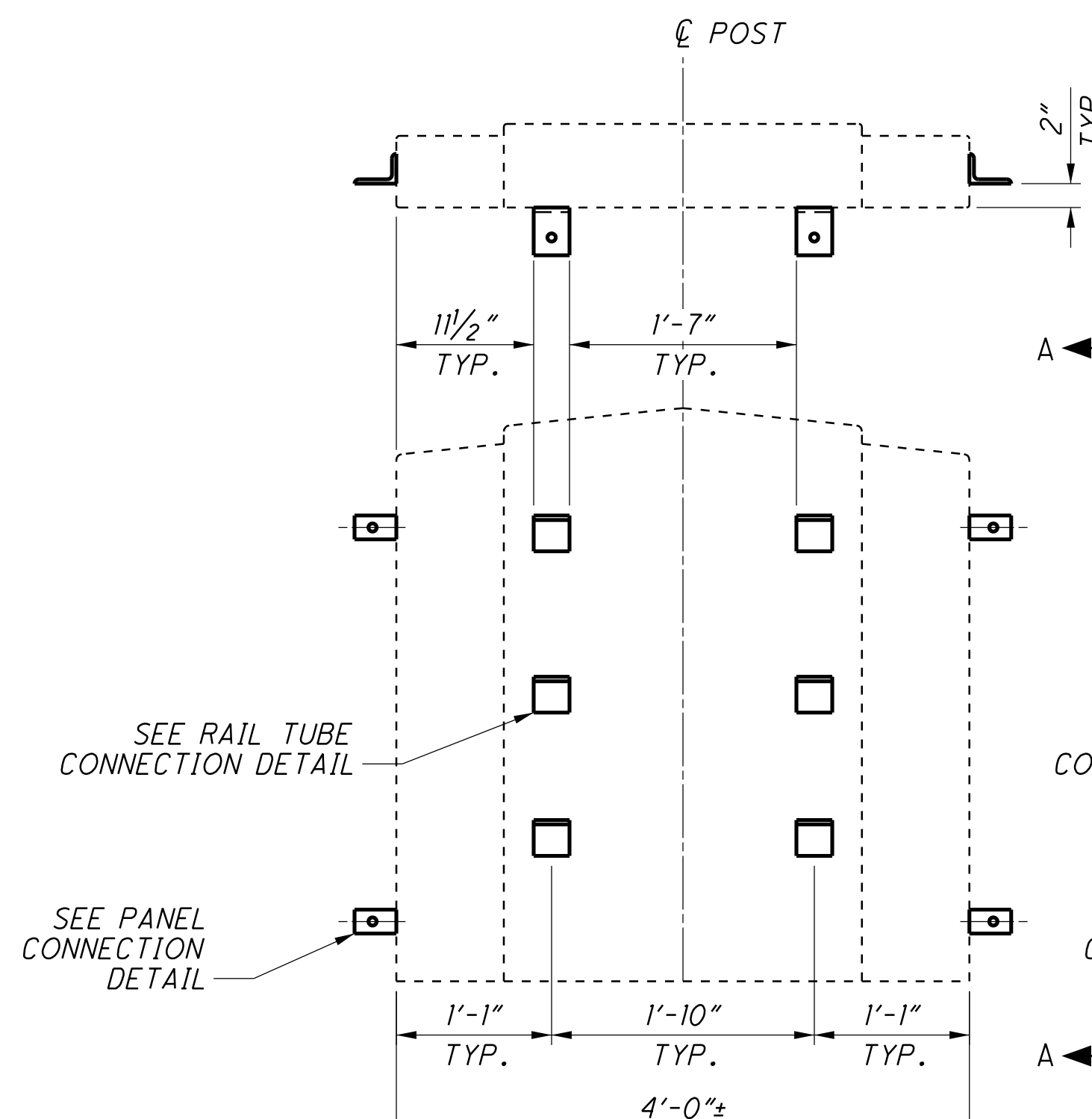
1. ALL CONNECTION ANGLES TO BE WELDED TO EXISTING POSTS AFTER THE POSTS HAVE BEEN CLEANED AND BEFORE PAINTING BEGINS.
2. ALL WELDING AND CONNECTION STEEL IS INCLUDED IN ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN. FOR ADDITIONAL NOTES SEE THE GENERAL NOTES ON SHEET [2715].



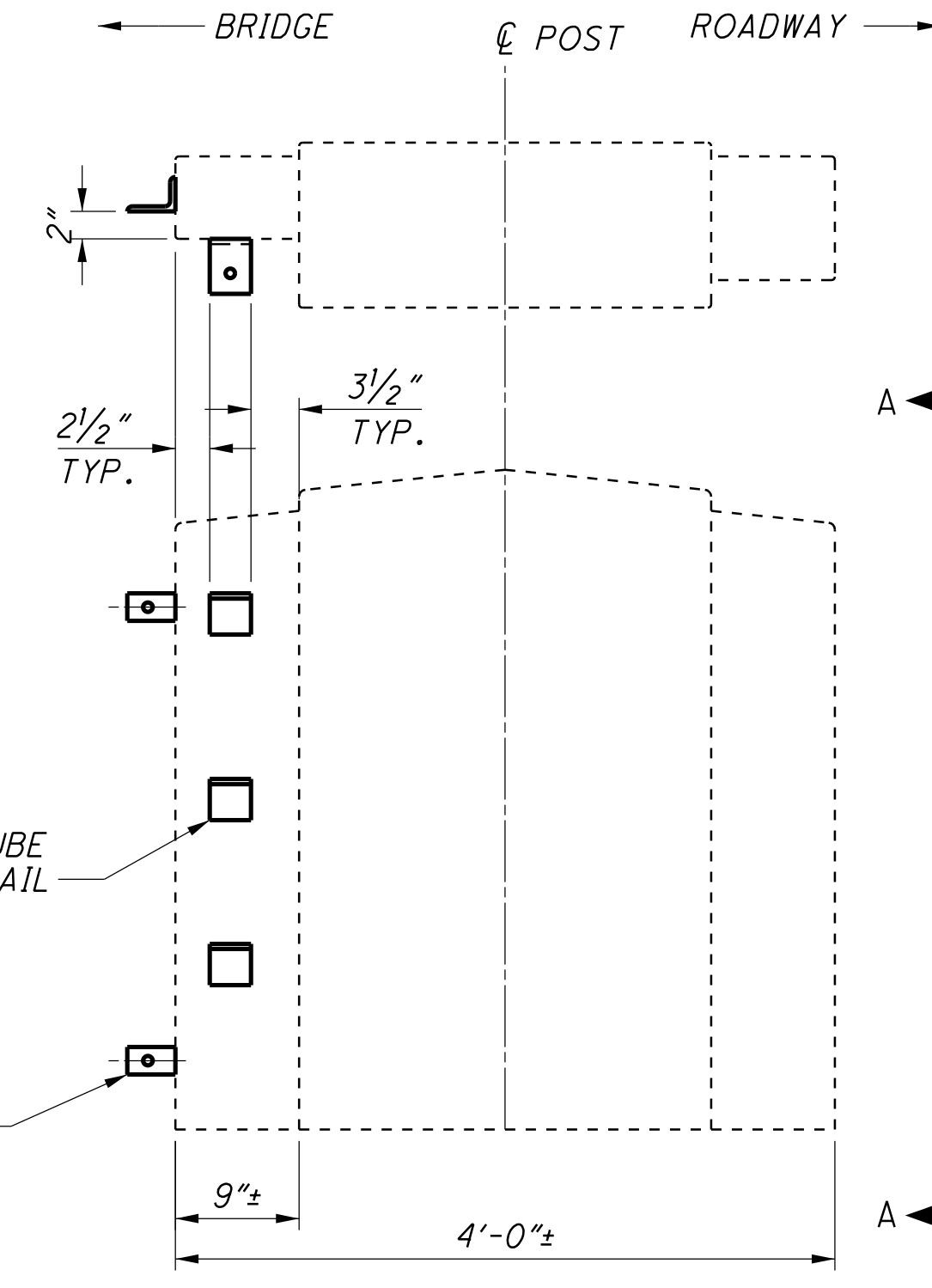
INTERMEDIATE POST CONNECTION LAYOUT
(PLAN AND FRONT FACE ELEVATION)



PIER/PYLON POST CONNECTION LAYOUT
(PLAN AND FRONT FACE ELEVATION)



ABUTMENT POST CONNECTION LAYOUT
(PLAN AND FRONT FACE ELEVATION)



TERMINAL POST CONNECTION LAYOUT
(PLAN AND FRONT FACE ELEVATION)

PROPOSED RAILING DETAILS - 3
BRIDGE NO. CUY-17-2.83
BROOKPARK ROAD OVER ROCKY RIVER

CUY-17-02.83
PID No. 101682

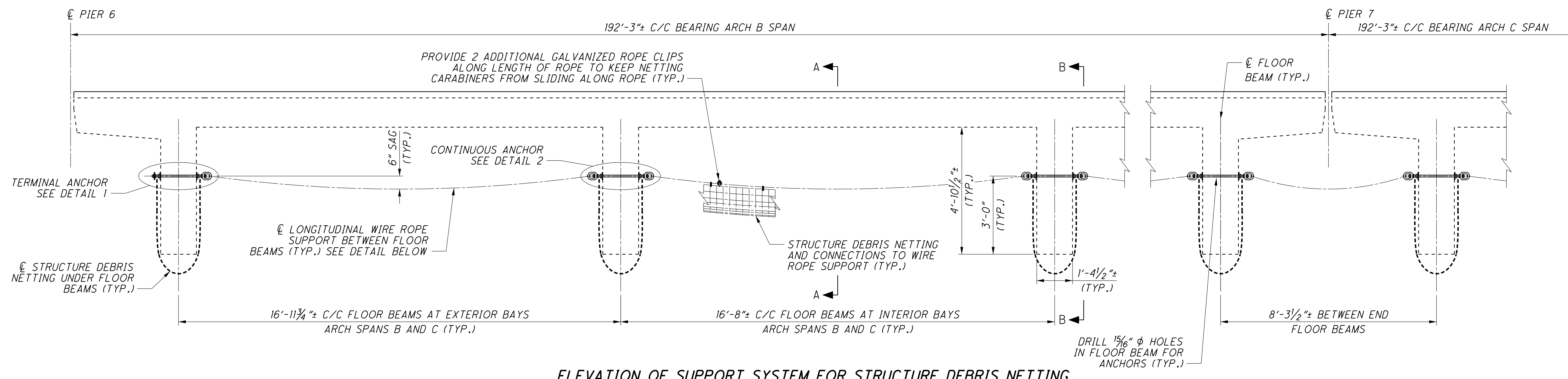
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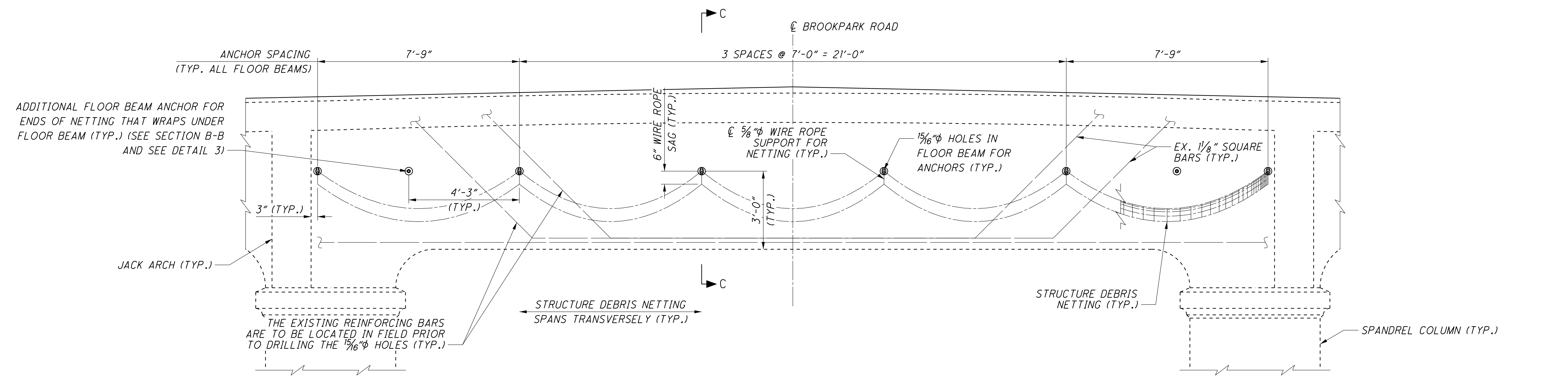
DESIGN AGENCY
E.L. ROBINSON
ENGINEERING
1488 West 9th Street - Cleveland, Ohio 44113
www.elrobinsonengineering.com

DESIGNED	DATE	REVIEWED	DATE	DRAWN	DATE
NBR	10/27/2016	NBR	10/27/2016	NBR	10/27/2016
CHECKED	FILE NUMBER	REVISED	FILE NUMBER	REVISED	FILE NUMBER
JOL					1802046

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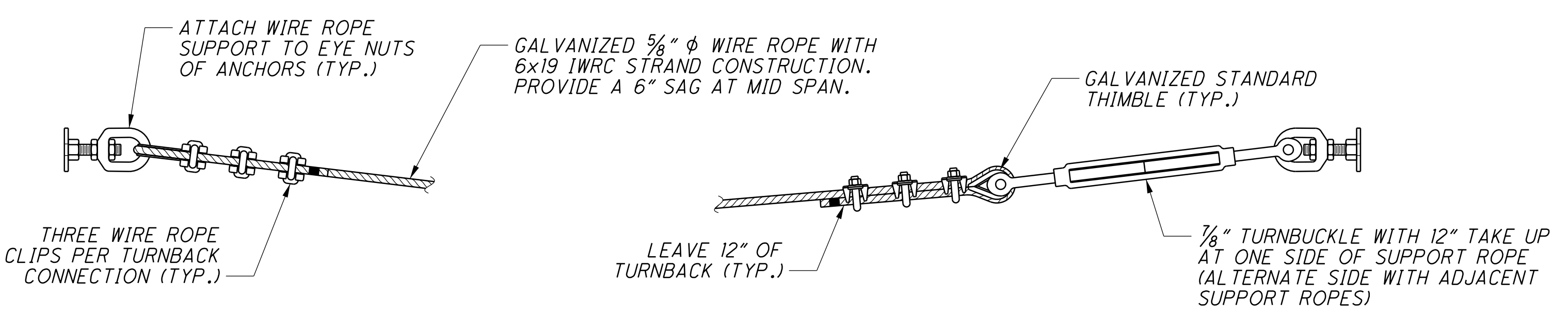


ELEVATION OF SUPPORT SYSTEM FOR STRUCTURE DEBRIS NETTING



SECTION A-A

(DEBRIS NETTING THAT WRAPS UNDER FLOOR BEAM AND ITS SUPPORT NOT SHOWN FOR CLARITY, SEE SECTION B-B)



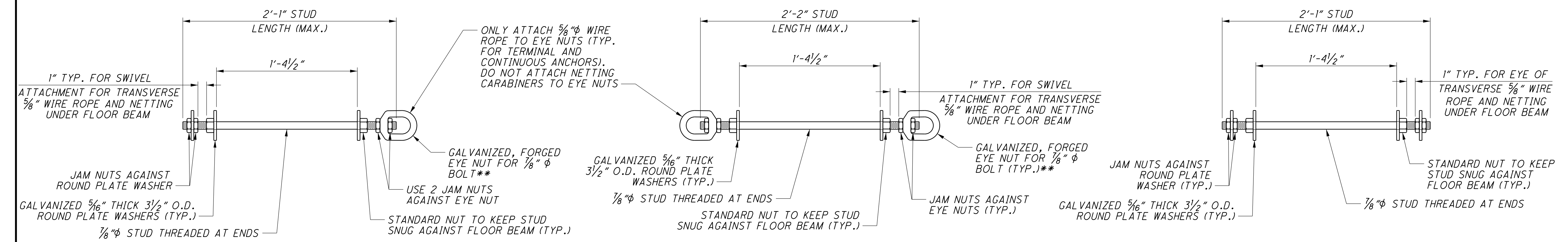
LONGITUDINAL WIRE ROPE SUPPORT BETWEEN FLOORBEAMS DETAILS

(ONLY PORTIONS OF THE ANCHORS ARE SHOWN FOR CLARITY)

NOTES:

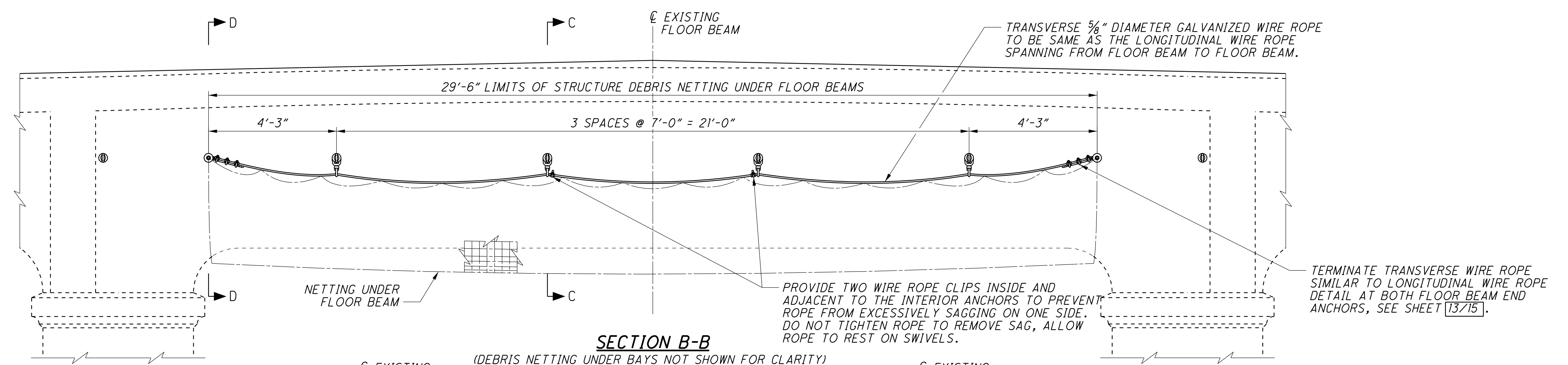
1. THE GALVANIZED WIRE ROPE, ROPE CLIPS, THIMBLES, TURNBUCKLES, 1/8" DIAMETER DRILLED HOLES IN THE FLOOR BEAMS, AND ALL HARDWARE IN THE CONTINUOUS ANCHORS, TERMINAL ANCHORS AND FLOOR BEAM END ANCHORS ARE INCLUDED IN ITEM 530, SPECIAL - STRUCTURES: NETTING SUPPORT CABLE SYSTEM. FOR MORE NOTES ON THE NETTING SUPPORT CABLE SYSTEM, SEE THE GENERAL NOTES ON SHEET 3/15.
2. DEBRIS NETTING AND SUPPORT SYSTEM ARE SYMMETRICAL ABOUT THE C/C OF PIER 7.
3. THE STRUCTURE DEBRIS NETTING AND ITS CONNECTIONS TO THE SUPPORT CABLE SYSTEM ARE INCLUDED IN ITEM 530, SPECIAL - STRUCTURES: STRUCTURE DEBRIS NETTING. FOR NOTES ON THE NETTING, SEE THE GENERAL NOTES ON SHEET 3/15.
4. FOR TERMINAL ANCHOR DETAIL 1, CONTINUOUS ANCHOR DETAIL 2, FLOOR BEAM END ANCHOR DETAIL 3, AND SECTIONS B-B AND C-C, SEE SHEET 14/15.

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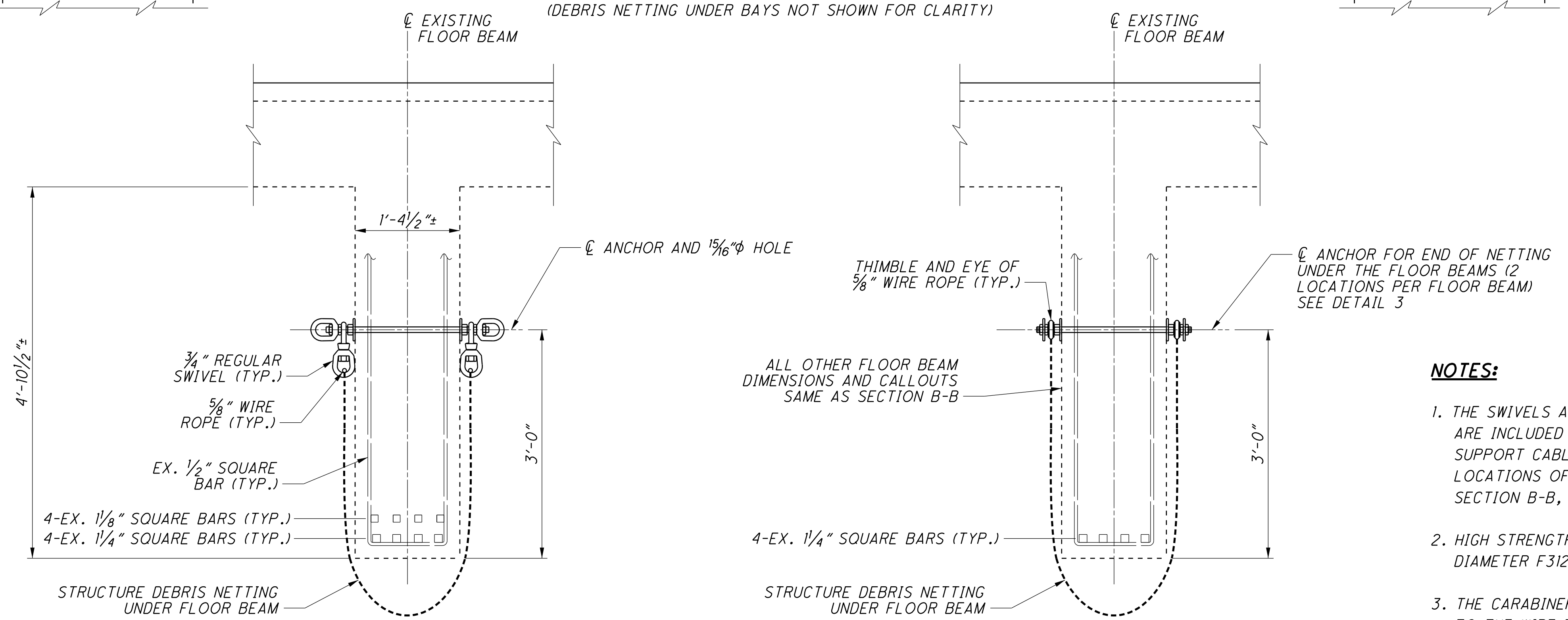


DETAIL 1 - TERMINAL ANCHOR **DETAIL 2 - CONTINUOUS ANCHOR** **DETAIL 3 - ANCHOR AT FLOOR BEAM ENDS**

**EYE NUTS ARE TO BE ORIENTED AS SHOWN, WITH THE STRONG AXIS IN THE VERTICAL PLANE



SECTION B-B



SECTION C-C

(INTERIOR FLOOR BEAM SHOWN, EXTERIOR SIMILAR)
(WIRE ROPE SUPPORT AND NETTING UNDER BAYS NOT SHOWN FOR CLARITY)

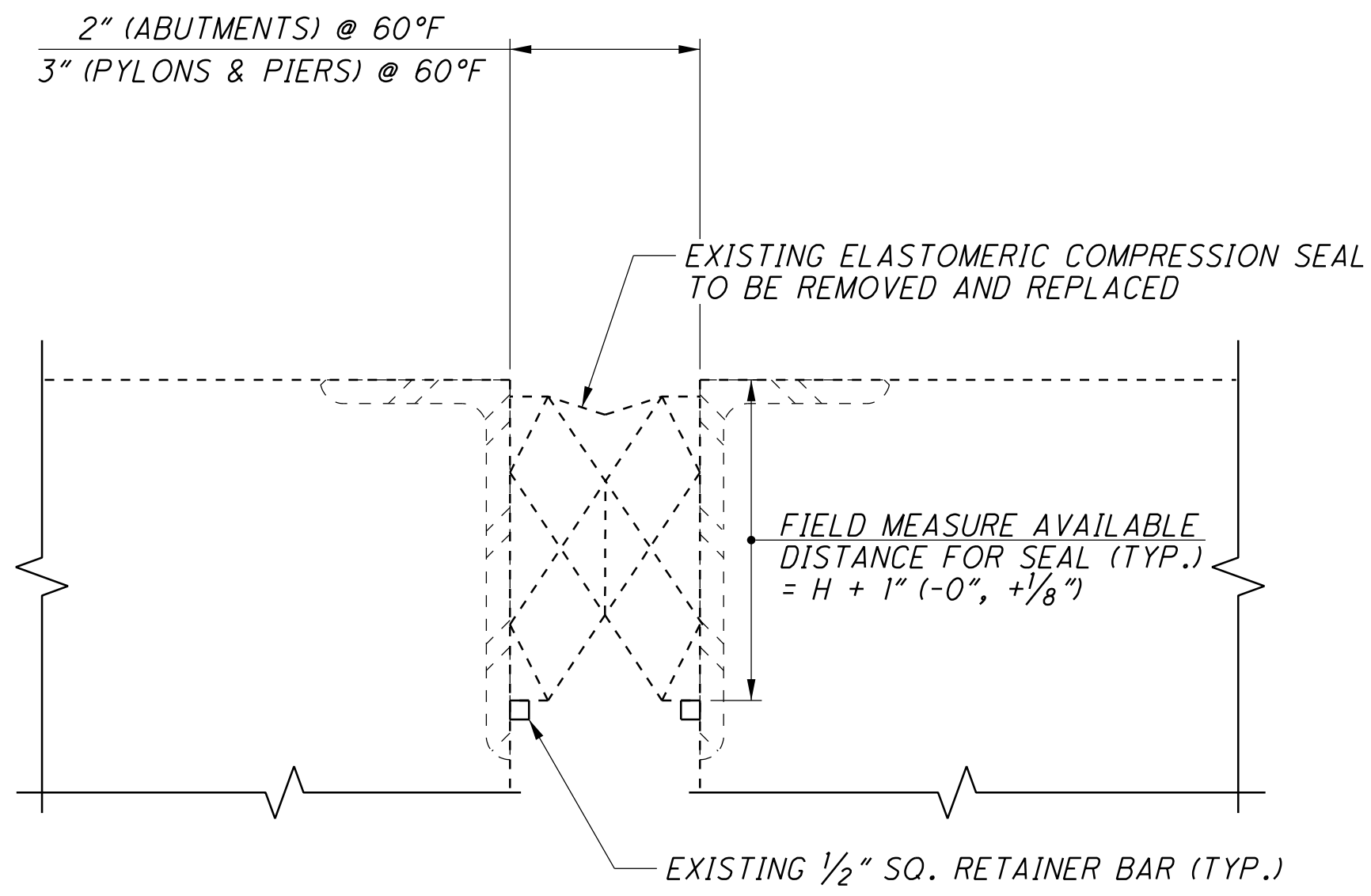
SECTION D-D

(INTERIOR FLOOR BEAM SHOWN, EXTERIOR SIMILAR)
(WIRE ROPE SUPPORT AND NETTING UNDER BAYS NOT SHOWN FOR CLARITY)

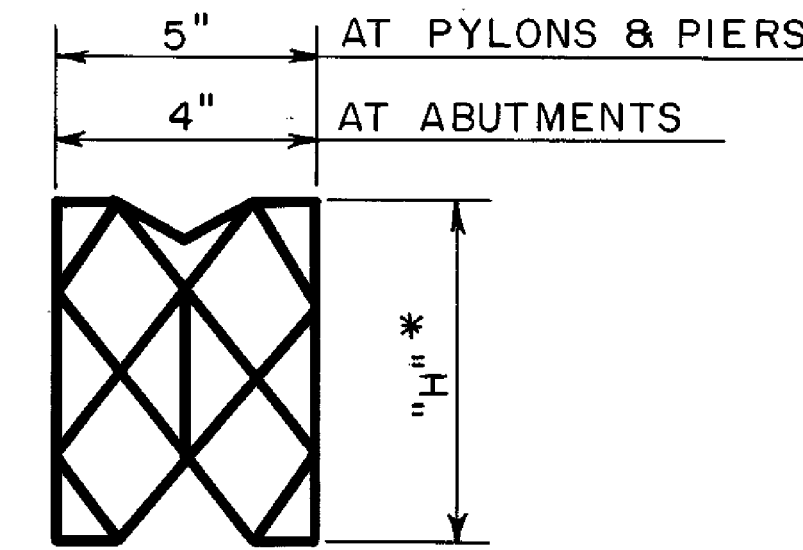
NOTES:

1. THE SWIVELS AND TRANSVERSE WIRE ROPES AND THEIR FITTINGS ARE INCLUDED IN ITEM 530, SPECIAL - STRUCTURES: NETTING SUPPORT CABLE SYSTEM. FOR ADDITIONAL NOTES AND LOCATIONS OF DETAILS 1, 2 AND 3, AND LOCATION OF SECTION B-B, SEE SHEET 13/15.
2. HIGH STRENGTH THREADED STUDS AND NUTS SHALL BE 7/8" DIAMETER F3125 (PREVIOUSLY A325).
3. THE CARABINERS OR OTHER TYPE OF NETTING CONNECTIONS TO THE WIRE ROPES ARE INCLUDING WITH ITEM 530, SPECIAL - STRUCTURES: STRUCTURE DEBRIS NETTING.

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DESIGNED NBR	DATE 10/27/2016
DRAWN NBR	REVIEWED RER
CHECKED JOL	STRUCTURE FILE NUMBER 1802046
DEBRIS NETTING SUPPORT DETAILS UNDER ARCH B AND C SPANS - 2	
BRIDGE NO. CUY-17-2.83	
BROOKPARK ROAD OVER ROCKY RIVER	
CUY - 17 - 02.83	PID No. 101682
14 / 15	33 / 34

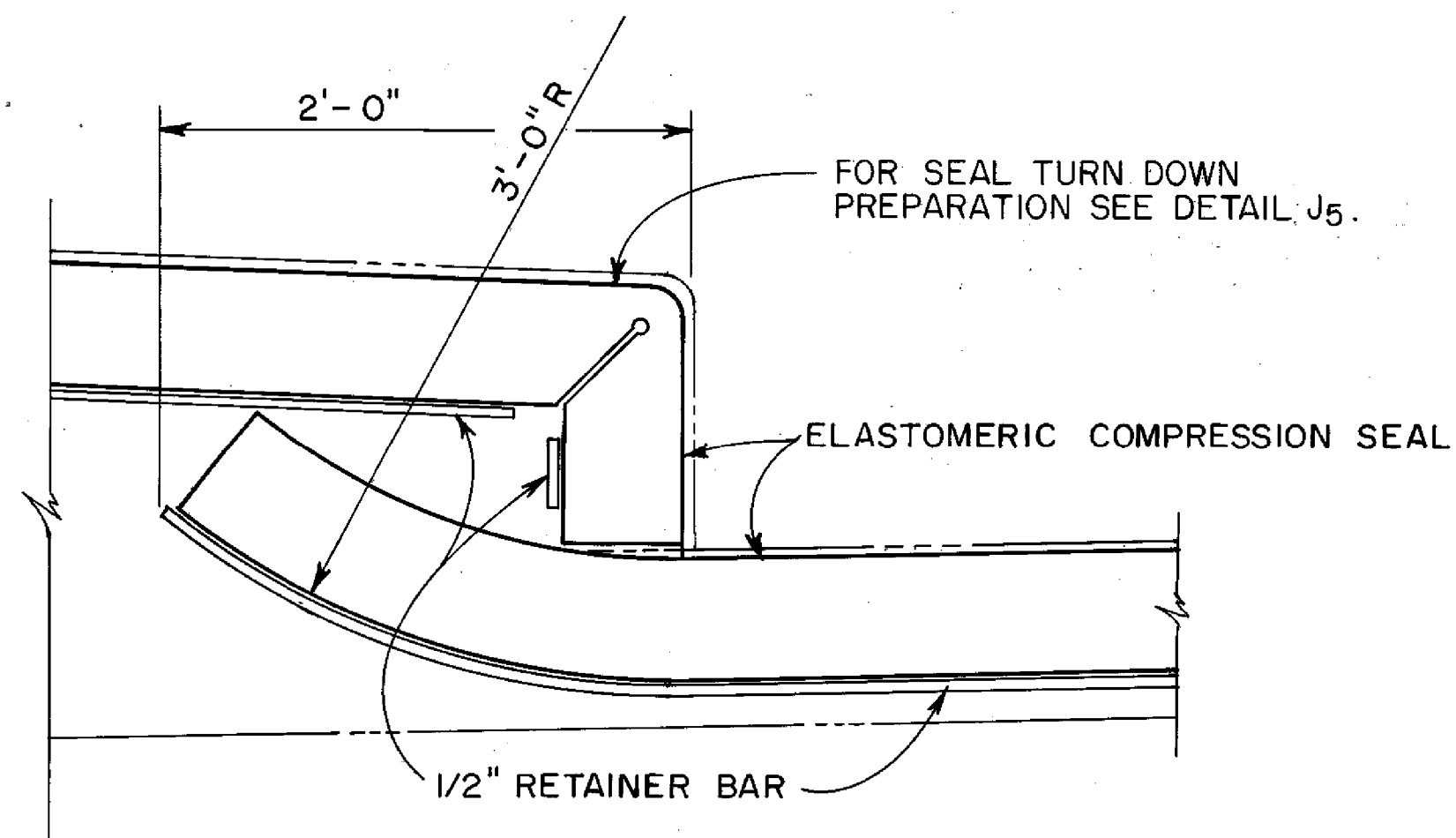


JOINT REPLACEMENT

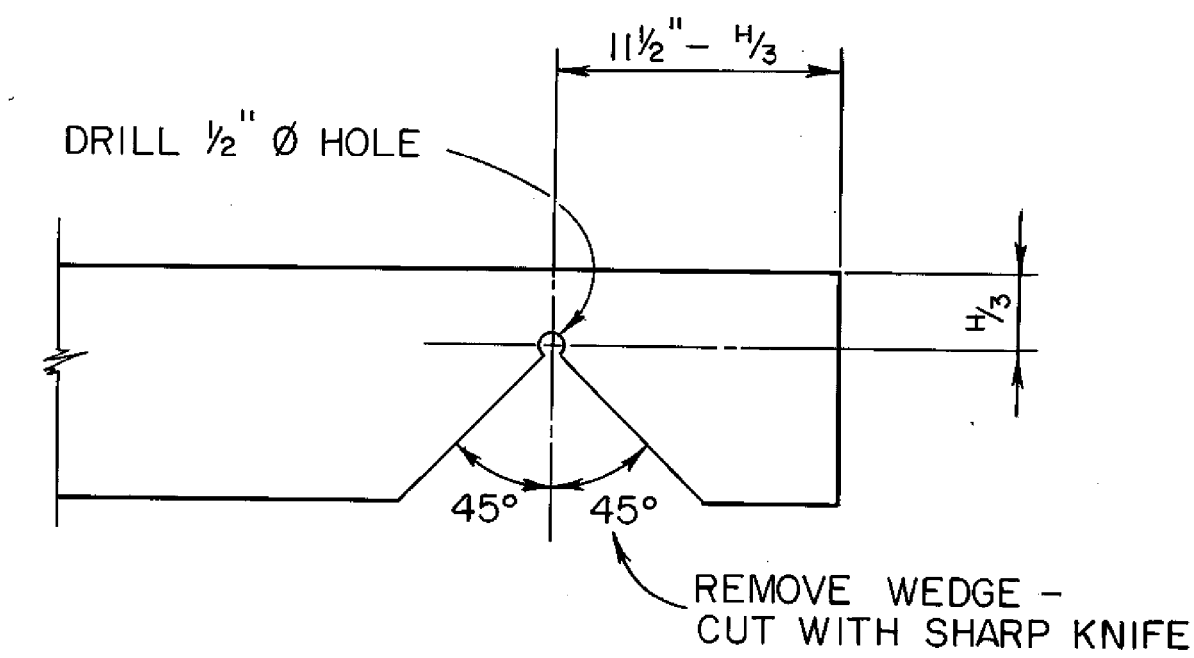


COMPRESSION SEAL DETAIL

* CHOOSE SEAL FROM MANUFACTURER THAT BEST SUITS AVAILABLE DEPTH AS MEASURED IN THE FIELD



DETAIL OF ELASTOMERIC COMPRESSION SEAL AT CURBS



DETAIL J5

SHOWING PREPARATION FOR SEAL TURN DOWN AT CURBS

NOTES:

1. THE DETAIL OF THE COMPRESSION SEAL AT THE CURB AND DETAIL J5 ARE TAKEN FROM THE 1986 REHABILITATION PLANS.
2. THE REMOVAL OF THE EXISTING COMPRESSION SEALS IS INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
3. THE NEW COMPRESSION SEALS AND THEIR INSTALLATION ARE INCLUDED IN ITEM 516, ELASTOMERIC COMPRESSION SEAL.
4. FOR LOCATIONS OF SEAL REPLACEMENT, SEE SHEET 5/15.

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