

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MED-42-19.58
MEDINA TOWNSHIP
BRUNSWICK HILLS TOWNSHIP
MEDINA COUNTY

PROJECT DESCRIPTION

THIS PROJECT IS 3.18 MILES IN LENGTH AND WILL INCLUDE PAVEMENT REPAIRS, RESURFACING WITH ASPHALT CONCRETE, GUARDRAIL REPLACEMENT AND RECONSTRUCTION, PLACEMENT OF PAVEMENT MARKINGS, AND DETECTOR LOOP REPLACEMENT.

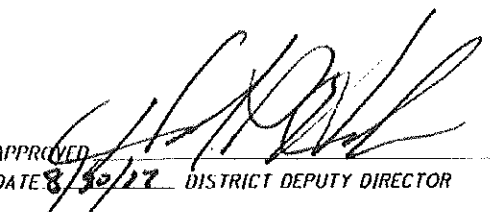
EARTH DISTURBED AREAS

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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: 
DATE: 8/30/17 DISTRICT DEPUTY DIRECTOR

APPROVED: 
DATE: 9-15-17 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E161292

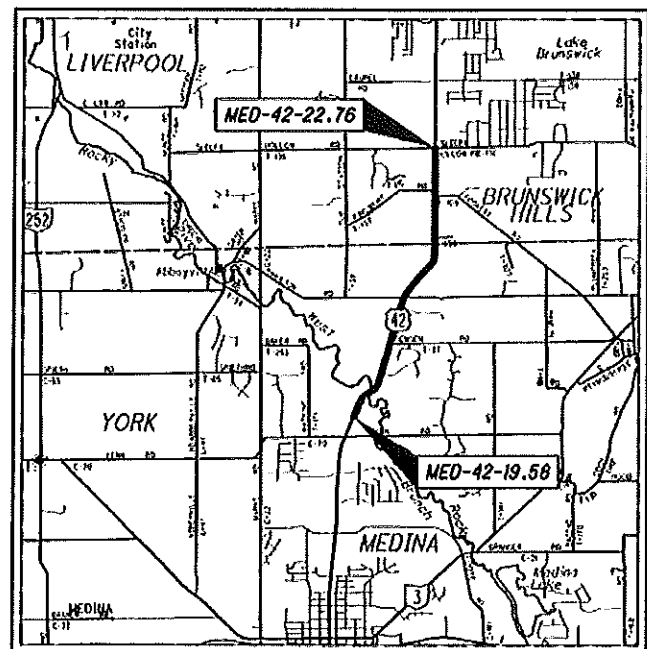
PID NO.
101401

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

MED-42-19.58

1
25



LOCATION MAP

LATITUDE: 41°10'27" LONGITUDE: 81°51'32"



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	-----
FEDERAL ROUTES	-----
STATE ROUTES	-----
COUNTY & TOWNSHIP ROADS	-----
OTHER ROADS	-----

DESIGN DESIGNATION

CURRENT ADT (2010)	11,000
DESIGN YEAR ADT (2030)	14,000
DESIGN HOURLY VOLUME (2030)	1,400
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	9%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
PRINCIPAL ARTERIAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

INDEX OF SHEETS:

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PIS GR-2.1	22-23
PIS GR-4.2	24-25

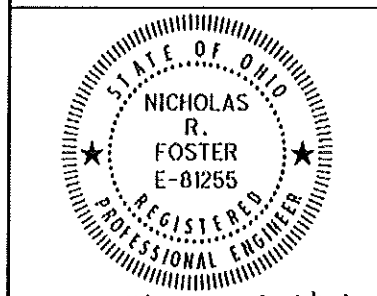
UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.



Call Before You Dig
1-800-362-2764

(Non-members must be called directly)
OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-925-0988

ENGINEERS SEAL:



SIGNED: Nicholas R. Foster
DATE: 8/30/17

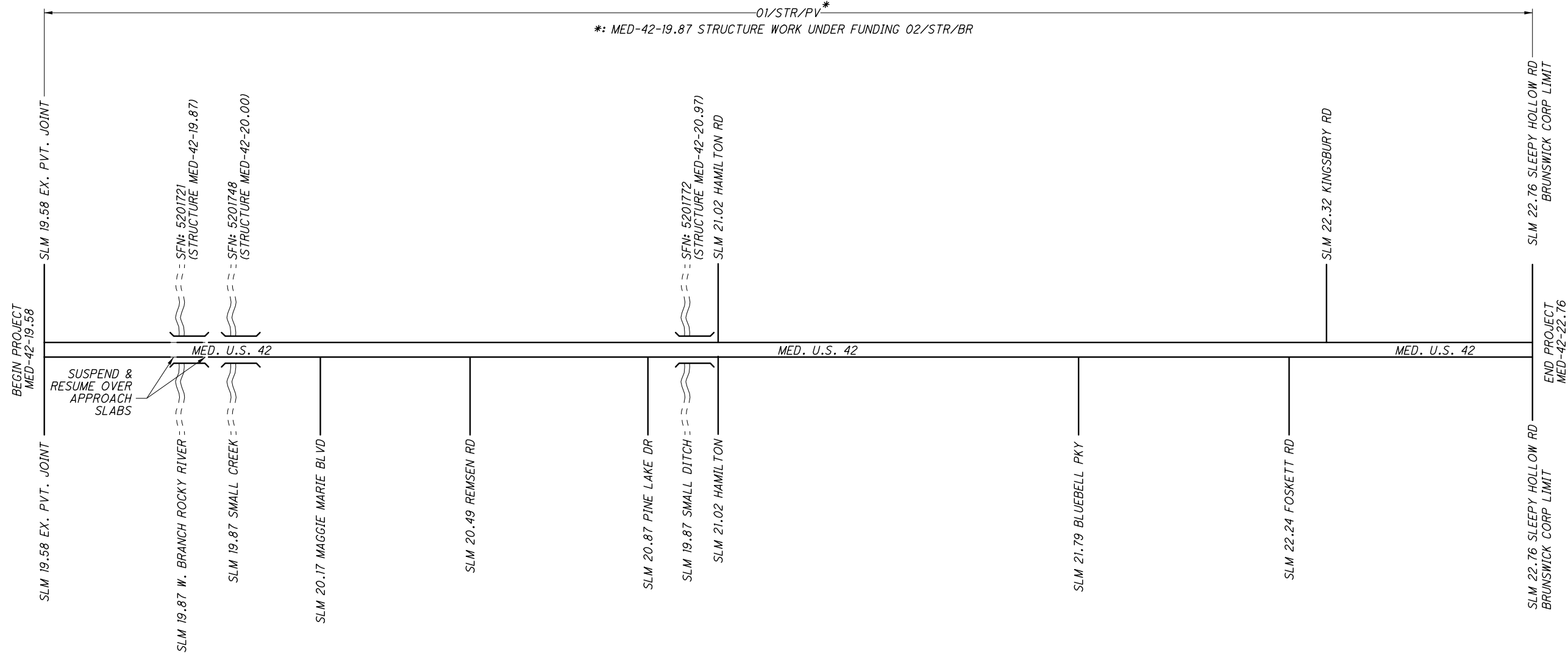
ENGINEERS SEAL:				STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	7/18/14	MT-89.20	7/21/17					800	10/20/17		
BP-4.1	7/19/13	MT-101.90	7/21/17					832	1/17/14		
		MT-105.10	7/19/13								
DM-1.1	7/21/17										
DM-4.3	1/15/16	TC-41.20	10/18/13								
DM-4.4	1/15/16	TC-42.20	10/18/13								
		TC-52.10	10/18/13								
RM-1.1	7/18/14	TC-52.20	7/21/17								
		TC-61.30	1/20/17								
DDR-3-11	7/15/11	TC-65.10	1/17/14								
		TC-65.11	7/21/17								
MT-95.50	7/21/17	TC-71.10	1/20/17								
MT-95.60	7/19/13	TC-82.10	7/17/15								
MT-95.61	7/19/13										
MT-97.10	7/18/14										
MT-97.12	1/20/17										

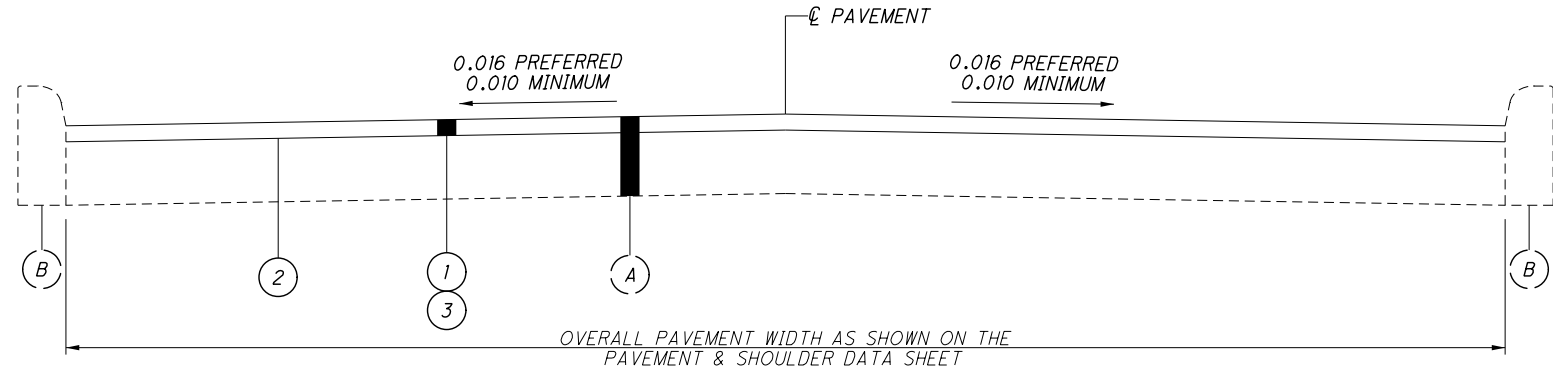
PLANS PREPARED BY:
 OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT THREE
PLANNING AND ENGINEERING

MED - US 42-19.58
170612 PID - 101401
Dist 3 11/30/2017

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

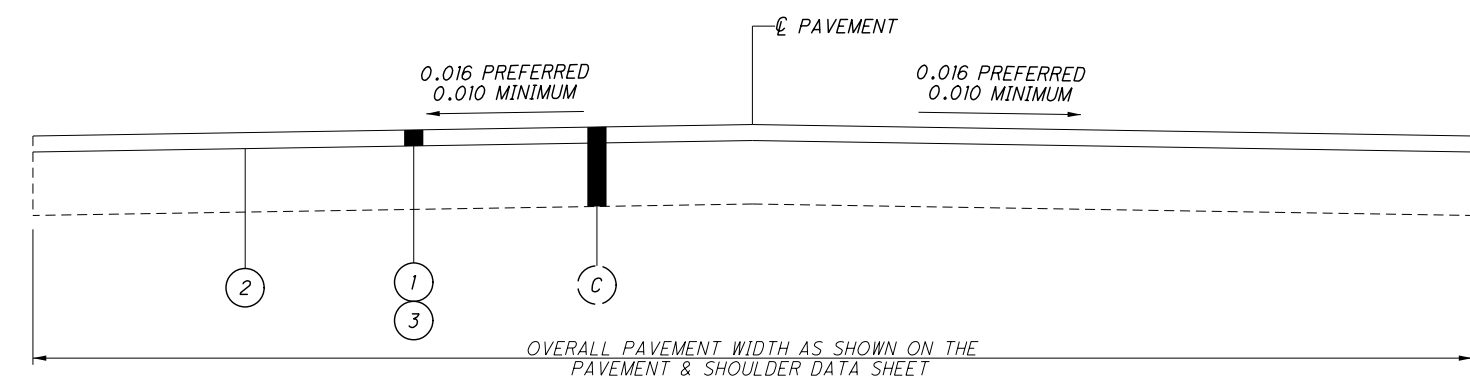
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TYPICAL 1

MED-42: 19.58-19.86 & 19.91-22.76



TYPICAL 2

MED-42: 19.86-19.91

SUSPEND & RESUME PLANING AND PAVING OVER CONCRETE APPROACH SLABS AT STRUCTURE MED-42-19.87
 PLANE AND PAVE STRUCTURE MED-42-19.87 FULL WIDTH FROM DECK EDGE TO DECK EDGE.

EXISTING LEGEND

- (A) EXISTING PAVEMENT
- (B) EXISTING CURB
- (C) EXISTING BRIDGE DECK

PROPOSED LEGEND

- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1.50")
- (2) ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT 0.09 GAL/SY)
- (3) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN (PG64-22)

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GENERAL

UTILITIES

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

TELEPHONE
VERIZON
6223 NORWALK RD.
MEDINA, OHIO 44256
330.722.9586

TELEPHONE
AT&T TRANSMISSION
HLG ENGINEERING & SURVEY
5980-G WILCOX
DUBLIN, OH 43106
614.760.8320

ELECTRIC
OHIO EDISON CO.
6326 LAKE AVENUE
ELYRIA, OH 44035
440.326.3227

GAS
COLUMBIA GAS OF OHIO
7080 FRY RD.
MIDDLEBURG HEIGHTS, OH 44130

GAS
TRANSCANADA
589 NORTH STATE RD.
MEDINA, OH 44256
330.721.4163

GAS
GATHERCO INC.
5772 DRESSLER RD. NW
NORTH CANTON, OH 44720
330.498.9553

GAS
SUNOCO PIPELINE
525 FRITZTOWN RD.
SINKING SPRING, PENNSYLVANIA 19608
610.670.3279

CABLE
ARMSTRONG UTILITIES
1141 LAFAYETTE RD.
MEDINA, OH 44256
330.722.3141, ext.224

MEDINA COUNTY ENGINEER
791 WEST SMITH RD.
MEDINA, OH 44256-0825
330.723.9561

CITY OF MEDINA
132 NORTH ELMWOOD ST.
MEDINA, OH 44256
330.722.9020

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICE (PIO) BY EMAIL AT
D03.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4318 OR EMAIL AT
LOUIS.TUMBLIN@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099
OR EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

EXISTING PLANS

EXISTING PLANS ENTITLED MED-42-18.64 MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ROADWAY

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE

ALL WORK RELATED TO ADJUSTING MONUMENT BOXES TO GRADE WILL BE IN ACCORDANCE TO SECTIONS 623.04 AND 623.05 OF THE 2016 ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE MONUMENT BOX TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING ADJUSTABLE FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING MONUMENT BOX TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT ADJUSTABLE FRAMES.

APPROX. SLM LOCATION(S): 19.84, 19.94

01/STR/PV: 2 EACH

DRAINAGE

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE

THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

APPROX. SLM LOCATION(S): 22.22, 22.23

01/STR/PV:
CATCH BASIN - 2 EACH

PAVEMENT

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) ITEM 253 - PAVEMENT REPAIR

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK. THE PAVEMENT CORING INFORMATION IS SHOWN ON SHEET 5.

PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE SURFACE COURSE. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301, OR ITEM 442 19MM MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 442 19MM CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 1.5" AND 3". ITEM 301 SHALL USE PG64-22 ASPHALT BINDER AND ITEM 442 19MM SHALL USE PG64-28 BINDER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442) IS TO BE A MAXIMUM OF 4" DEEP AND ITEM 253 PAVEMENT REPAIR IS FOR DEPTHS GREATER THAN 4". PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) OR ITEM 253 - PAVEMENT REPAIR. ESTIMATED 90%± OF PAVEMENT REPAIRS ARE LONGITUDINAL. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

01/STR/PV:
US 42 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) 200 CY
US 42 ITEM 253 - PAVEMENT REPAIR 20 CY

ITEM 254 - PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254 - PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF THE PATCHING DEPTH IS 0 TO 2 IN.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL 1.5 INCHES AT THE CENTER OF PAVEMENT AT THE NON-CURBED AREAS. THE PAVEMENT SLOPE SHALL BE 0.010 MINIMUM AND 0.016 PREFERRED, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH THE ABOVE GUIDELINES. WHEN 1.5 INCH DEPTH PAVEMENT PLANING IS BEING PERFORMED AT THE CENTERLINE, THE CONTRACTOR MAY HAVE TO PLANE DEEPER AT THE EDGE OF PAVEMENT TO ESTABLISH THE MINIMUM CROSS SLOPE. IF THIS IS THE CASE, THE CONTRACTOR SHALL PLANE A MAXIMUM OF 2.0 INCHES AT THE EDGE OF PAVEMENT EVEN IF THIS MAXIMUM DEPTH DOES NOT MEET THE MINIMUM CROSS SLOPE REQUIREMENTS.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN SEVEN (7) CALENDAR DAYS. FOR EACH CALENDAR DAY BEYOND THE 7 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE OF \$1000.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE TO INCLUDE FROM DECK EDGE TO DECK EDGE OVER STRUCTURE MED-42-19.87. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE.

CALCULATED
NRF
CHECKED
KCK

GENERAL NOTES

MED - 42 - 19.58

4
25

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING: THE MAXIMUM CROSS SLOPE SHALL BE 0.020 WHILE THE MINIMUM CROSS SLOPE SHALL BE 0.010. THE PREFERRED CROSS SLOPE IS 0.016. THE CROWN OF THE PAVEMENT SHALL BE LOCATED BETWEEN THE TRAVELED LANES, OR AS DIRECTED BY THE ENGINEER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE A CROSS SLOPE IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN SEVEN (7) CALENDAR DAYS. FOR EACH CALENDAR DAY BEYOND THE 7 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE OF \$1000.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5 MM. TYPE A (446), AS PER PLAN (PG64-22)

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
 MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
 CHOOSE OPTIMUM BINDER CONTENT AT DESIGN AIR Voids OF 3.5%.
 MINIMUM TOTAL PG BINDER CONTENT IS 6.3 PERCENT.
 MINIMUM VIRGIN PG BINDER CONTENT IS 5.2 PERCENT.
 USE A PG 64-22 BINDER.
 WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
 QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

PAVEMENT CORING INFORMATION

County	Route	SLM	Asphalt	Concrete	Brck	Locatlon	Direction
MED	42	19.70	2.5	9.0	0.0	Inside	NB
MED	42	19.70	2.1	8.8	0.0	Outside	NB
MED	42	19.71	5.1	7.0	0.0	TWLTL	NB
MED	42	20.10	4.0	8.3	0.0	RWP	NB
MED	42	20.10	3.8	8.8	0.0	LWP	NB
MED	42	20.60	4.8	8.8	0.0	RWP	NB
MED	42	20.60	4.3	8.8	0.0	LWP	NB
MED	42	21.17	10.0	0.0	0.0	TWLTL	NB
MED	42	21.18	3.5	8.8	0.0	Inside	NB
MED	42	21.18	2.8	8.5	0.0	Outside	NB
MED	42	21.30	4.0	9.3	0.0	RWP	NB
MED	42	21.30	4.3	8.8	0.0	LWP	NB
MED	42	21.80	3.8	8.8	0.0	RWP	NB
MED	42	21.80	2.5	9.3	0.0	LWP	NB
MED	42	22.50	2.5	9.3	0.0	Inside	NB
MED	42	22.50	2.0	9.0	0.0	Outside	NB
MED	42	22.50	4.3	8.8	0.0	RWP	NB
MED	42	22.50	3.5	8.8	0.0	LWP	NB
MED	42	22.51	8.3	0.0	0.0	TWLTL	NB

INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

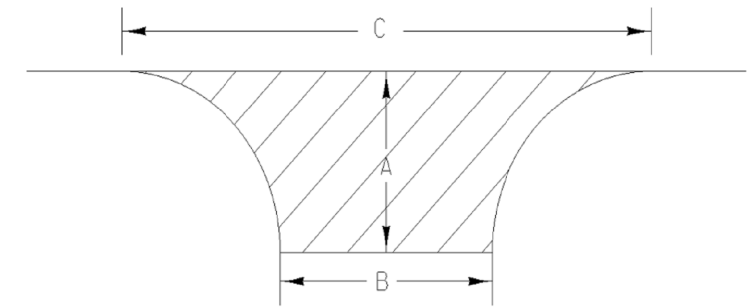
URBAN-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON AN AVERAGE WIDTH OF 4 FT. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ANY GRADING NEEDED TO PAVE THE APRON SHALL BE INCLUDED IN THE RELATED ASPHALT ITEM FOR PAYMENT. ITEM 617 COMPACTED AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY OF ITEM 617 HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN AS AN EXTRA AREA ON THE PAVEMENT & SHOULDER DATA SHEET.

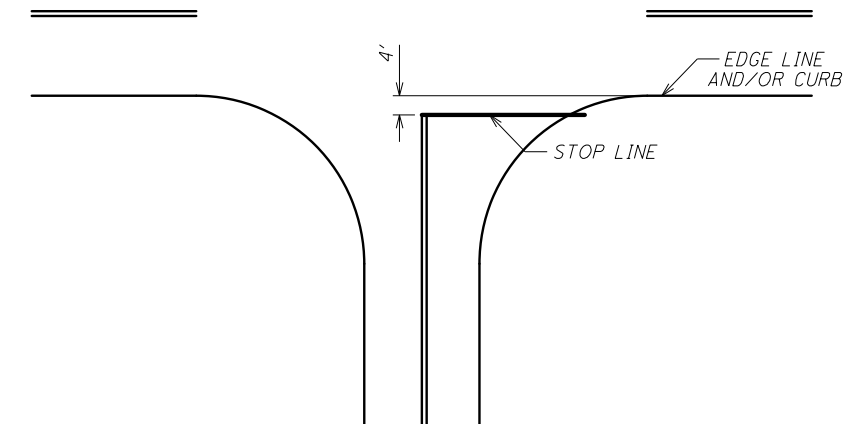
ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE PAVING DIMENSIONS FOR THE INTERSECTIONS ARE SHOWN IN THE CHART ON THIS PAGE.



Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
MAGGIE MARIE BLVD E	CONCRETE, NO TAPER			0
REMSEN RD E	16	34	76	85
PINE LAKE DR E	14	48	134	119
HAMILTON RD E	NO TAPER			0
HAMILTON RD W	NO TAPER			0
BLUEBELL PKWY E	CONCRETE, NO TAPER			0
FOSKETT RD E	14	46	82	90
KINGSBURY RD W	16	32	64	76
USR 42 (PEARL RD) S	12	46	88	80

TRAFFIC CONTROL



AT NORMAL STOP CONTROLLED INTERSECTIONS, THE STOP BAR SHOULD BE PLACED 4 FEET FROM THE EDGE LINE AND/OR CURB OF THE INTERSECTING ROADWAY IN ORDER TO ACHIEVE MAXIMUM INTERSECTION SIGHT DISTANCE.

MAINTENANCE OF TRAFFIC

ITEM 614 - MAINTAINING TRAFFIC LANE CLOSURE/REDUCTION REQUIRED

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES FROM 7:00 AM TO 8:00 PM BY USE OF THE EXISTING PAVEMENT, OR THE COMPLETED PAVEMENT WHEN THE TWO WAY LEFT TURN LANE IS PRESENT. SEE SCD MT-95.60 AND MT-95.61. A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES FROM 8:00 PM TO 7:00 AM BY USE OF THE EXISTING PAVEMENT, OR THE COMPLETED PAVEMENT USING FLAGGERS.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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.

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, WITH THE APPROVAL OF THE ENGINEER.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL MAINTENANCE OF TRAFFIC SIGNS ARE PAID UNDER THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS = 16 EACH
TOTAL, 01/STR/PV: = 16 EACH

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS. BEFORE RESURFACING OF THE PAVEMENT, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
TOTAL, 01/STR/PV: 10 CY

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED AS OUTLINED ABOVE IN THE MAINTAINING TRAFFIC LANE CLOSURE/REDUCTION REQUIRED NOTE FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

446 DENSITY ACCEPTANCE WITH FLAGGER CLOSING OF A 2-LANE HIGHWAY FOR PAVING OPERATIONS

THIS PLAN NOTE APPLIES ONLY TO A FLAGGER CLOSURE OF ONE LANE OF A 2-LANE HIGHWAY DURING PAVING OPERATIONS WHEN USING STANDARD CONSTRUCTION DRAWING MT-97.11 OR MT-97.12, AND ALLOWS A PAVING OPERATION TO PROCEED CONCURRENTLY WITH THE MARKING AND CUTTING OF CORES REQUIRED FOR 446 DENSITY ACCEPTANCE.

IN ALL CASES THE CONTRACTOR SHOULD LENGTHEN THEIR LANE CLOSURES TO THE MAXIMUM PERMISSIBLE LENGTH DETAILED IN THE ABOVE REFERENCED STANDARD CONSTRUCTION DRAWINGS TO ALLOW THE ENGINEER ADEQUATE TIME TO MARK THE REQUIRED CORE LOCATIONS AND FOR CORE CUTTING OPERATIONS.

THE CONTRACTOR WILL PROVIDE TO THE ENGINEER THE PLANNED QUANTITY THAT WILL BE PLACED FOR THE DAY'S PRODUCTION. EACH DAY'S PRODUCTION WILL BE CONSIDERED ONE LOT AND INCLUDES SHOULDERS. TEN CORES WILL BE OBTAINED BY THE CONTRACTOR FOR EACH LOT AT RANDOM LOCATIONS DETERMINED BY THE ENGINEER. THE ENGINEER WILL DIVIDE A LOT INTO FIVE EQUAL SUBLOTS AND CALCULATE TWO RANDOM CORE LOCATIONS IN EACH SUBLLOT AS DESCRIBED IN C&MS 446.04.

THE ENGINEER WILL MARK THE CORE LOCATIONS AFTER THE PAVING OPERATION (INCLUDING THE FINISH ROLLER) HAS COMPLETELY PASSED THE RANDOMLY SELECTED CORE LOCATION. THE CONTRACTOR SHOULD DETERMINE WHEN IT IS APPROPRIATE TO START THE CORE DRILL OPERATION AND BEGIN CUTTING CORES WHEN THE NEWLY PLACED PAVEMENT SURFACE TEMPERATURE IS LESS THAN 140°F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LANE CLOSURE DURING ALL PAVING, CORE MARKING, AND CORING OPERATIONS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWING USED FOR THE PAVING OPERATION.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEO'S SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL
3149 FRANTZ ROAD
MEDINA, OH 44212
330-725-4921

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
40 HOURS (01/STR/PV)

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE IN THE AMOUNT OF \$50/MIN FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

CALCULATED
NRF
CHECKED
KCK

GENERAL NOTES

MED - 42 - 19.58

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25

SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	6	8	9	10	11	12	13	16		01/STR/PV	02/STR/BR							
ROADWAY																		
				25	25	12.5				62.5			202	38000	62.5	FT	GUARDRAIL REMOVED	
				1		1				2			202	42040	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
			10							10			203	20001	10	CY	EMBANKMENT, AS PER PLAN	9
				0.38	0.25	0.25				0.88			209	15000	0.88	STA	RESHAPING UNDER GUARDRAIL	
				25	25	12.5				62.5			606	13000	62.5	FT	GUARDRAIL, TYPE 5	
				1		1				2			606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
2										2			623	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE	
EROSION CONTROL																		
										750	250		832	30000	1,000	EACH	EROSION CONTROL	
DRAINAGE																		
2										2			611	98630	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
PAVEMENT																		
200										200			251	01030	200	CY	PARTIAL DEPTH PAVEMENT REPAIR (442)	
20										20			253	02000	20	CY	PAVEMENT REPAIR	
		68,780								67,137	1,643		254	01000	68,780	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
		343								335	8		254	01600	343	SY	PATCHING PLANED SURFACE	
		6,191								6,043	148		407	20000	6,191	GAL	NON-TRACKING TACK COAT	
		2,866								2,798	68		442	00201	2,866	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN, PG64-22	5
		14								14			617	10100	14	CY	COMPACTED AGGREGATE	
TRAFFIC SURVEILLANCE																		
								6		6			632	26501	6	EACH	DETECTOR LOOP, AS PER PLAN	16
TRAFFIC CONTROL																		
							493			493			621	00100	493	EACH	RPM	
							471			471			621	54000	471	EACH	RAISED PAVEMENT MARKER REMOVED	
				1	1	1				3			626	00110	3	EACH	BARRIER REFLECTOR, TYPE 2 (1WAY)	
							0.1			0.1			642	00094	0.1	MILE	EDGE LINE, 6"	
							3.19			3.19			642	00290	3.19	MILE	CENTER LINE	
							405			405			644	00400	405	FT	CHANNELIZING LINE, 8"	
							144			144			644	00500	144	FT	STOP LINE	
							36			36			644	01300	36	EACH	LANE ARROW	
STRUCTURE REPAIR (MED-42-1987)																		
				425						425			202	38603	425	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN	9
				425						425			517	75601	425	FT	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN	9
MAINTENANCE OF TRAFFIC																		
	40									40			614	11110	40	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	10									10			614	13000	10	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
							6.36			6.36			614	21550	6.36	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
							810			810			614	23680	810	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
							138			138			614	26610	138	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
							6			6			614	30650	6	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
	16									16			614	12460	16	EACH	WORK ZONE MARKING SIGN	
INCIDENTALS																		
										LS	LS		614	11000	LS		MAINTAINING TRAFFIC	
										1	1		619	16010	2	MNTH	FIELD OFFICE, TYPE B	
										LS	LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS	LS		624	10000	LS		MOBILIZATION	

CALCULATED NRF CHECKED KCK	GENERAL SUMMARY
MED - 42 - 19 . 58	
7 25	

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FUNDING	COUNTY	ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.	PAVEMENT AREA	TYPICAL	254		407	442		AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA	617		
					MILE	FEET				PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	PATCHING PLANED SURFACE	NON-TRACKING TACK COAT @ 0.09 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN		COMPACTED AGGREGATE					
					STRAIGHT LINE MILEAGE					SY	SY	GALLON	INCH	CY	SL	SR		1.50 INCHES AVG. THICKNESS	CY	
							SY						FT	FT	SY					
01/STR/PV	MED	42	19.58	19.86	0.28	1478	36.0	5,912	1	5,912	30	532	1.50	246						
SUSPEND AND RESUME PAVEMENT TREATMENT OVER REAR CONCRETE APPROACH SLAB																				
02/STR/BR	MED	42	19.86	19.91	0.05	264	56.0	1,643	2	1,643	8	148	1.50	68						
SUSPEND AND RESUME PAVEMENT TREATMENT OVER FRONT CONCRETE APPROACH SLAB																				
01/STR/PV	MED	42	19.91	21.87	1.96	10349	36.0	41,396	1	41,396	207	3,726	1.50	1,725						
01/STR/PV	MED	42	21.87	21.89	0.02	106	40.0	471	1	471	2	42	1.50	20						
01/STR/PV	MED	42	21.89	21.90	0.01	53	45.0	265	1	265	1	24	1.50	11						
01/STR/PV	MED	42	21.90	21.92	0.02	106	40.0	471	1	471	2	42	1.50	20						
01/STR/PV	MED	42	21.92	22.76	0.84	4435	36.0	17,740	1	17,740	89	1,597	1.50	739						
			EXTRA AREA FOR INTERSECTIONS						450		450	2	41	1.50	19					
			EXTRA AREA FOR PAVED DRIVES						432		432	2	39	1.50	18					
			EXTRA AREA FOR AGGREGATE DRIVES						333								333			14
TOTAL FOR 01/STR/PV:										67,137	335	6,043		2,798					14	
TOTAL FOR 02/STR/BR:										1,643	8	148		68						
TOTALS					3.18	16790				68,780	343	6,191		2,866					14	

CALCULATED
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PAVEMENT & SHOULDER DATA
MED - 42 - 19.58
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CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

ITEM 202 - BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING THRIE BEAM BRIDGE GUARDRAIL FOR PLANING AND PAVING OPERATIONS OVER THE STRUCTURE. AFTER THE PLANING AND PAVING OPERATIONS ARE COMPLETED OVER THE STRUCTURE, THE GUARDRAIL SHALL BE REINSTALLED. THE REMOVAL AND REPLACEMENT OF THE BRIDGE RAIL SHALL BE PERFORMED IN THE SAME DAY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 202 - BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 203 - EMBANKMENT, AS PER PLAN

AT LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 60 PERCENT OF RELATIVE COMPACTION.

AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDDED, MULCHED, AND WATERED AS PER ITEM 659. THE COST SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

A QUANTITY OF 10 CY (01/STR/PV) HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 209 - RESHAPING UNDER GUARDRAIL

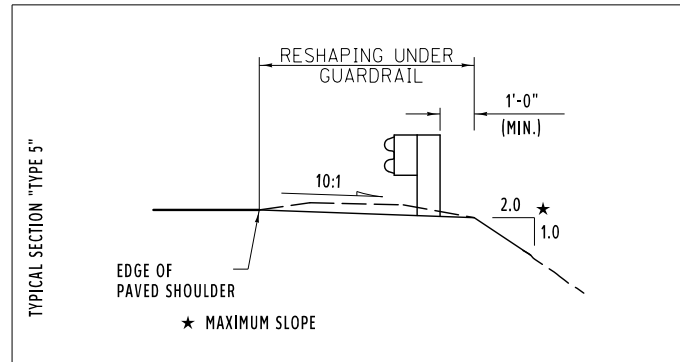
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM FOR TYPE 5 AND 8:1 MAXIMUM FOR MGS (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.

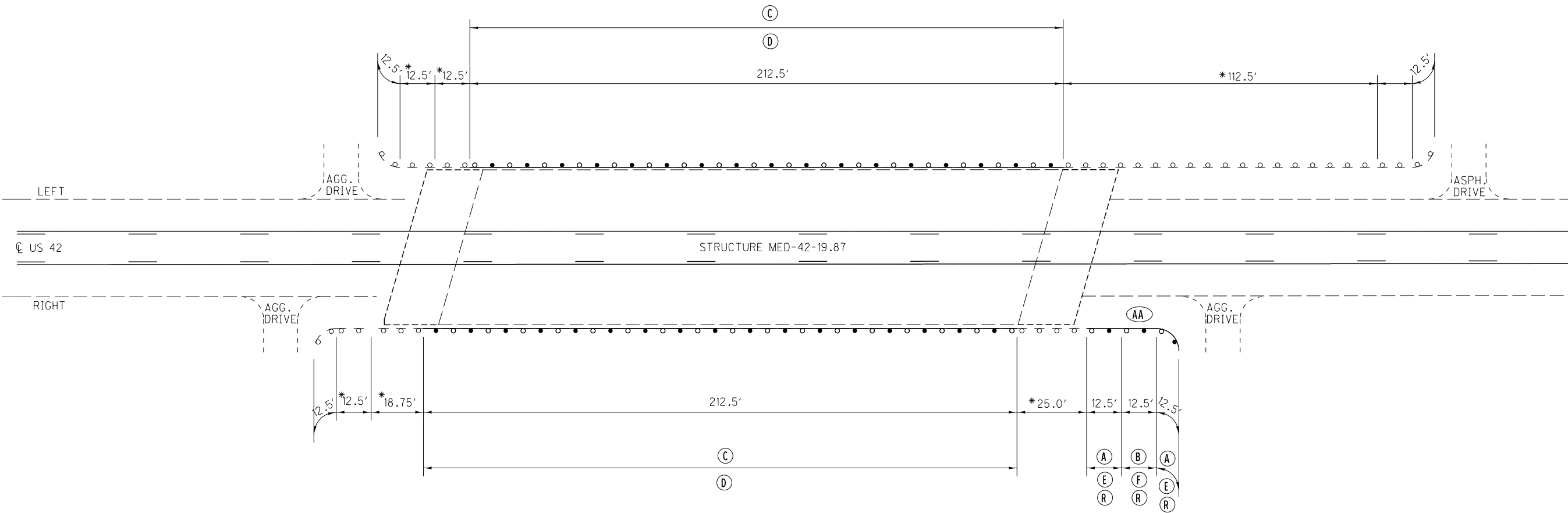


ITEM 517 - DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN

AFTER THE PLANING & PAVING OPERATIONS ARE COMPLETED OVER THE STRUCTURE, THE GUARDRAIL SHALL BE REINSTALLED. THE REMOVAL AND REPLACEMENT OF THE BRIDGE RAIL SHALL BE PERFORMED IN THE SAME DAY. FOR ADDITIONAL RETROFIT DETAILS, SEE SBD DBR-3-11.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 517 - DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN FILE: I:\ProjectData\101401\Design\Roadway\Sheets\101401GR001.dgn
 WORKSTATION: nfoster DATE: 8/31/2017



* THERE IS A BRIDGE TERMINAL ASSEMBLY, TYPE 4 WITHIN THESE LIMITS.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		25	25
(B)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(C)	202	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN	FT	212.5	212.5	425
(R)	209	RESHAPING UNDER GUARDRAIL	STA		0.38	0.38
(D)	517	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN	FT	212.5	212.5	425
(E)	606	GUARDRAIL, TYPE 5	FT		25	25
(F)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(AA)	626	BARRIER REFLECTOR, TYPE 2 (1WAY)	EACH		1	1

BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN AND DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN WORK UNDER FUNDING 02/STR/BR. ALL OTHER WORK UNDER FUNDING 01/STR/PV.

CALCULATED
NRF

CHECKED
KCK

0 20 40
HORIZONTAL
SCALE IN FEET

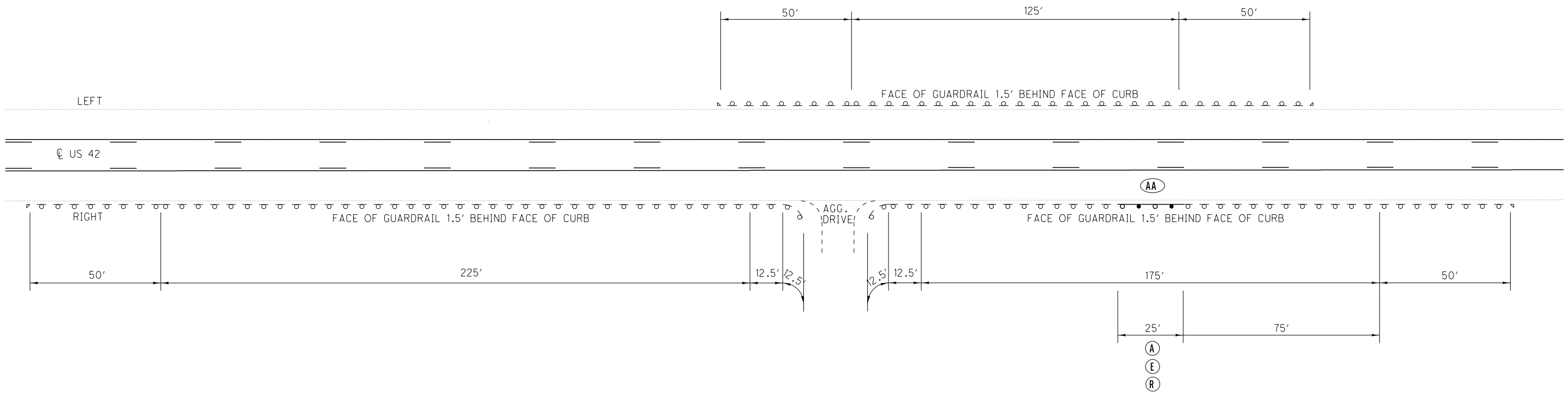
GUARDRAIL DETAILS
SLM 19.86

MED-42-19.58

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 WORKSTATION: nfooster DATE: 8/31/2017

CALCULATED
NRF
CHECKED
KCK

HORIZONTAL
SCALE IN FEET



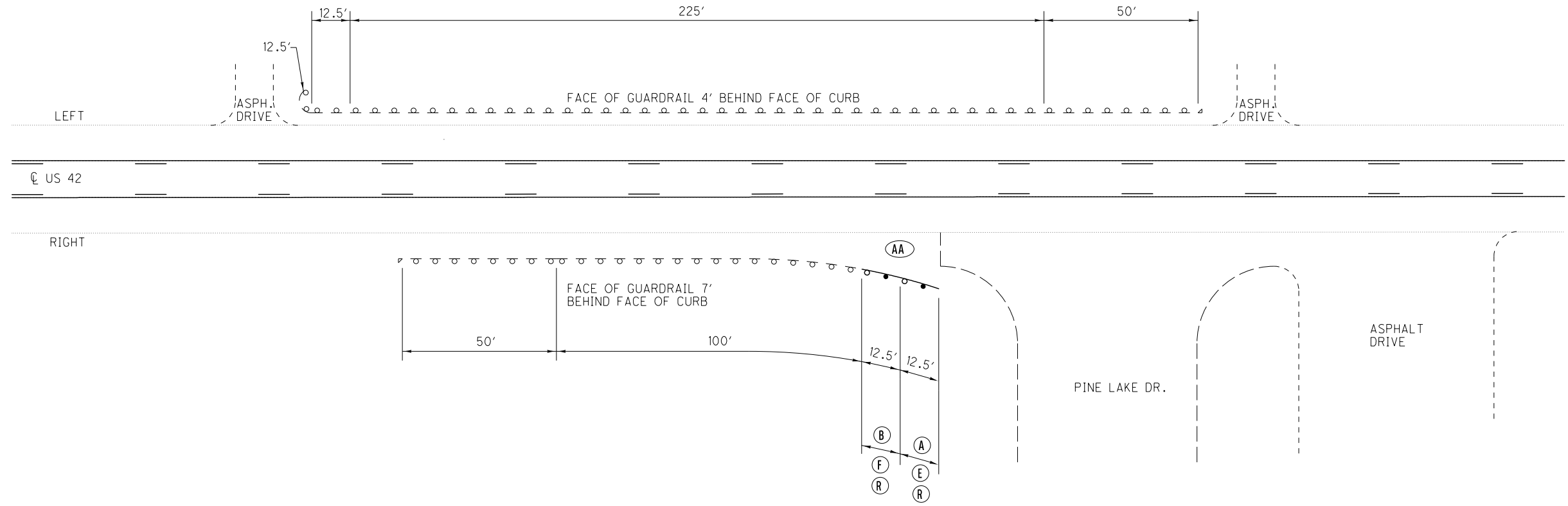
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		25	25
(R)	209	RESHAPING UNDER GUARDRAIL	STA		0.25	0.25
(E)	606	GUARDRAIL, TYPE 5	FT		25	25
(AA)	626	BARRIER REFLECTOR, TYPE 2 (1WAY)	EACH		1	1

ALL WORK AT THIS LOCATION UNDER FUNDING 01/STR/PV.

GUARDRAIL DETAILS
SLM 19.94

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 WORKSTATION: nfoster DATE: 8/31/2017



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		12.5	12.5
(B)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(R)	209	RESHAPING UNDER GUARDRAIL	STA		0.25	0.25
(E)	606	GUARDRAIL, TYPE 5	FT		12.5	12.5
(F)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(AA)	626	BARRIER REFLECTOR, TYPE 2 (1WAY)	EACH		1	1

ALL WORK AT THIS LOCATION UNDER FUNDING 01/STR/PV.

CALCULATED
NRF

CHECKED
KCK

0 20 40
HORIZONTAL
SCALE IN FEET

GUARDRAIL DETAILS
SLM 20.83

MED-42-19.58

AUXILIARY & LONG LINE MARKINGS

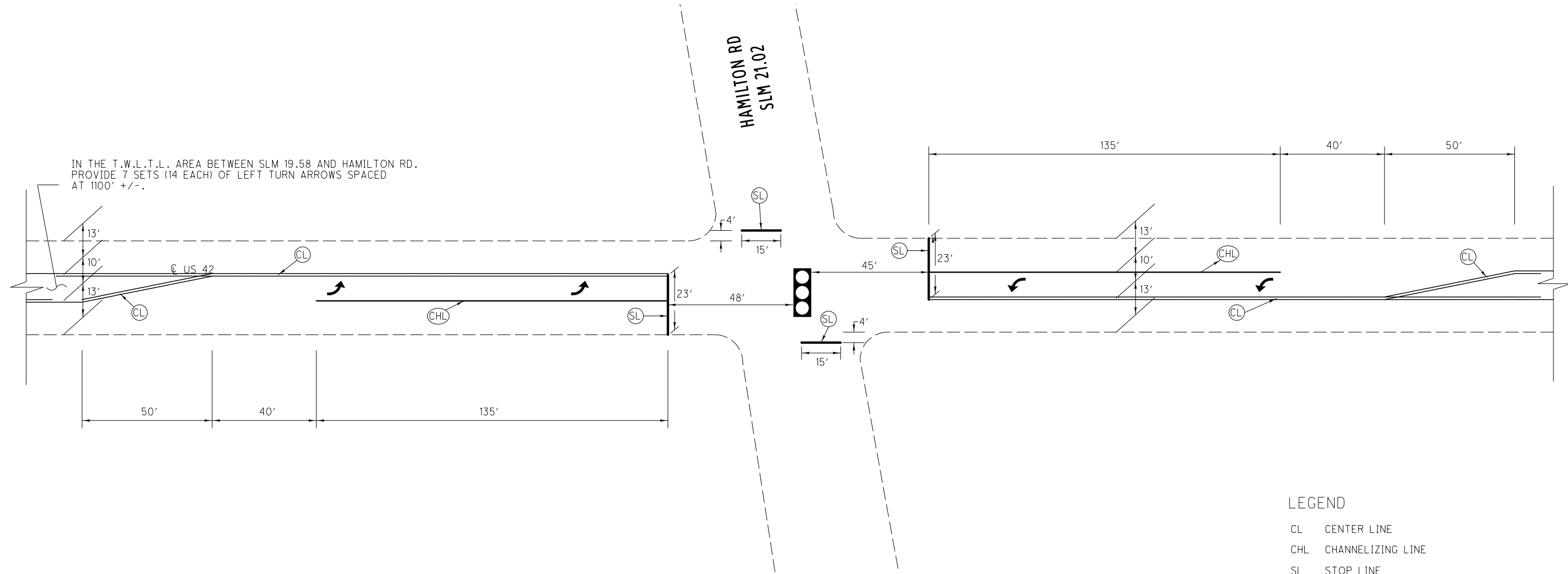
ROUTE	COUNTY	STATION / SLM		HIGHWAY MILES	614				642, TYPE 1			644															SPECIAL																		
		FROM	TO		MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	WORK ZONE ARROW, CLASS III, 642 PAINT (LEFT)	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	EDGE LINE, 6"		CENTER LINE		AUXILIARY MARKINGS (740.04)											AIR SPEED ZONE MARKING																				
										TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNLEIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING		PARKING LOT STALL MARKING		LANE ARROW			WORD ON PAVEMENT "ONLY"		DOTTED LINE, 4"	HANDICAP SYMBOL MARKING													
US 42	MED	19.58	22.76	3.18	6.36	6	810	138	0.10		7.926	3.18	405	69																					36										
ADDITIONAL QUANTITY FROM SIDE ROADS										0.010	0.01			75																															
TOTALS TO GENERAL SUMMARY (01/STR/PV)				3.18	6.36	6	810	138	0.10		7.936	3.19	405	144																				36											

RAISED PAVEMENT MARKERS


ROUTE	COUNTY	STATION/SLM		DETAIL	RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR TYPES				REMARKS	DETAIL	DESCRIPTION	
		FROM	TO				ONE-WAY	TWO-WAY						
								WHITE	YELLOW / YELLOW	WHITE / RED				YELLOW / RED
US 42	MED	19.58	22.76	13/9/18	471	493		404	67		22	T.W.L.T.L. & L.T. LANES & FIRE HYDRANTS	1	MULTILANE UNDIVIDED TYPICAL SPACING
													2	TAPERED ACCEL. LANE
													3	DECELERATION LANE
													4	PARALLEL ACCEL LANE
													5	MULTILANE DIVIDED/EXPRESSWAY
													6	STOP APPROACH
													7	2 LANE APPR. WITH TURN LANE
													8	THROUGH APPROACH
													9	3 LANE APPR. WITH TURN LANE
													10	3 LANE DIVIDED TO 2 LANE TRANSITION
													11	3 LANE UNDIVIDED TO 2 LANE TRANSITION
													12	TWO LANE NARROW BRIDGE
													13	TWO WAY LEFT TURN LANE
													14	ONE LANE BRIDGE
													15	HORIZONTAL CURVE
													16	HORIZONTAL CURVE ALT.
													17	STOP APPROACH ALT.
													18	FIRE HYDRANT
													GAP	CENTER LINE AT 80 FT. TYP.
												NOTES		
												1)	THRU LANES SHALL BE STRIPED TO MATCH EXISTING WIDTHS ACCORDING TO CMS 641.08A.	
												2)	FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.	
												3)	WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: US 42 & HAMILTON RD US 42 & SLEEPY HOLLOW RD	
TOTALS TO GENERAL SUMMARY (01/STR/PV)					471	493								

CALCULATED	NRF	CHECKED	KCK
PAVEMENT MARKING / RPM SUBSUMMARY			
MED - 42 - 19.58			
13 25			

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IN THE T.W.L.T.L. AREA BETWEEN SLM 19.58 AND HAMILTON RD.
 PROVIDE 7 SETS (14 EACH) OF LEFT TURN ARROWS SPACED
 AT 1100' +/-.

LEGEND
 CL CENTER LINE
 CHL CHANNELIZING LINE
 SL STOP LINE
 LANE ARROW

NOTE: 1. PLACE ALL STOP LINES BACK IN THEIR ORIGINAL LOCATIONS.
 2. PROVIDE 10' TWO WAY LEFT TURN LANES AND 10' LEFT TURN LANES THROUGHOUT THE PROJECT.

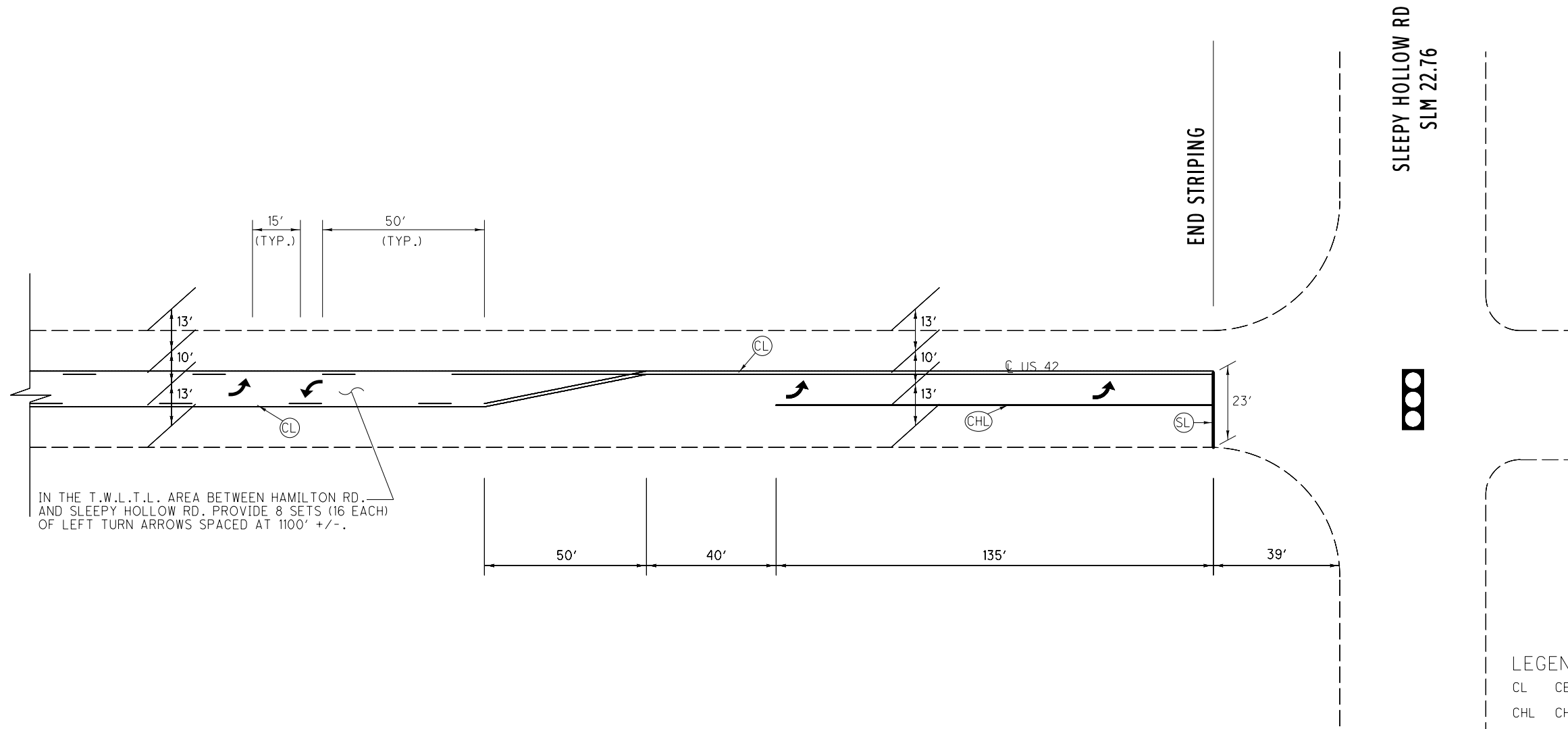
CALCULATED
 NRF
 CHECKED
 KCK

0 20 40
 HORIZONTAL
 SCALE IN FEET



PAVEMENT MARKING DETAILS
HAMILTON RD.

MED - 42 - 19.58



IN THE T.W.L.T.L. AREA BETWEEN HAMILTON RD. AND SLEEPY HOLLOW RD. PROVIDE 8 SETS (16 EACH) OF LEFT TURN ARROWS SPACED AT 1100' +/-.

LEGEND
 CL CENTER LINE
 CHL CHANNELIZING LINE
 SL STOP LINE
 LANE ARROW

NOTE: 1. PLACE ALL STOP LINES BACK IN THEIR ORIGINAL LOCATIONS.
 2. PROVIDE 10' TWO WAY LEFT TURN LANES AND 10' LEFT TURN LANES THROUGHOUT THE PROJECT.

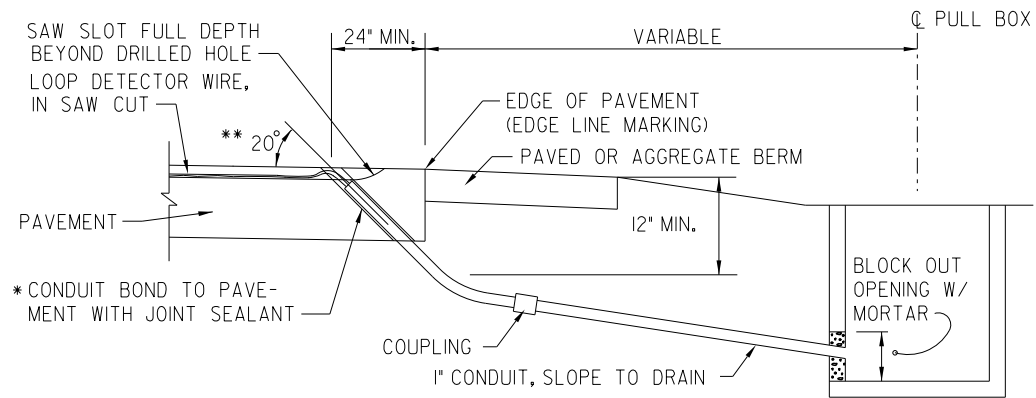
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CHECKED	KCK

0 20 40
 HORIZONTAL SCALE IN FEET

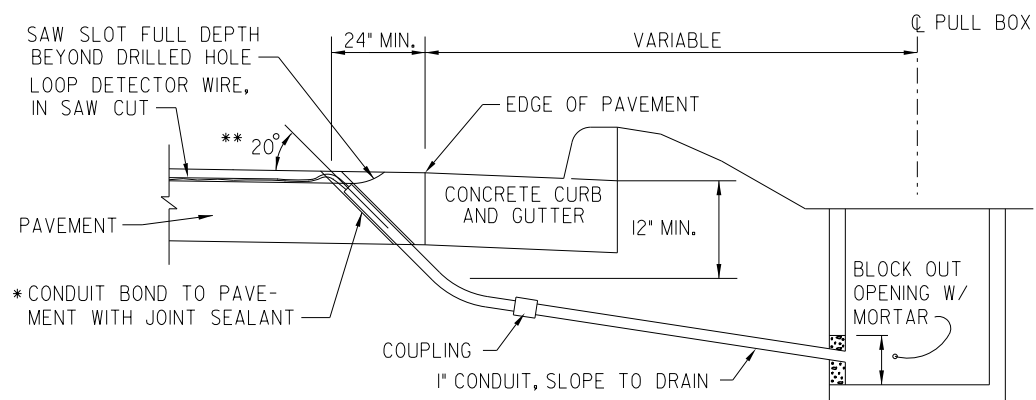
PAVEMENT MARKING DETAILS
SLEEPY HOLLOW RD.

MED - 42 - 19 . 58

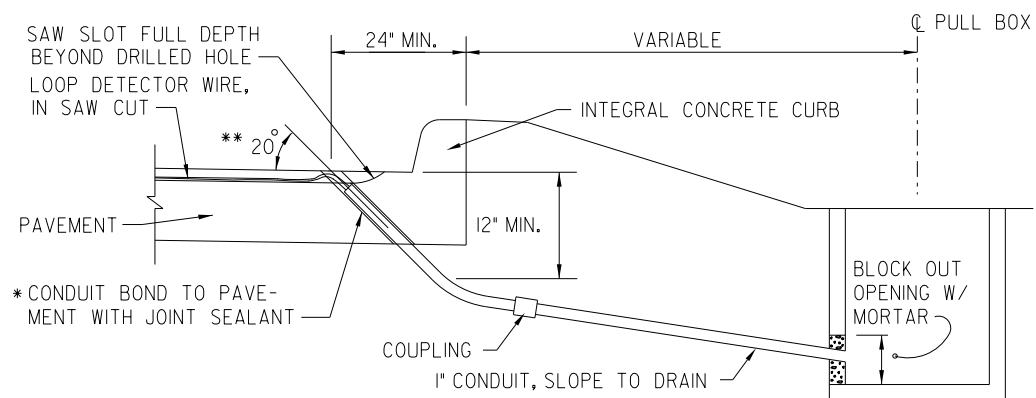
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 WORKSTATION: foster DATE: 8/31/2017
 MODELNAME: Sheet



DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



DRILLED HOLE LOCATION DETAIL WITH CONCRETE CURB AND GUTTER

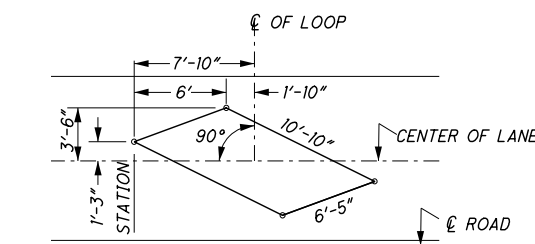


DRILLED HOLE LOCATION DETAIL WITH INTEGRAL CONCRETE CURB

* CONDUIT SHALL BE 1" DIAMETER 725.04.

** THE RANGE OF THIS ANGLE SHALL BE FROM 15 TO 30 DEGREES.

NOTE: SEE STANDARD DRAWING TC-82.10 FOR ADDITIONAL NOTES AND DETAILS



ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL FOR LANE WIDTH 11' & LARGER

ITEM 632- DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF ITEM 632, DETECTOR LOOP, AS PER PLAN, HAS BEEN PROVIDED FOR THE PURPOSE OF REPLACING DAMAGED DETECTOR LOOPS AND/OR UPGRADING DETECTOR LOOPS TO IMPROVE MOTORCYCLE DETECTION. IT IS IMPERATIVE THAT REPLACEMENT OF DETECTOR LOOPS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT DETECTOR LOOPS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE EXISTING DETECTOR LOOPS.

THE CONTRACTOR SHALL NOTIFY MATT BLANKENSHIP, ODOT DISTRICT 3 ROADWAY SERVICES MANAGER, (PHONE 419-207-7045) 5 WORKING DAYS IN ADVANCE OF ANY PLANING OPERATIONS OR PAVEMENT REPAIR WORK. THIS NOTIFICATION IS NEEDED FOR DISTRICT 3 TO SCHEDULE TEMPORARY SIGNAL TIMING MODIFICATIONS FOR THE TIME PERIOD WHEN THE DETECTOR LOOPS ARE OUT OF OPERATION. THE CONTRACTOR SHALL THEN RENOTIFY MR. BLANKENSHIP WITHIN 2 WORKING DAYS AFTER THE NEW DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS.

IN ADDITION, THE CONTRACTOR SHALL ALSO NOTIFY CRAIG DEVORE, ODOT DISTRICT 3 PLANNING AND ENGINEERING DEPT. (PHONE 419-207-7169) WHEN THE NEW LOOPS ARE INSTALLED.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF A DISINCENTIVE FEE OF \$500.00 PER DAY TO THE CONTRACTOR FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW DETECTOR LOOPS SHALL BE PLACED PER THE PLAN DETAILS AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE AFFECTED AREAS. THE DETECTOR LOOPS SHALL NOT BE CUT INTO THE SURFACE COURSE.

IN ADDITION TO THE REQUIREMENTS OF CMS 632.11, THE CONTRACTOR SHALL PROVIDE A POSITIVE AND EFFECTIVE MEANS FOR REMOVAL OF SOLID RESIDUE RESULTING FROM THE DRY SAW BLADE CUTTING OF LOOP DETECTOR SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER EFFECTIVE MEANS, BEFORE IT IS BLOWN BY TRAFFIC ACTION OR WIND. RESIDUE FROM DRY CUTTING SHALL NOT BE REMOVED BY COMPRESSED AIR. AS AN ALTERNATE, THE CONTRACTOR MAY USE WET CUTTING.

LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN EPOXY ENCAPSULATED SPLICE ENCLOSURES SHALL BE JOINED BY AN APPROVED CONNECTOR AND SOLDERED PER CMS 632.23 & 725.15. ALL COSTS ASSOCIATED WITH THE SOLDERED SPLICE CONNECTION AND EPOXY SPLICE KIT SHALL BE INCLUDED WITH THE DETECTOR LOOP.

IF THE PULL BOX IS NOT SPECIFIED IN THE PLANS, THE SPLICE SHALL BE MADE IN THE FIRST ENTERED POLE OR PEDESTAL, EXCEPT WHERE THE CONTROLLER CABINET IS MOUNTED ON THE POLE OR PEDESTAL, IN WHICH CASE THE LOOP WIRES SHALL BE ROUTED DIRECTLY INTO THE CABINET UNLESS SPECIFIED DIFFERENTLY IN THE PLANS. LOOP DETECTOR WIRE ROUTED THROUGH CONDUIT, PULL BOXES, POLES, AND PEDESTALS SHALL BE TWISTED PER CMS 632.23.

FURNISH ALL MATERIALS ACCORDING TO THE DEPARTMENT'S QUALIFIED PRODUCTS LIST (QPL).

SEE DETAILS ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

(01/STR/PV):
 ITEM 632 - DETECTOR LOOP, AS PER PLAN

6 EACH

CALCULATED
 NRF
 CHECKED
 KCK

DETECTOR LOOP INSTALLATION DETAILS

MED-42-19.58

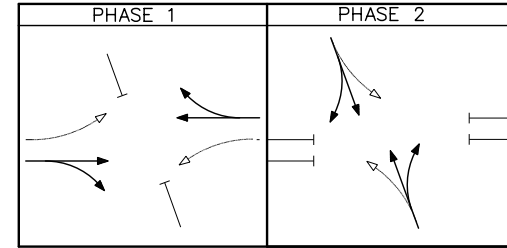
16
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MED-42-19.58 SUBSUMMARY

ITEM	QTY.	UNIT	DESCRIPTION
632	4	EACH	DETECTOR LOOP, AS PER PLAN

ALL QUANTITIES CARRIED TO THE DETECTOR LOOP INSTALLATION DETAILS SHEET.

SIGNAL PHASING DIAGRAM



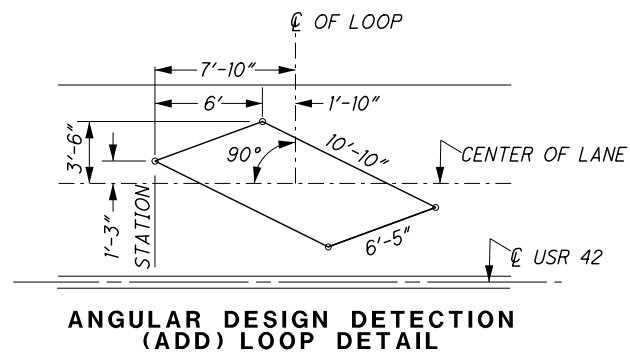
LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT	ASSOCIATED CONTROLLER PHASE	
L-1	SEE DETAIL	4	PULSE		1	1	ADD LOOP
L-2	SEE DETAIL	4	PULSE		1	1	ADD LOOP
L-3	SEE DETAIL	4	PULSE		2	1	ADD LOOP
L-4	SEE DETAIL	4	PULSE		2	1	ADD LOOP
L-5	5X30	3+3	PRESENCE	10 *	3	2	POWERHEAD
L-6	6X12	3-6-3	PRESENCE	10 *	5	2	QUADRUPOLE
L-7	6X12	3-6-3	PRESENCE	10 *	4	2	QUADRUPOLE
L-8	5X30	3+3	PRESENCE	10 *	6	2	POWERHEAD

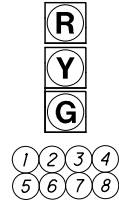
* DELAY INHIBITED DURING PHASE 2 GRN.

FLASHER OPERATION

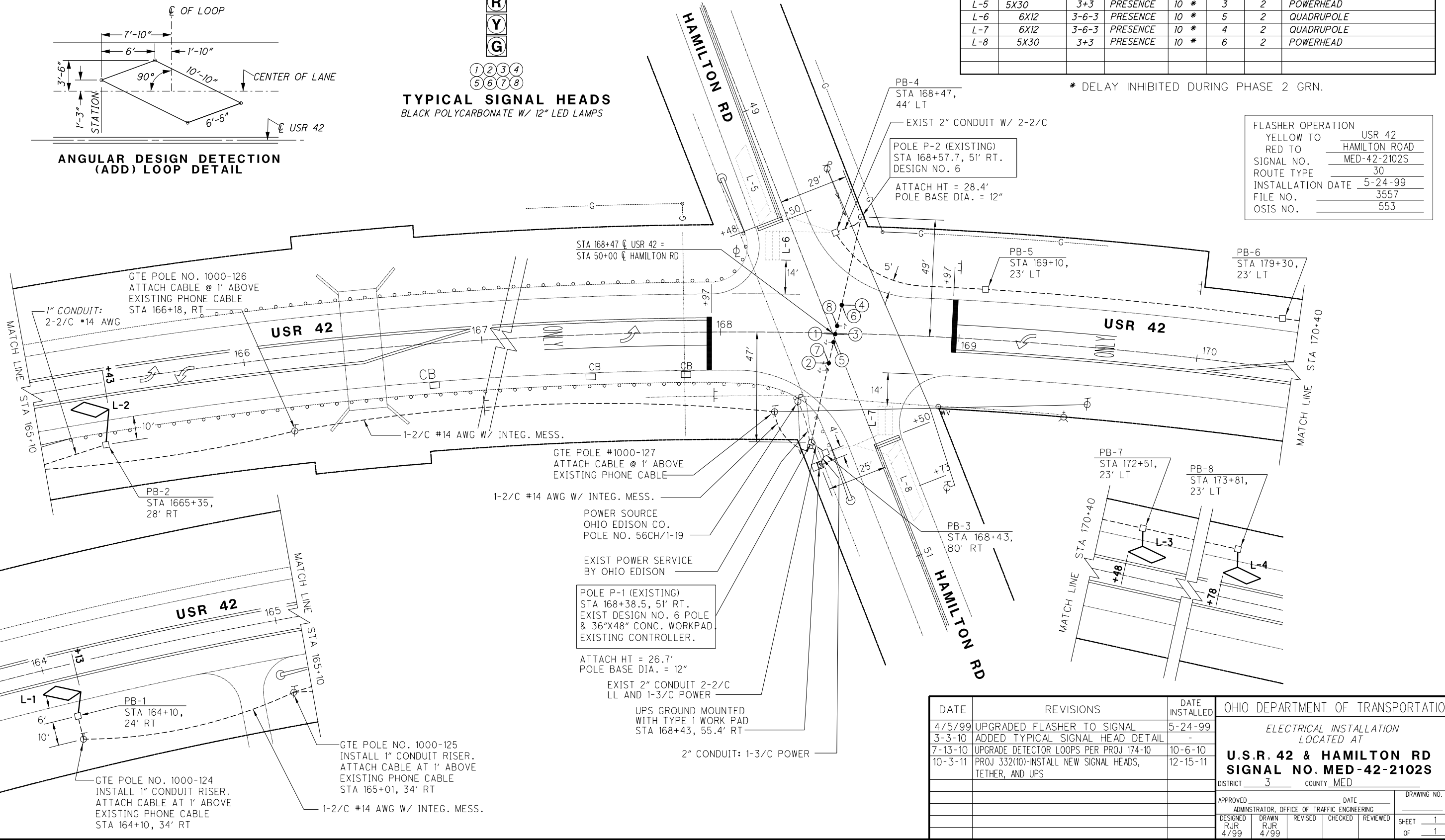
YELLOW TO	USR 42
RED TO	HAMILTON ROAD
SIGNAL NO.	MED-42-2102S
ROUTE TYPE	30
INSTALLATION DATE	5-24-99
FILE NO.	3557
OSIS NO.	553



TYPICAL SIGNAL HEADS
BLACK POLYCARBONATE W/ 12" LED LAMPS



DESIGN FILE: \\ProjectData\101401\Design\Roadway\Sheets\101401\TMO03.dgn
WORKSTATION: fofoster
DATE: 8/31/2017
MODELNAME: Design

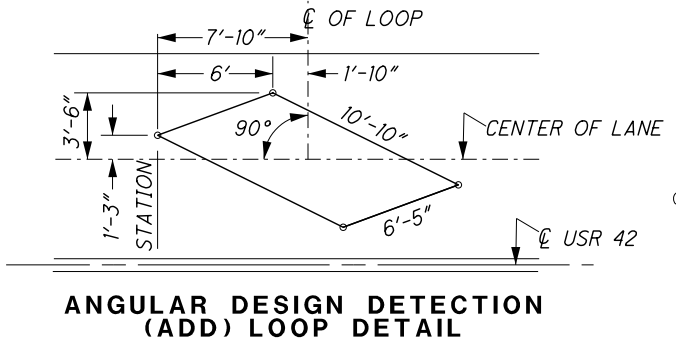
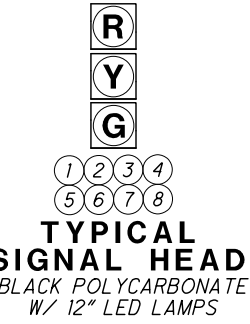


DATE	REVISIONS	DATE INSTALLED
4/5/99	UPGRADED FLASHER TO SIGNAL	5-24-99
3-3-10	ADDED TYPICAL SIGNAL HEAD DETAIL	-
7-13-10	UPGRADE DETECTOR LOOPS PER PROJ 174-10	10-6-10
10-3-11	PROJ 332(10)-INSTALL NEW SIGNAL HEADS, TETHER, AND UPS	12-15-11

OHIO DEPARTMENT OF TRANSPORTATION				
ELECTRICAL INSTALLATION LOCATED AT				
U.S.R. 42 & HAMILTON RD				
SIGNAL NO. MED-42-2102S				
DISTRICT 3			COUNTY MED	
APPROVED	DATE	DRAWING NO.		
ADMINISTRATOR, OFFICE OF TRAFFIC ENGINEERING				
DESIGNED RJR 4/99	DRAWN RJR 4/99	REVISED	CHECKED	REVIEWED
SHEET 1		OF 1		

MED-42-19.58 SUBSUMMARY			
ITEM	QTY.	UNIT	DESCRIPTION
632	2	EACH	DETECTOR LOOP, AS PER PLAN

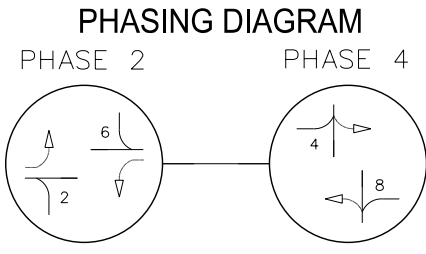
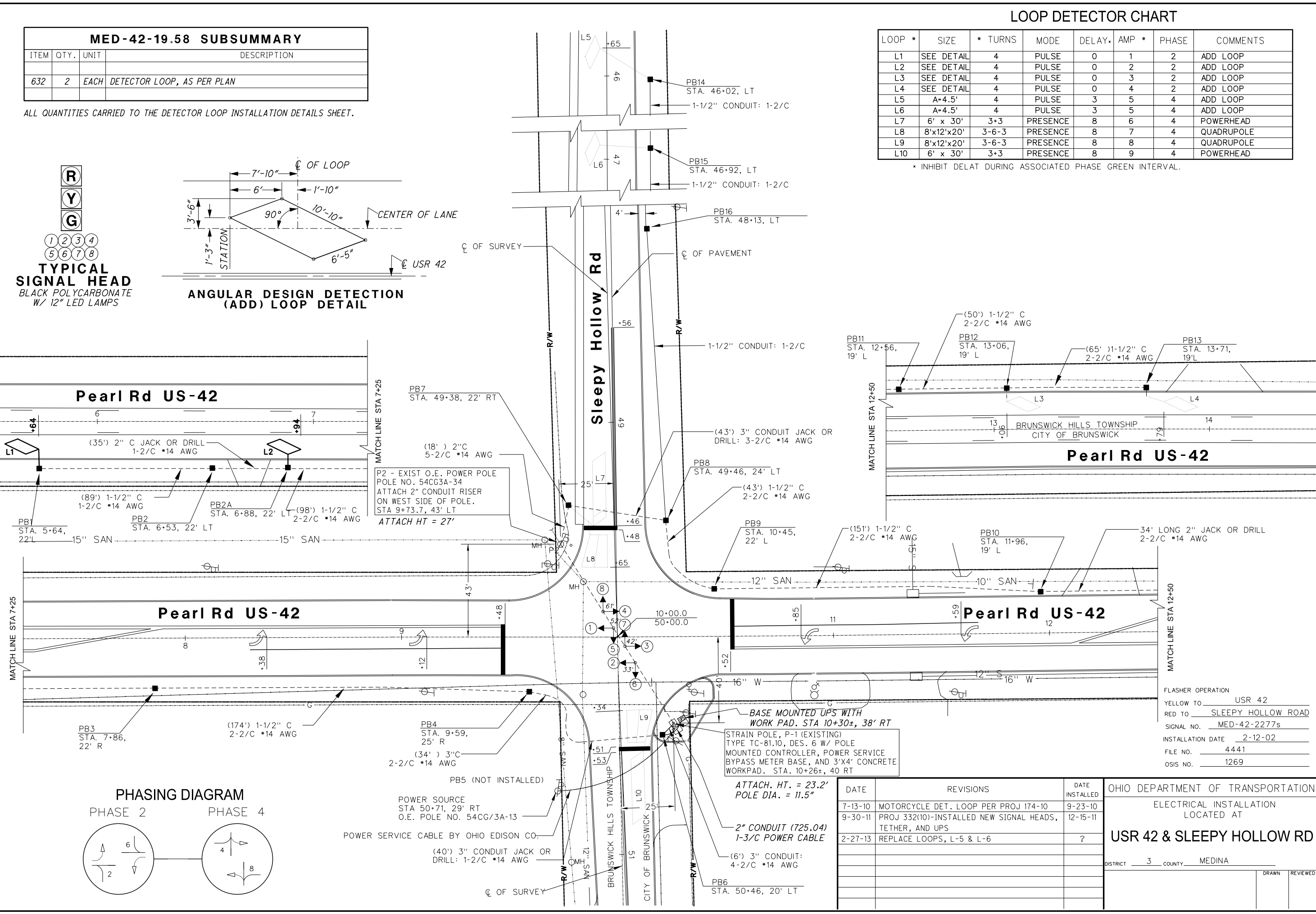
ALL QUANTITIES CARRIED TO THE DETECTOR LOOP INSTALLATION DETAILS SHEET.



LOOP #	SIZE	* TURNS	MODE	DELAY	AMP	PHASE	COMMENTS
L1	SEE DETAIL	4	PULSE	0	1	2	ADD LOOP
L2	SEE DETAIL	4	PULSE	0	2	2	ADD LOOP
L3	SEE DETAIL	4	PULSE	0	3	2	ADD LOOP
L4	SEE DETAIL	4	PULSE	0	4	2	ADD LOOP
L5	A=4.5'	4	PULSE	3	5	4	ADD LOOP
L6	A=4.5'	4	PULSE	3	5	4	ADD LOOP
L7	6' x 30'	3+3	PRESENCE	8	6	4	POWERHEAD
L8	8'x12'x20'	3-6-3	PRESENCE	8	7	4	QUADRUPOLE
L9	8'x12'x20'	3-6-3	PRESENCE	8	8	4	QUADRUPOLE
L10	6' x 30'	3+3	PRESENCE	8	9	4	POWERHEAD

* INHIBIT DELAT DURING ASSOCIATED PHASE GREEN INTERVAL.

DESIGN FILE: \\ProjectData\101401\Design\Roadway\Sheets\101401\TMO02.dgn
 WORKSTATION: fofster DATE: 8/31/2017



FLASHER OPERATION	
YELLOW TO	USR 42
RED TO	SLEEPY HOLLOW ROAD
SIGNAL NO.	MED-42-2277s
INSTALLATION DATE	2-12-02
FILE NO.	4441
OSIS NO.	1269

DATE	REVISIONS	DATE INSTALLED
7-13-10	MOTORCYCLE DET. LOOP PER PROJ 174-10	9-23-10
9-30-11	PROJ 332(10)-INSTALLED NEW SIGNAL HEADS, TETHER, AND UPS	12-15-11
2-27-13	REPLACE LOOPS, L-5 & L-6	?

OHIO DEPARTMENT OF TRANSPORTATION	
ELECTRICAL INSTALLATION LOCATED AT	
USR 42 & SLEEPY HOLLOW RD	
DISTRICT	3 COUNTY MEDINA
DRAWN	REVIEWED

CALCULATED	NRF	CHECKED	KCK
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LOOP DETECTOR DETAILS
US 42 & SLEEPY HOLLOW ROAD

MED-42-19.58

18
25

NOTES

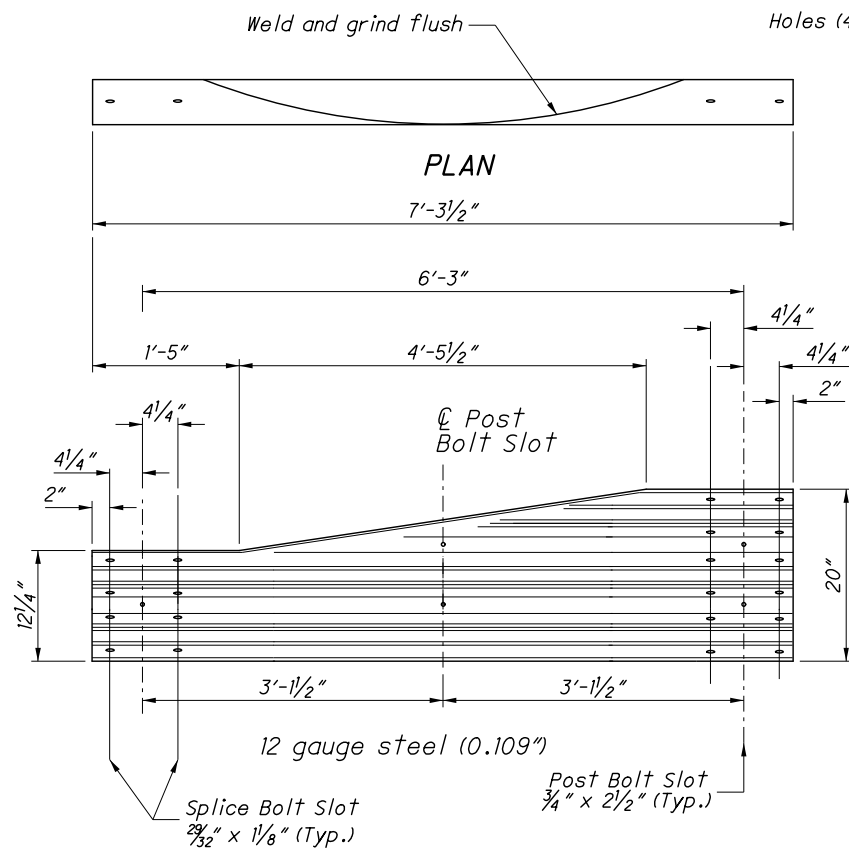
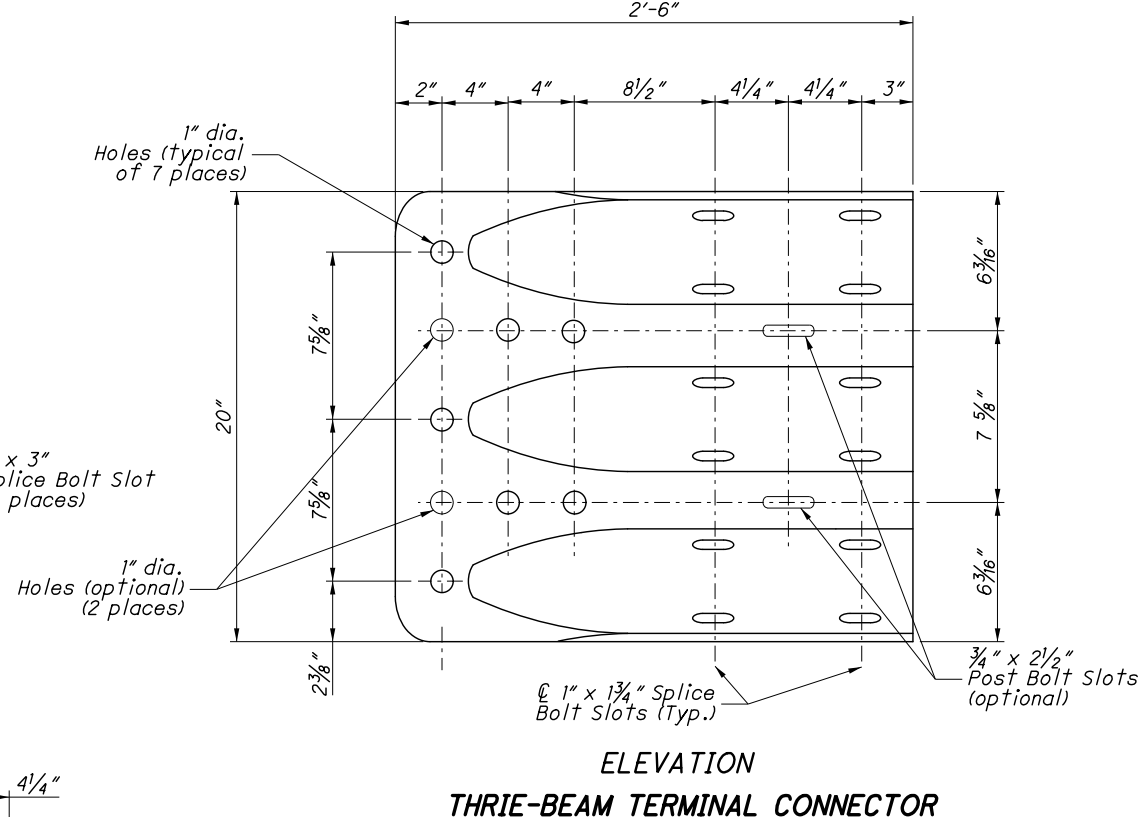
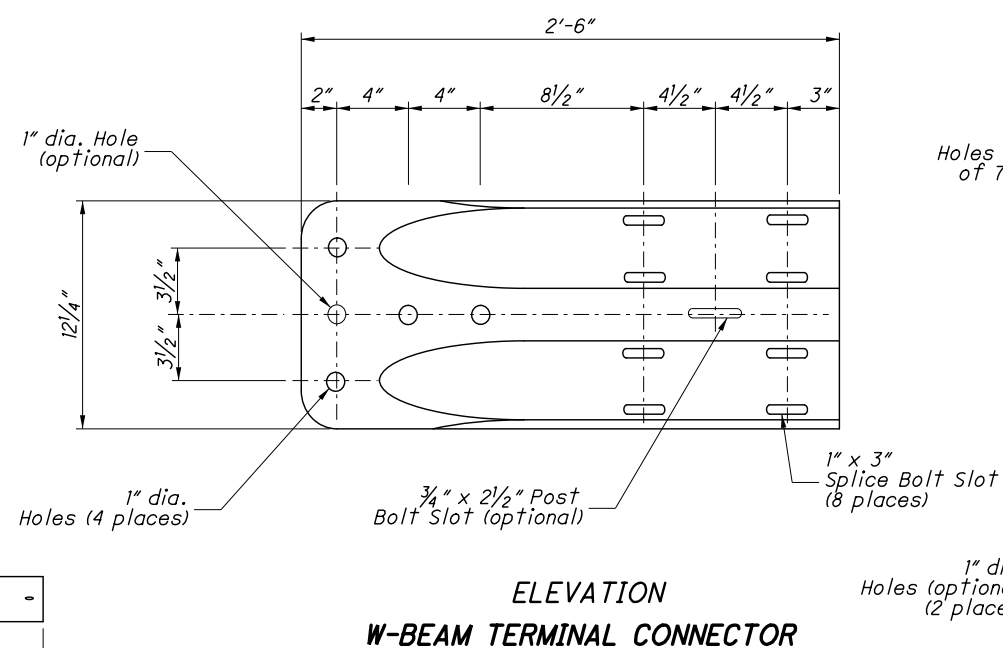
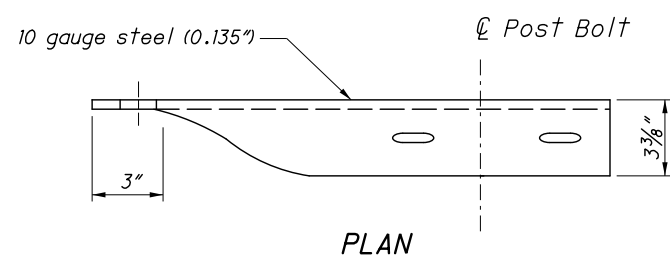
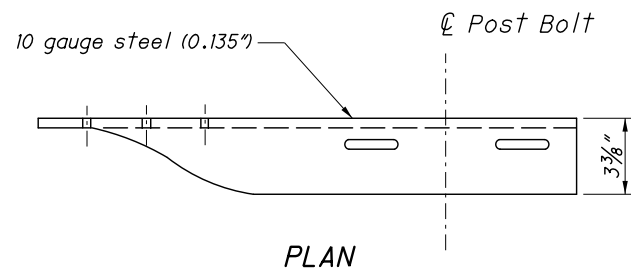
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

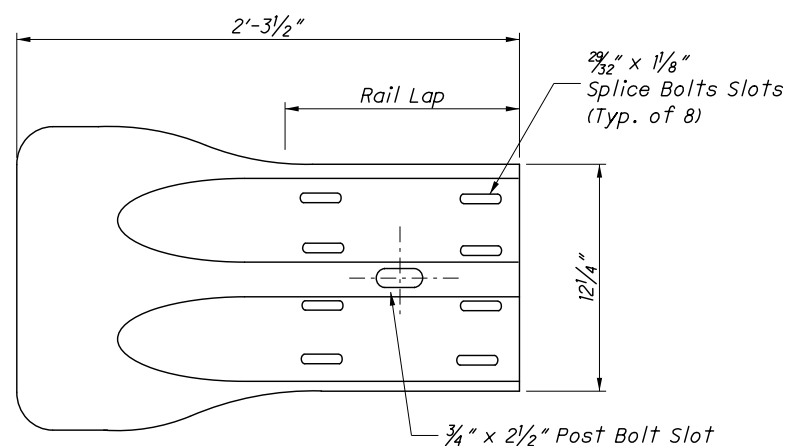
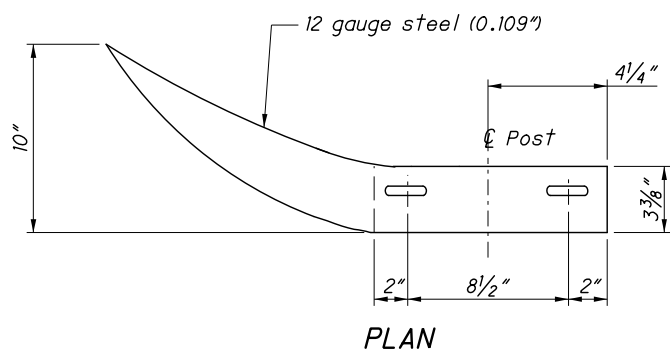
RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with 3/4" x 2 1/2" post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.

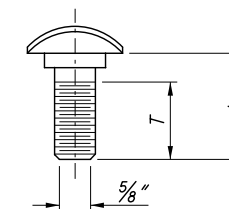


**ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)**

For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



**ELEVATION
W-BEAM FLARED END SECTION**

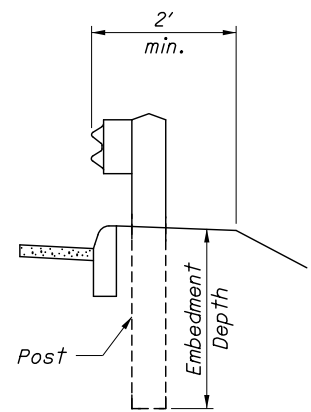


GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1 1/4"	1 1/8"	Splice Bolt

WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

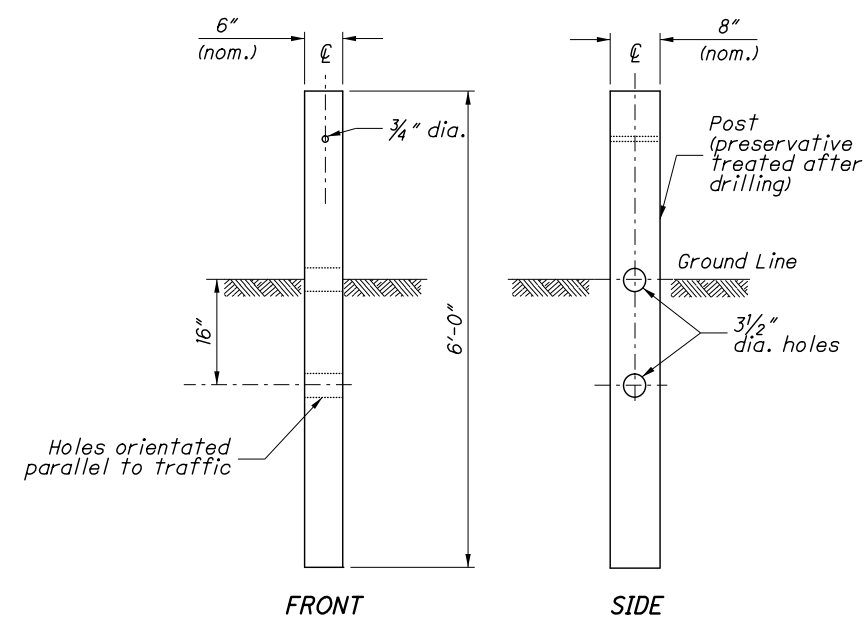
Longer Bolt may be needed for round Wood Post larger than 8" dia.

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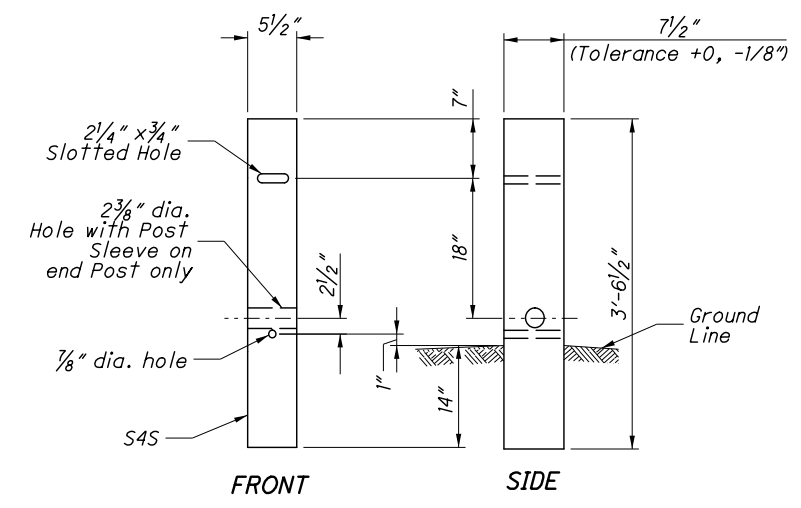


DETAIL A

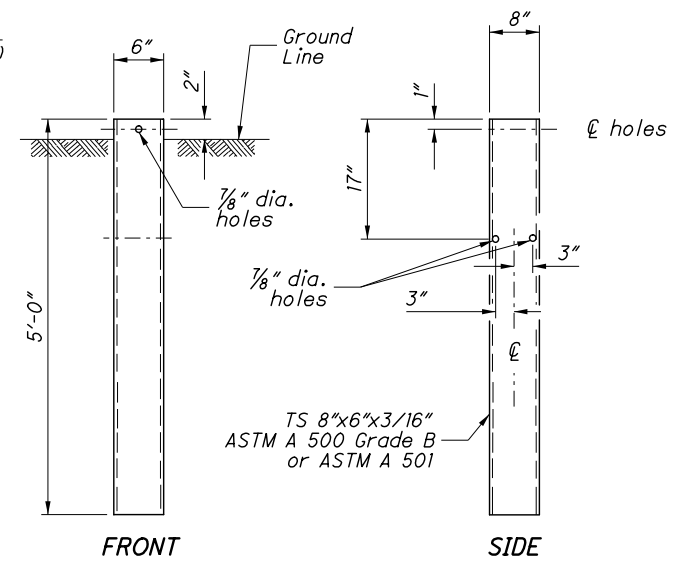
See POST EMBEDMENT DEPTH Note



TYPE 1 BREAKAWAY CRT POST



TYPE 2 BREAKAWAY CRT POST



STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within $\pm 1"$ of the standard height, h , or **29"** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)

When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within $\pm 2.5"$ of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2,** may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

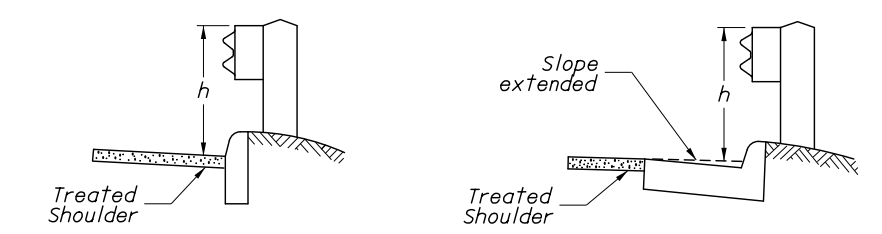
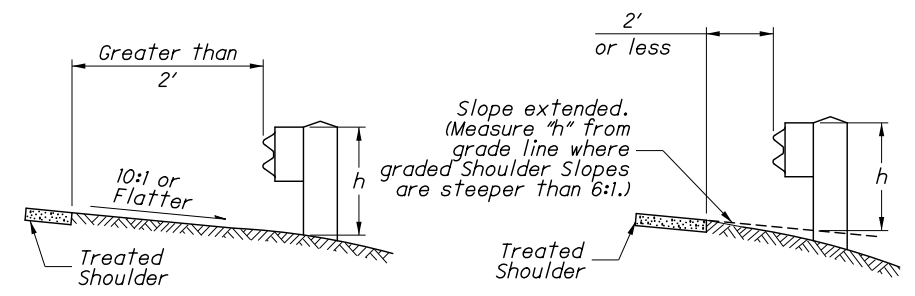
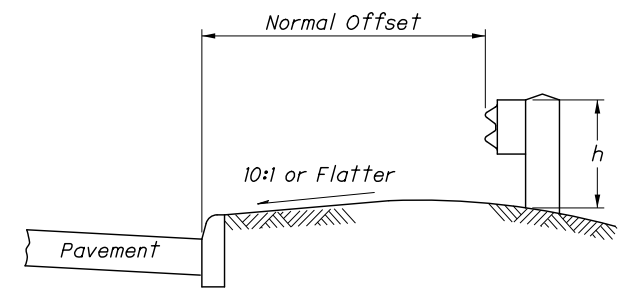
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

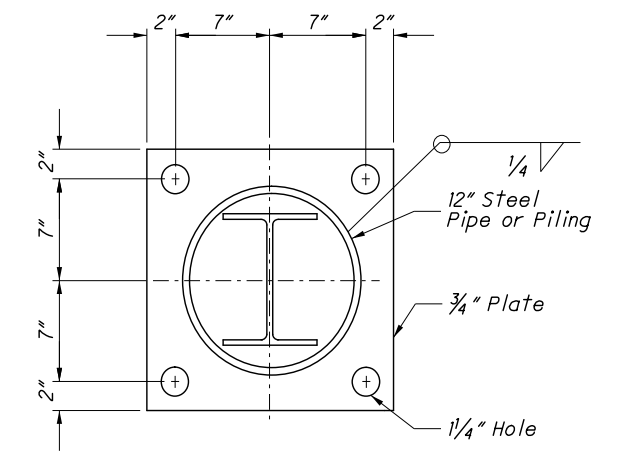
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)



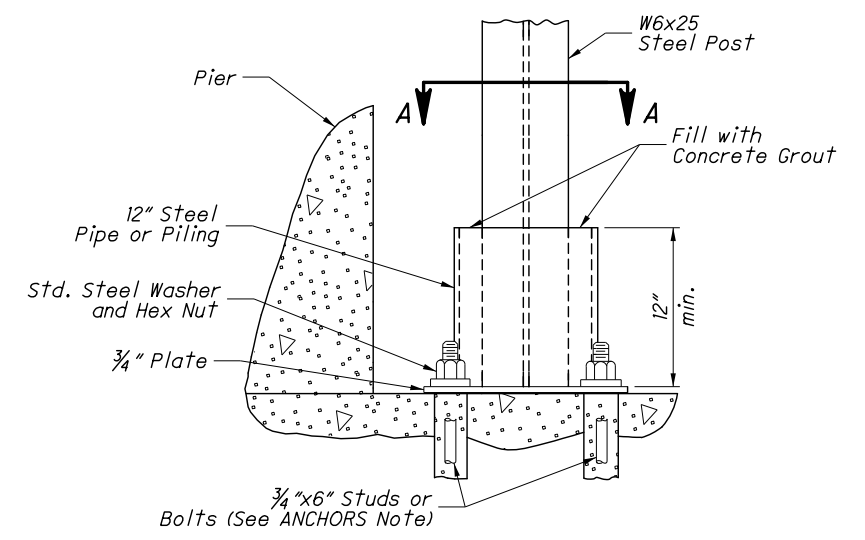
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

SECTION A-A

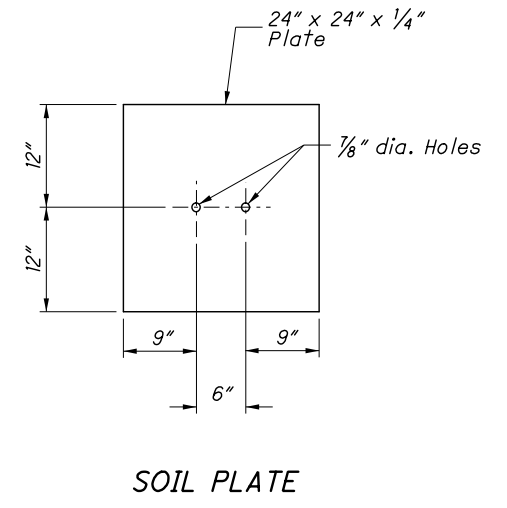
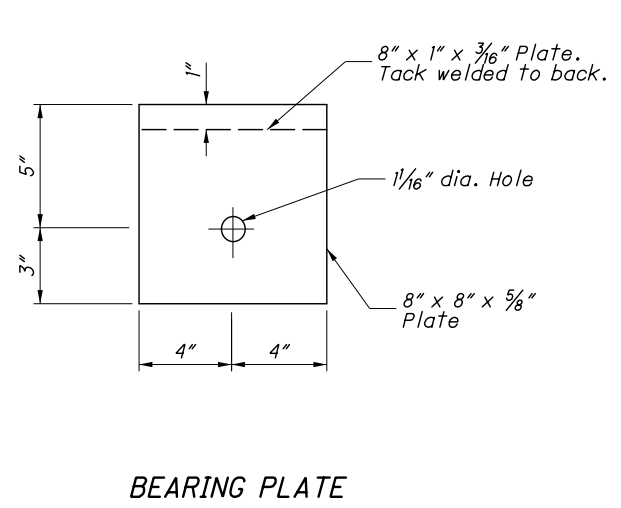
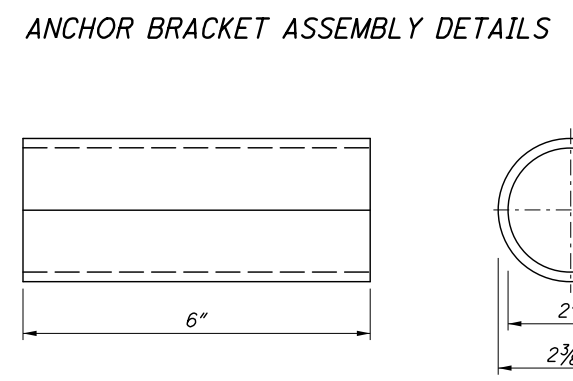
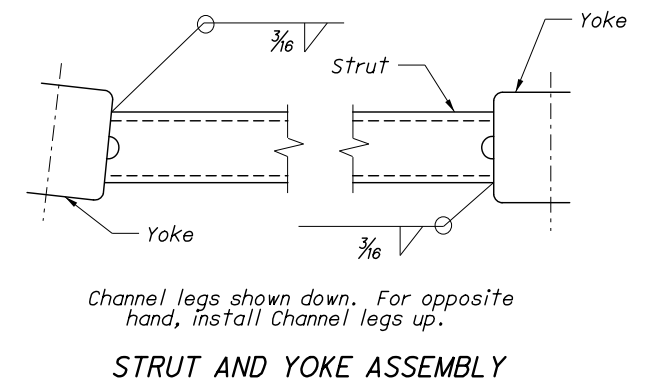
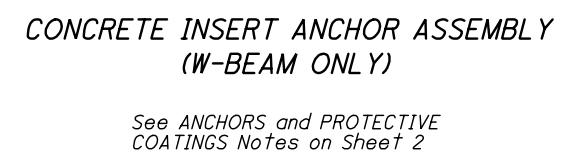
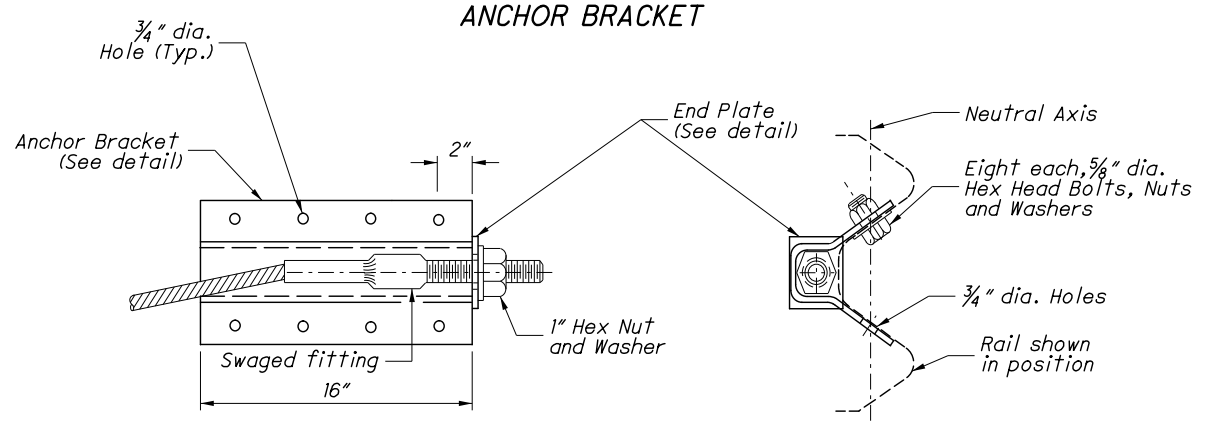
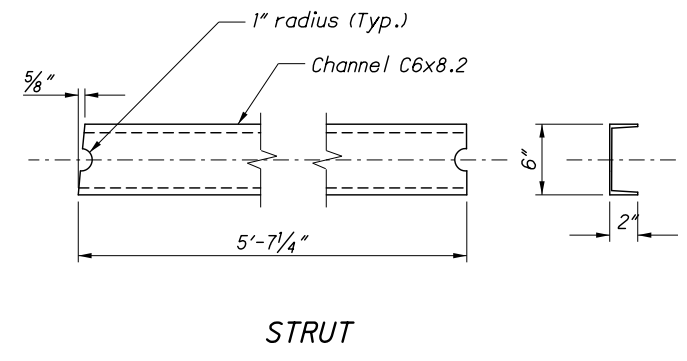
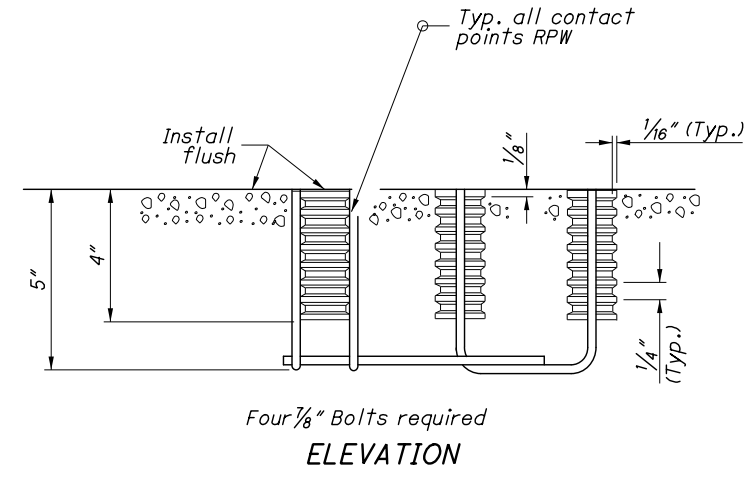
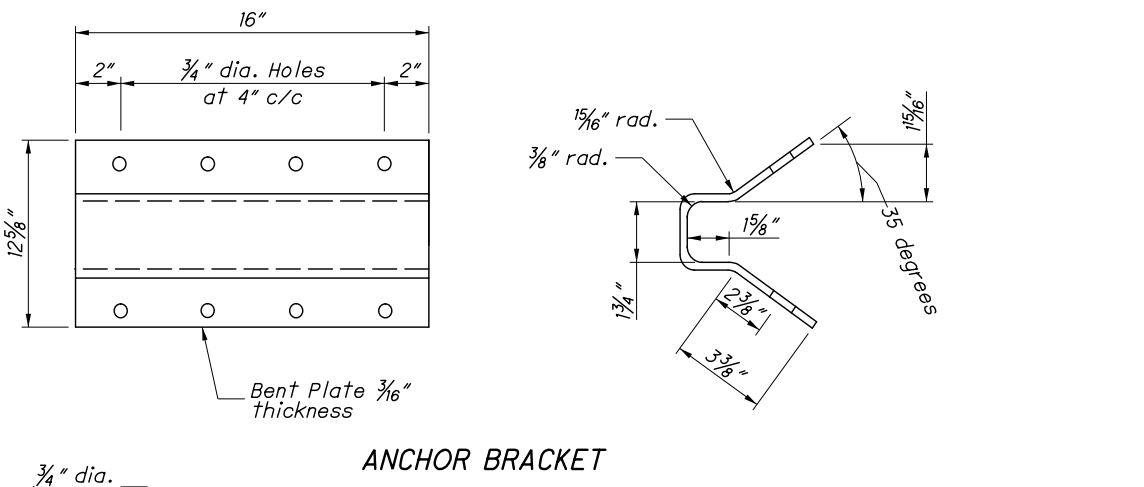
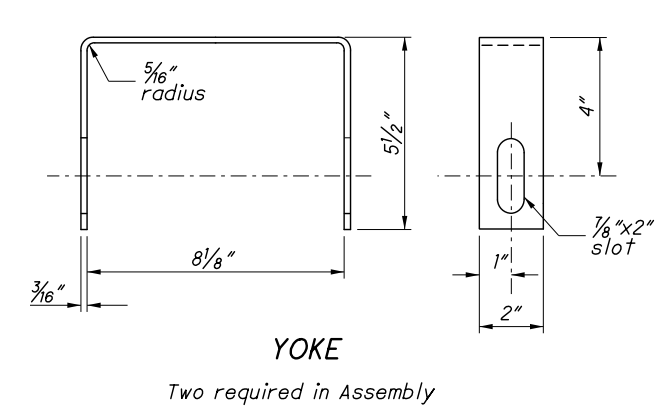
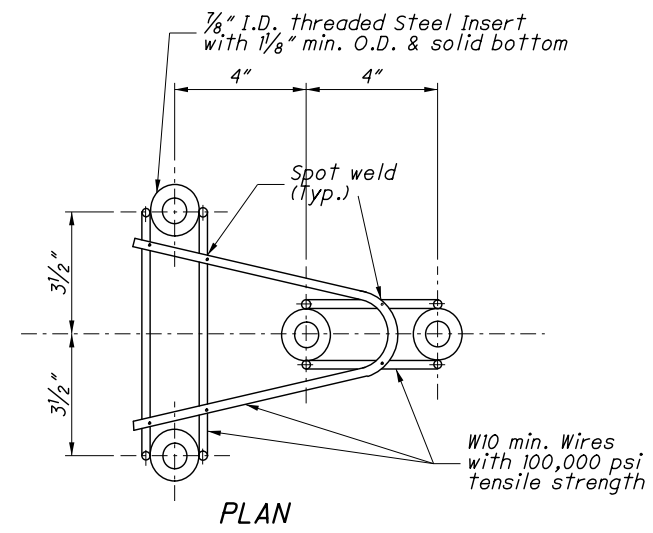
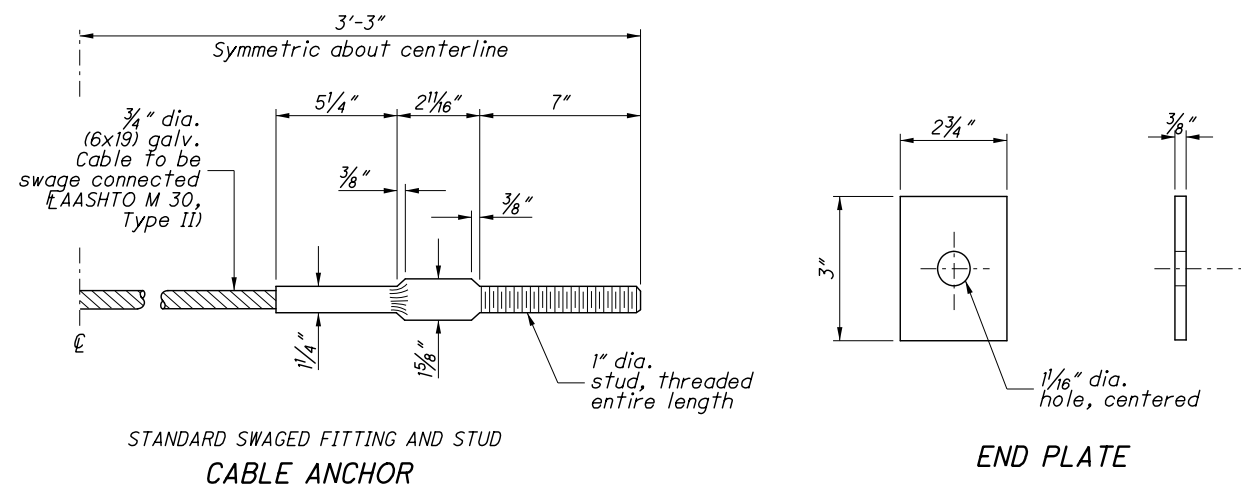


ELEVATION FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

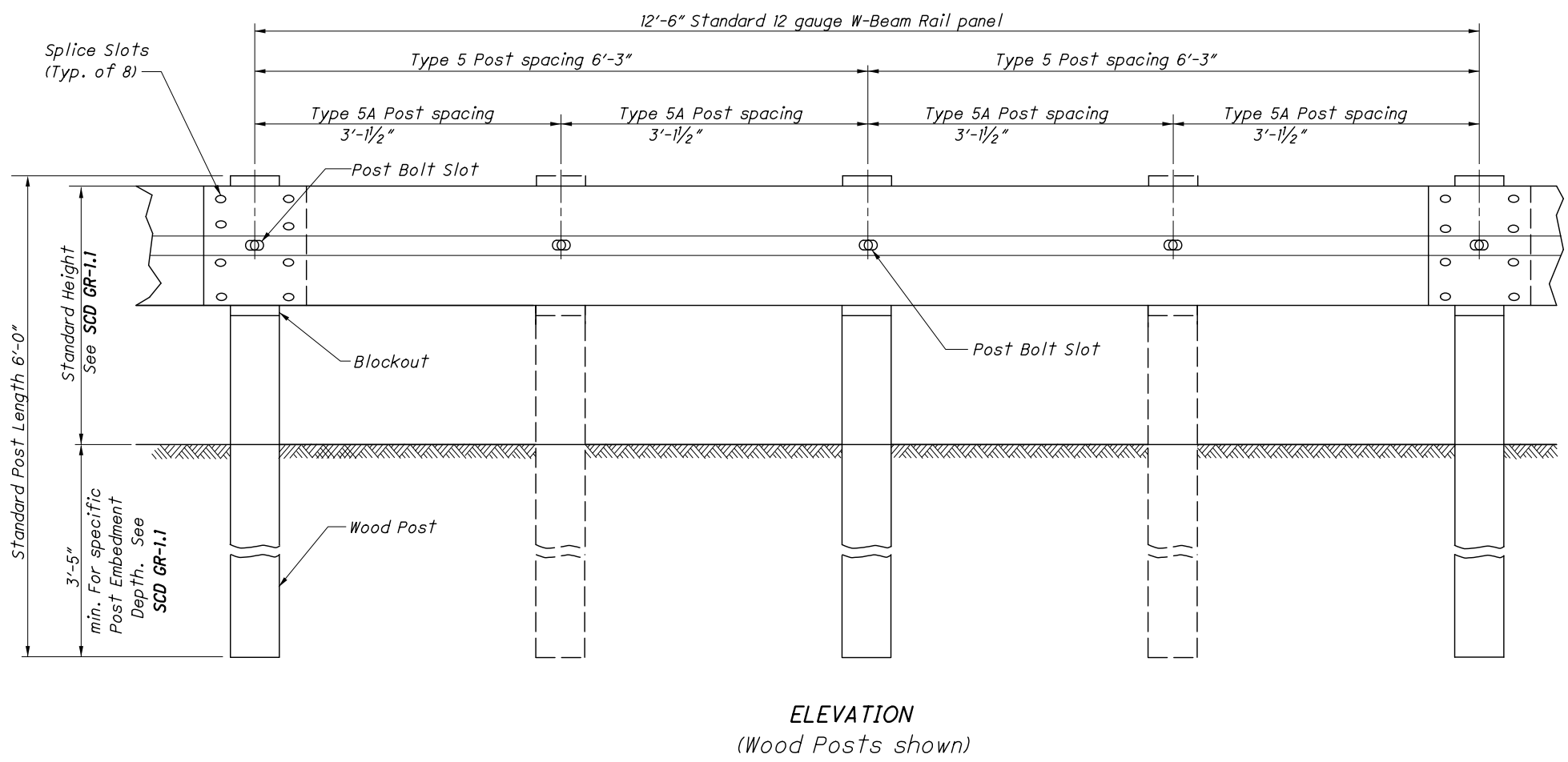
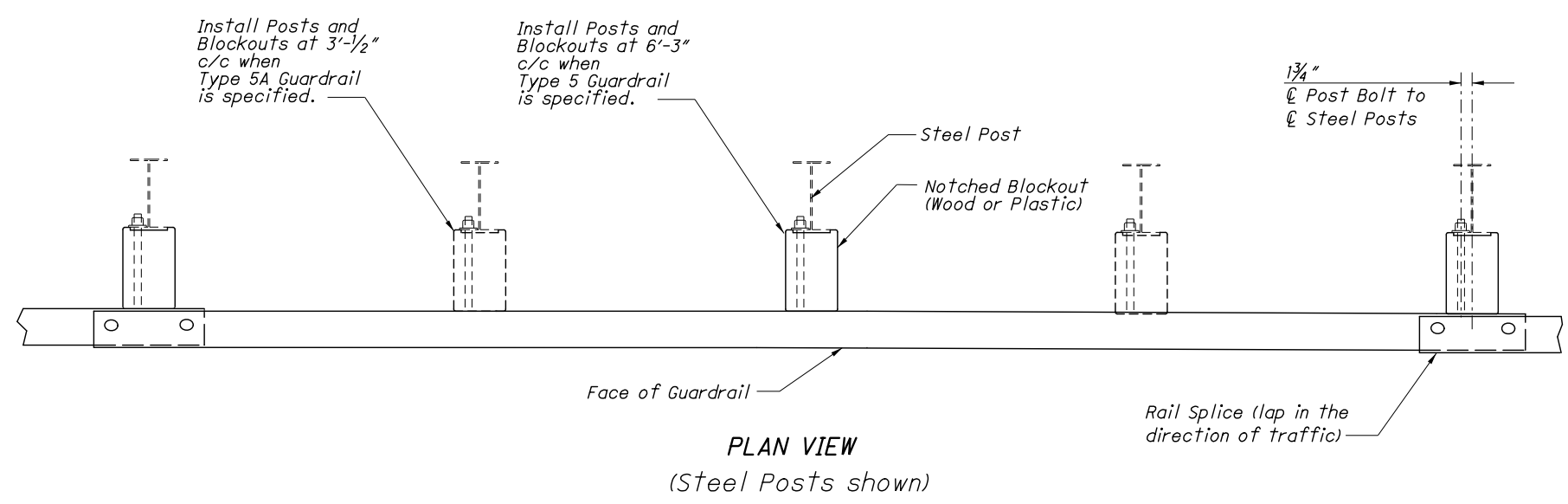
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NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform Taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

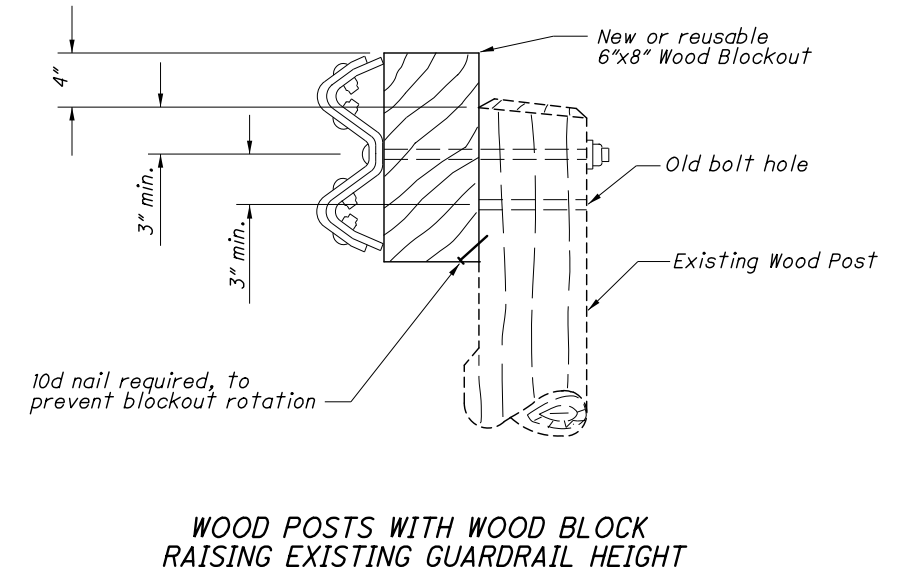
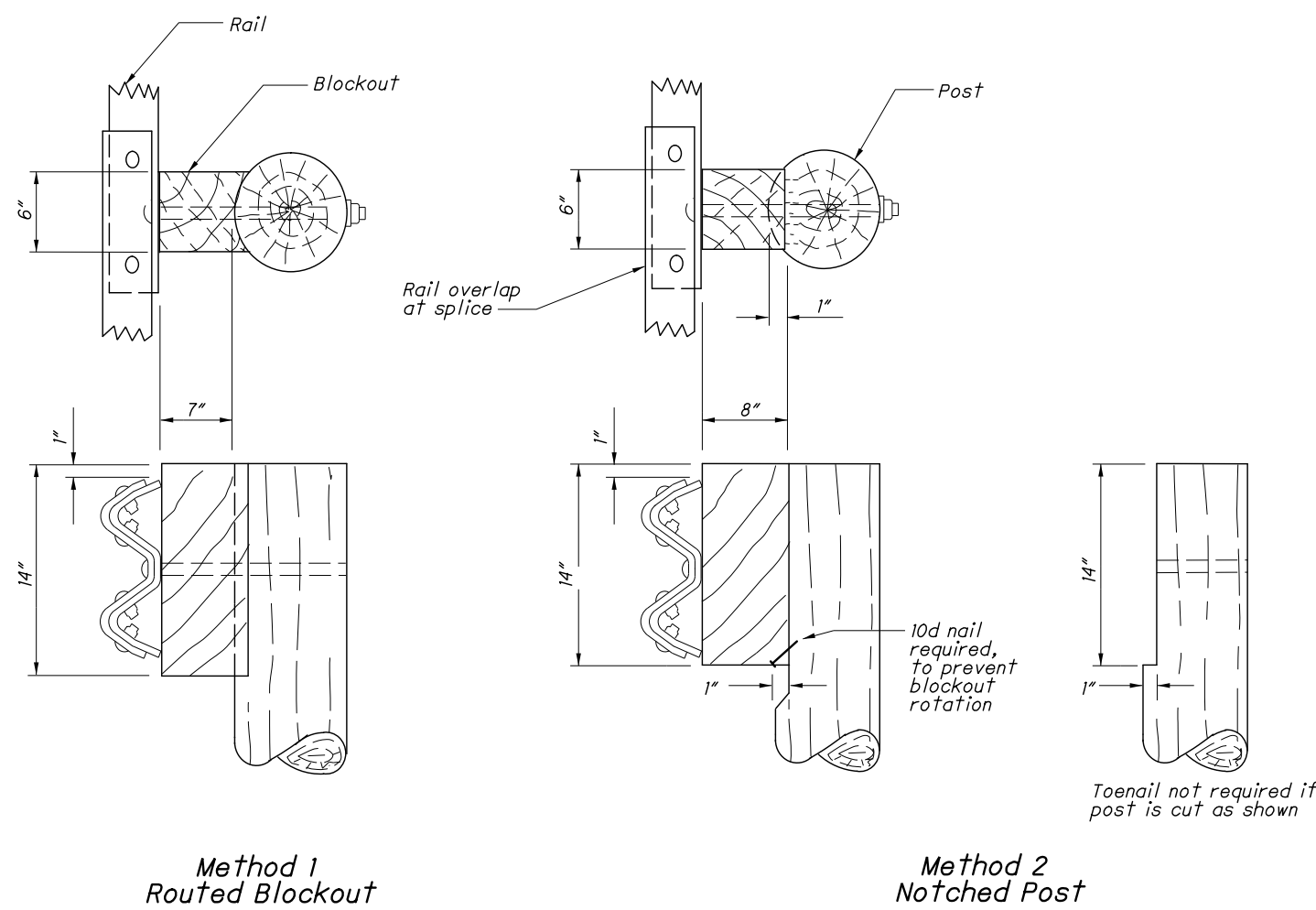
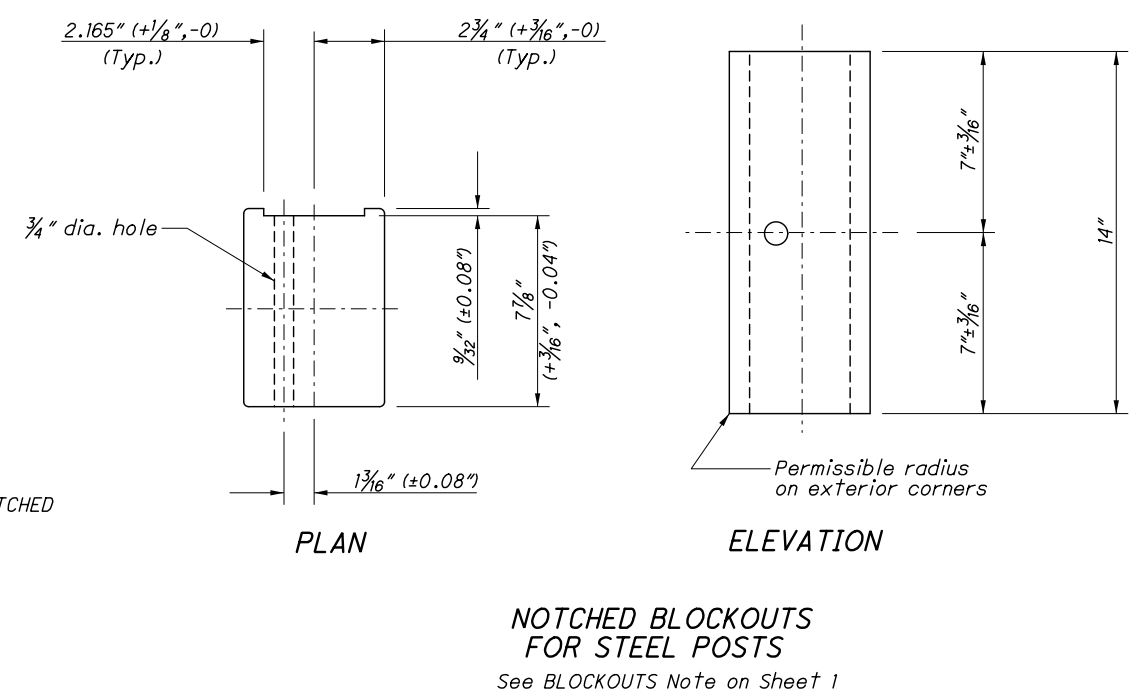
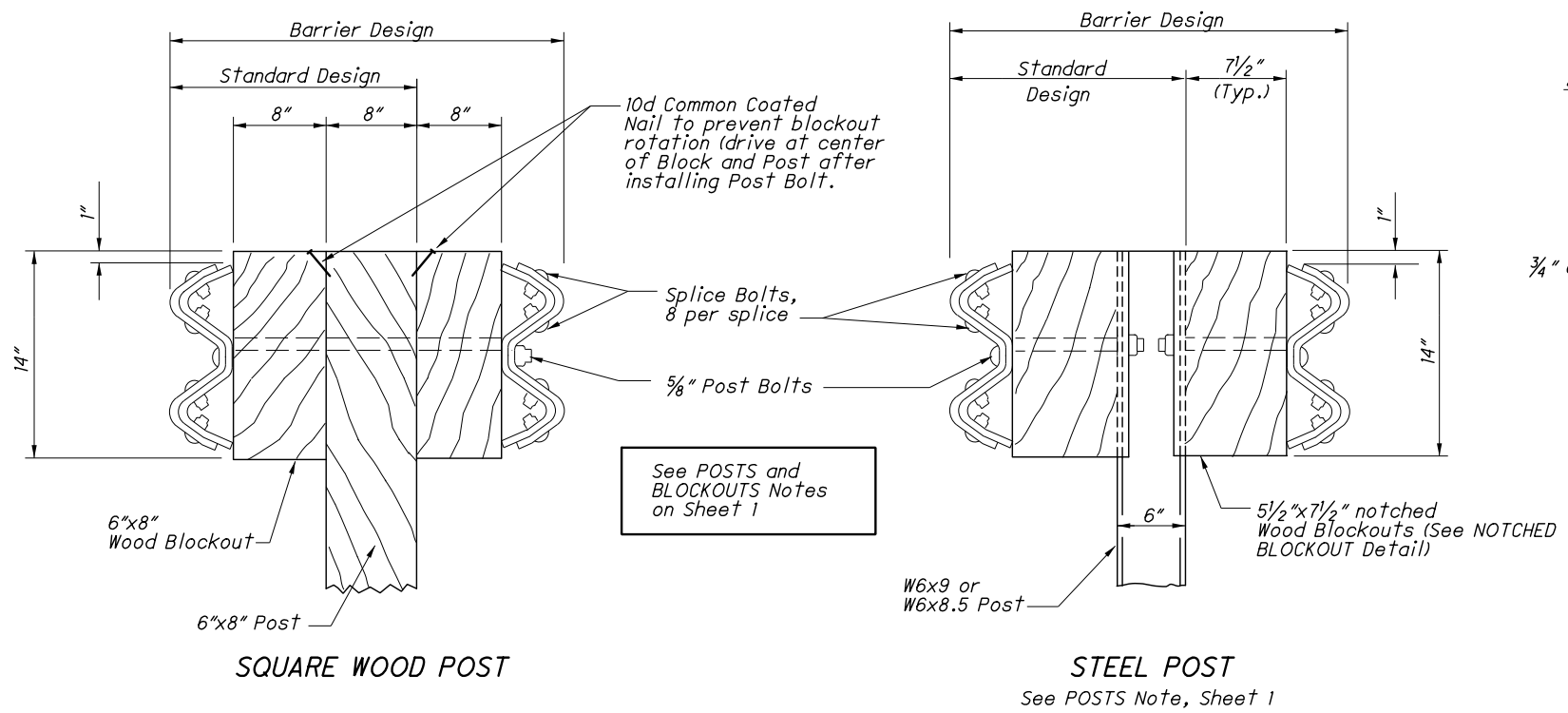
WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

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REVISION DATE	1/18/2013
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Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
Single Sided runs only (Standard Design)

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NOTES

APPLICATION: Use Type T Anchor Assemblies on the trailing end of guardrail runs, located outside of the clear zone of opposing traffic. The assembly is 12'-6" long, none of which can be considered the Length of Need for the guardrail run.

For termination requirements at driveways, see DRIVEWAY OPENING Detail on Sheet 2. For side road approaches and Terminals at Structures, see Location & Design Manual, Volume 1, Figure 603-3.

ANCHORING OPTIONS: Contractor may choose either the foundation tube (shown on this Sheet) or the concrete footing option (Sheet 2) to construct this anchor assembly.

If the foundation tube option is chosen, the contractor will take proper care to insure that the Soil Plate fasteners are not broken during the driving process.

Concrete footings may be cast-in-place or precast. Compact fill after placing precast unit.

MATERIALS: See SCD GR-1.1 for parts used on this anchor, including the CRT Breakaway Posts, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly.

Bearing Plate and Soil Plate is ASTM A709 Grade 36. Steel Ground Tube shall be ASTM A500, Grade B, and meet CMS 707.10. All angles, channels and plates shall meet CMS 711.01. All structural steel shall be galvanized as specified in CMS 711.02. All bolt washers indicated are standard galvanized steel of the appropriate size.

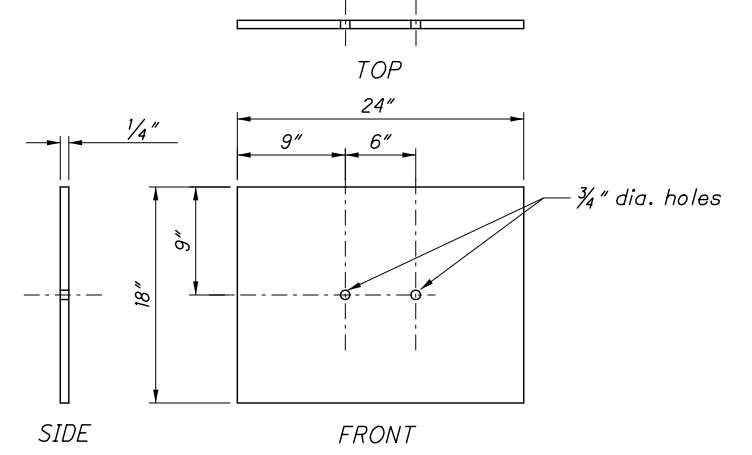
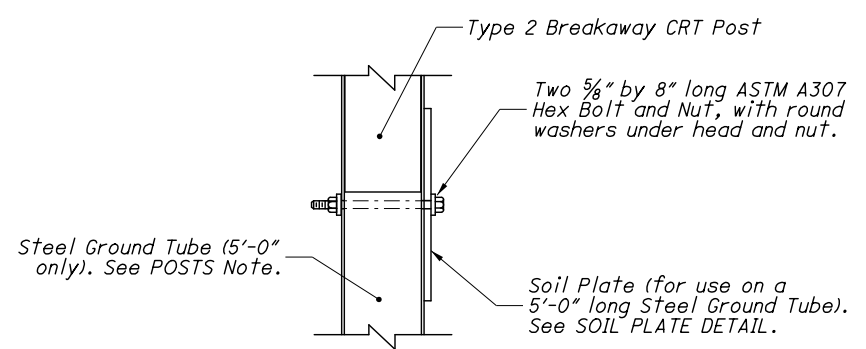
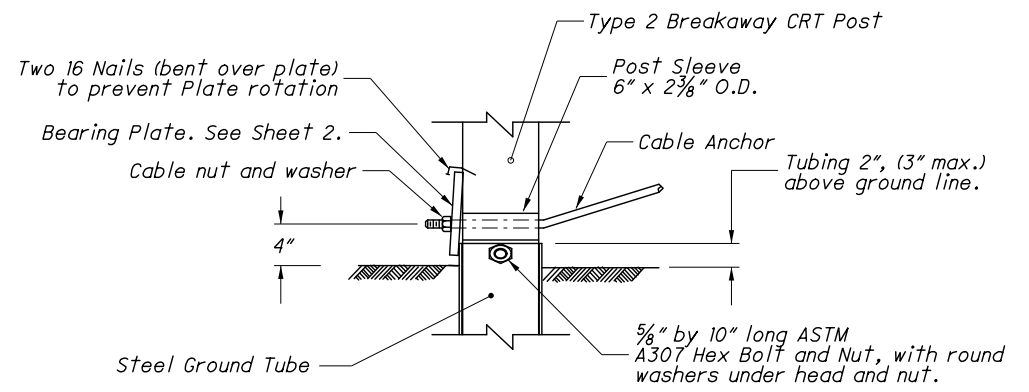
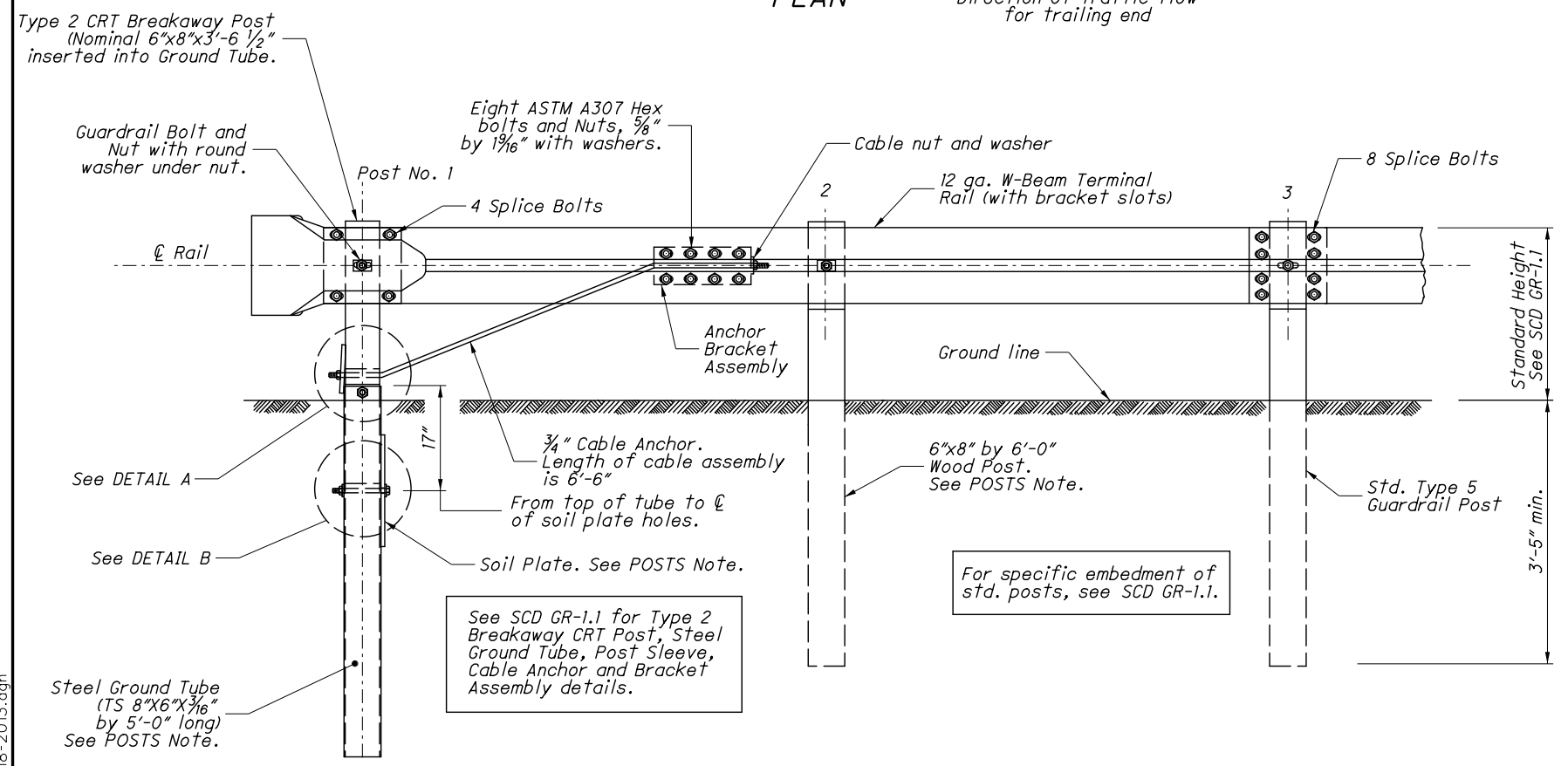
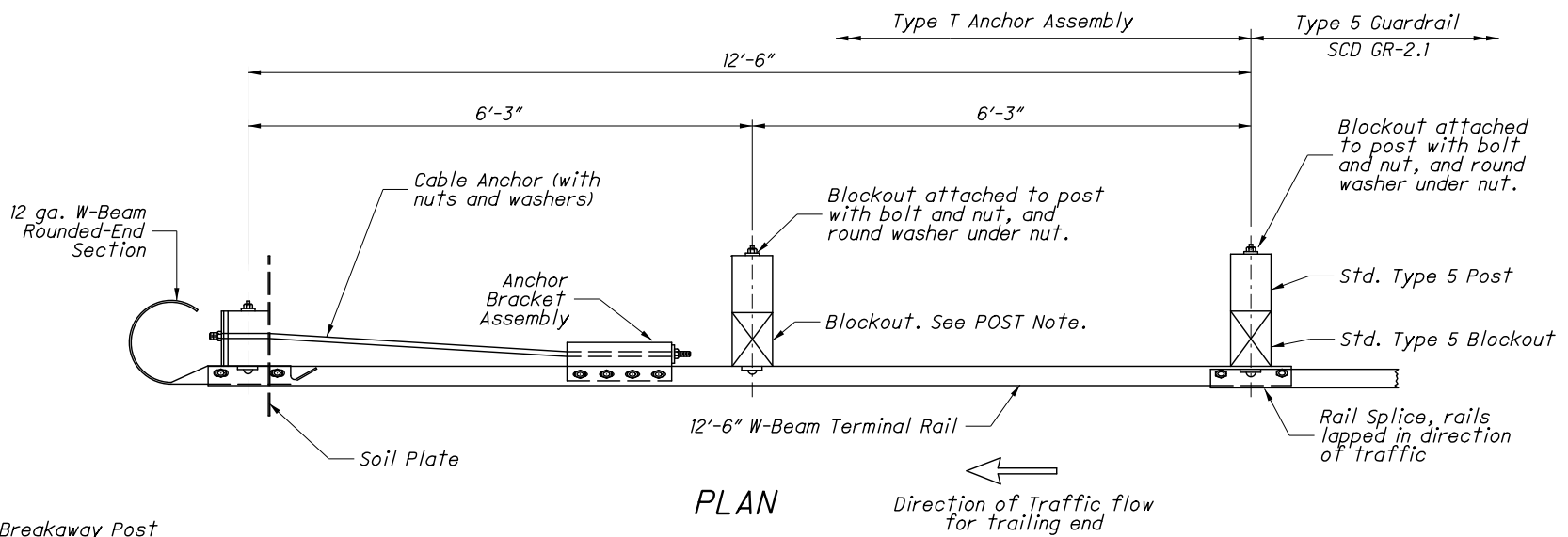
Concrete shall be class C.

Components on this anchor that are not detailed on SCD GR-1.1 include: 1) 12'-6" W-Beam Terminal Rail (standard part RWM14a), and 2) W-Beam Rounded End Section (RWE03a). For complete details and specifications, see part descriptions in the AASHTO/AGC/ARTBA Standardized Hardware Guide.

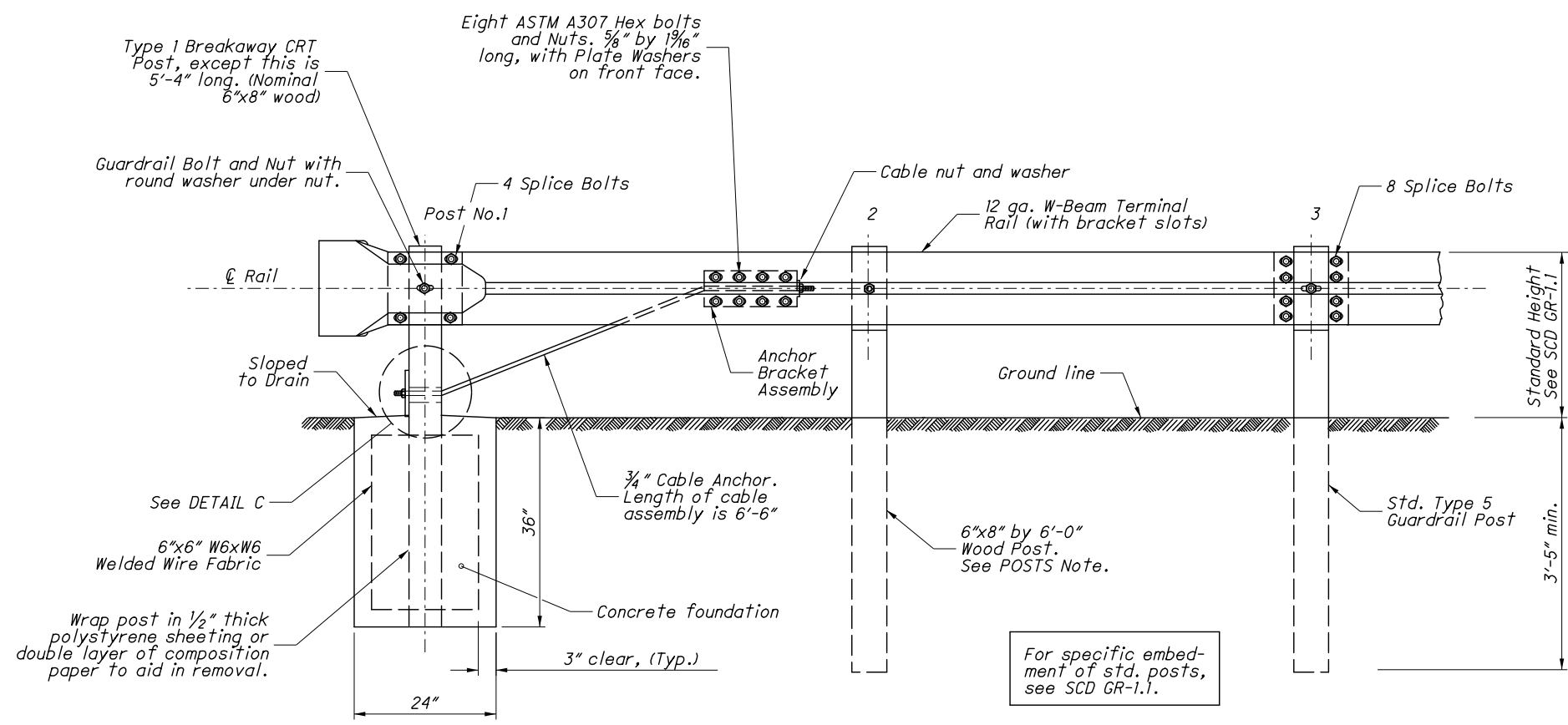
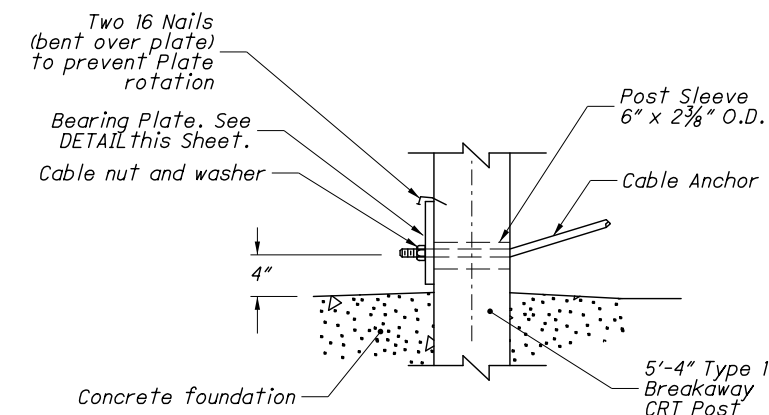
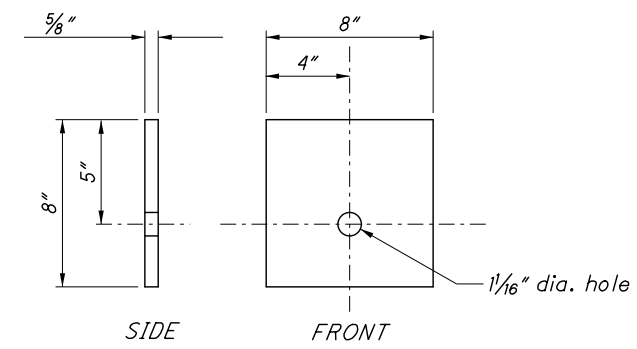
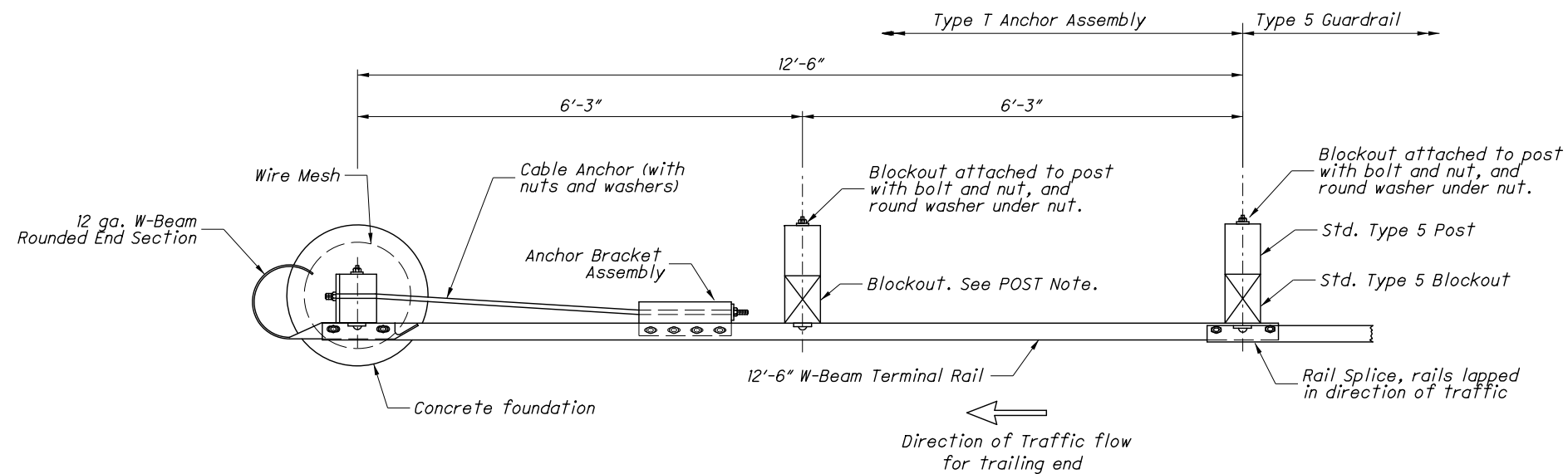
POSTS: Post No. 1 may be an 8'-0" long Steel Ground Tube without a Soil Plate in lieu of the 5'-0" tube with Soil Plate.

Post No. 2 can be W6x9 (or W6x8.5) with notched wood blockouts or a standard Type 5 post and blockout. Recycled plastic blockouts are permitted.

PAYMENT: All labor and materials, including the W-Beam Rounded End Section and the W-Beam Terminal Rail for the 12'-6" anchor assembly shall be included in the unit price bid for Item 606 - Anchor Assembly, Type T, Each.

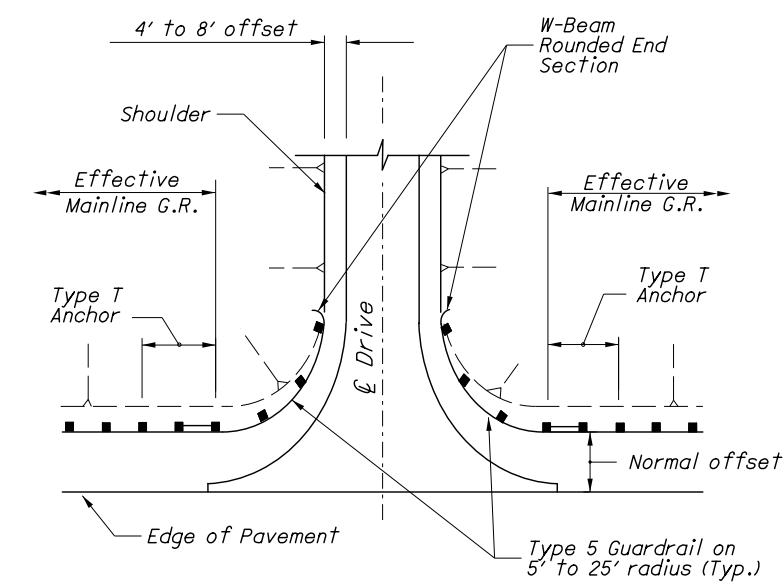


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See SCD GR-1.1 for Type 1 Breakaway CRT Post, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly details.

For specific embedment of std. posts, see SCD GR-1.1.



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