

LOCATION MAP

DESIGN DESIGNATION	LIC-16 20.26-23.75	LIC-79 12.46-13.81
FUNCTIONAL CLASSIFICATION	FREE	FREE
OPENING YEAR ADT (2023)	51,500	38,500
DESIGN YEAR ADT (2035)	62,00	48,000
DESIGN HOURLY VOLUME (2035)	8,100	4,300
DIRECTIONAL DISTRIBUTION	100%	62%
TRUCKS (24 HOUR B&C)	3%	4%
DESIGN SPEED	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH
NHS PROJECT	YES	YES

FREE = FREEWAYS AND EXPRESSWAY

DESIGN EXCEPTIONS  
NONE REQUIRED

ADA DESIGN WAIVER  
NONE REQUIRED

**UNDERGROUND UTILITIES**  
 Contact Two Working Days  
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
 (Non members must be called directly)

PLAN PREPARED BY:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 5 PLANNING & ENGINEERING

ENGINEERS SEAL

SIGNED: *Tracy Allen Greenwald*  
 DATE: 1-30-2023

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

LIC-16/79-VAR

NEWARK AND MADISON TOWNSHIPS  
LICKING COUNTY

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	1/21/22	MT-98.29	1/17/20	EXJ-3-93	1/18/13	800	10/21/22
		MT-99.20	4/19/19			808	1/18/19
		MT-101.60	1/17/20			832	7/15/22
		MT-101.90	7/17/20			843	10/18/19
		MT-102.20	4/19/19			908	10/20/17
MT-95.30	7/19/19	MT-104.10	10/16/15				
MT-95.31	7/19/19	MT-105.10	1/17/20				
MT-95.32	4/19/19						
MT-95.50	7/21/17						
MT-97.10	4/19/19						
MT-98.10	1/17/20						
MT-98.11	1/17/20						
MT-98.20	4/19/19	TC-71.10	7/15/22				
MT-98.22	1/17/20	TC-72.20	7/20/18				
MT-98.28	1/17/20						

FEDERAL PROJECT NUMBER

E191(755)

RAILROAD INVOLVEMENT

COLUMBUS AND OHIO RIVER RAIL ROAD

PROJECT DESCRIPTION

REHABILITATION ON VARIOUS STRUCTURES ON S.R. 16 AND S.R. 79 IN LICKING COUNTY.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA = N/A (MAINTENANCE)  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA = N/A (MAINTENANCE)  
 NOTICE OF INTENT EARTH DISTURBED AREA = NOI NOT REQUIRED

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON 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.

DISTRICT DEPUTY DIRECTOR

DIRECTOR, DEPARTMENT OF TRANSPORTATION

*John Mohr*

DESIGN AGENCY



DESIGNER

TDF

REVIEWER

TAG 01/30/23

PROJECT ID

110414

SHEET TOTAL

P.1 79

**ITEM 614 - MAINTAINING TRAFFIC**

DO NOT EXCEED THE PERMITTED LANE CLOSURE TIMES POSTED ON THE DEPARTMENT'S PERMITTED LANE CLOSURE WEB SITE OR THE LANE VALUE CONTRACT TABLE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SUBMIT A LANE CLOSURE APPLICATION REQUEST FORM TO THE ENGINEER IN WRITING, THREE (3) WORKING DAYS IN ADVANCE OF THE LANE(S) CLOSURES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO LANE CLOSURES WILL BE PERMITTED DURING HOLIDAYS OR SPECIAL EVENTS. SEE SPECIAL EVENTS/HOLIDAY NOTE.

**BRIDGE LOCATION 2:**

PEDESTRIAN TRAFFIC SHALL BE CLOSED USING STANDARD DRAWING MT-101.60. TRAFFIC FOR PREP AND SEALING THE BRIDGE DECK SHALL ONLY BE DONE AT NIGHT FROM 8:00 PM TO 8:00 AM. REPLACEMENT OF THE SIDEWALK WILL ONLY BE ALLOWED FROM 8:00 PM TO 8:00 AM.

**BRIDGE LOCATION 3:**

A MINIMUM OF 1 LANE OF TRAFFIC ON THE BRIDGE SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS DRAWING MT-97.10 CLOSING THE RIGHT OR LEFT LANES AS NEEDED OR DIRECTED BY THE ENGINEER BETWEEN THE HOURS OF 10:00 PM AND 7:00 AM. A STEEL PLATE SHALL BE USED TO COVER UP ANY WORK THAT IS UNFINISHED AND/OR CURING OF CONCRETE BEFORE RE-OPENING TO TRAFFIC.

**BRIDGE LOCATIONS 6:**

A MINIMUM OF 1 LANE OF TRAFFIC ON THE BRIDGE SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS DRAWING MT-95.31 & MT-95.32 CLOSING THE RIGHT OR LEFT LANES AS NEEDED OR DIRECTED BY THE ENGINEER BETWEEN FRIDAY 7:00PM TO 7:00AM MONDAY.

**BRIDGE LOCATIONS 9, 10, 14, 15:**

A MINIMUM OF 1 LANE OF TRAFFIC ON THE BRIDGE SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS DRAWING MT-95.30 CLOSING THE RIGHT OR LEFT LANES AS NEEDED OR DIRECTED BY THE ENGINEER.

**BRIDGE LOCATIONS 1, 4, 5, 7, 8, 11, 12, 13:**

A MINIMUM OF 1 LANE OF TRAFFIC ON THE BRIDGE SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS DRAWING MT-95.31 & MT-95.32 CLOSING THE RIGHT OR LEFT LANES AS NEEDED OR DIRECTED BY THE ENGINEER.

CLOSING THE LANES BEFORE THE ALLOWABLE TIME AND/OR FAILURE TO RE-OPEN ALL LANES TO TRAFFIC AS DIRECTED IN THE PLANS WILL RESULT IN A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT PROPOSAL NOTE 127.

PLACE AN UNOCCUPIED SHADOW VEHICLE EQUIPPED WITH A TRUCK-MOUNTED ATTENUATOR (TMA) WHENEVER MAINTAINING TRAFFIC ACCORDING TO STANDARD DRAWING MT-95.30 OR AS DIRECTED BY THE ENGINEER. EQUIP THE VEHICLES WITH A 360 DEGREE ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE FROM A MINIMUM DISTANCE OF 1 QUARTER MILE.

PERFORM ALL WORK AND SUPPLY ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH CMS 614 AND LATEST VERSION OF 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.

**SPECIAL EVENTS/HOLIDAY**

THE FOLLOWING HOLIDAY OR SPECIAL EVENT RESTRICTIONS APPLY.

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 WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING)	12:00N WED. THROUGH 6:00AM MON.
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

**LANE VALUE CONTRACT TABLE**

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	\$ PER TIME UNIT
1 LANE OF S.R. 16 FROM MM 19.95 TO MM 23.30 EASTBOUND AND WESTBOUND	O.D.O.T. WEBSITE: PERMITTED LANE CLOSURE TIMES	15 MIN.	\$2,500

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTUCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTUCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

1. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
2. DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMTUCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

1. 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 FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS 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 LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. 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.

LEOS (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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 500 HOURS THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

**WORK ZONE SPEED ZONES (WZSZs)**

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S) WZ-

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRECONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSEVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

[WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTUCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

[ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 4 EACH]

[ASSUMING 4 DSL SIGN ASSEMBLY(IES) FOR 2 MONTH(S)]

DESIGN AGENCY



DESIGNER

TDF

REVIEWER

TAG 01/30/23

PROJECT ID


110414

SHEET TOTAL

P.8 | 79

SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
								14		01/NHS/14	ITEM	EXT	TOTAL				
<b>STRUCTURE REPAIR (LIC-16-21.42 or 4500962)</b>																	
										1,734	202	11401	1,734	LB	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS)	6	
										500	202	11401	500	LB	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS)	6	
										33	202	23000	33	SY	PAVEMENT REMOVED		
										LS	202	98000	LS		REMOVAL MISC.: BEAM SEAT DEBRIS	5	
										10	202	98500	10	CY	REMOVAL MISC.: PORTIONS OF PARAPET REMOVED	4	
										10	511	34451	10	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	4	
										10	511	53012	10	CY	CLASS QC2 CONCRETE, MISC.: ACCELERATING ADMIXTURE	5	
										1,388	513	10201	1,388	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	6	
										31	513	95000	31	FT	STRUCTURAL STEEL, MISC.: REPAIR OF DAMAGED MAIN MEMBERS, COMPLETE PENETRATION WELDING	6	
										5	513	95000	15	FT	STRUCTURAL STEEL, MISC.: REPAIR OF DAMAGED SECONDARY MEMBER, FILLET WELDING	6	
										15	513	95030	15	EACH	STRUCTURAL STEEL, MISC.: REPAIR OF DAMAGED MEMBERS, COPE HOLES	6	
										151	514	27700	151	SF	FIELD PAINTING, MISC.: MAIN AND SECONDARY MEMBERS	6	
										75	516	14600	75	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL (3" BEJS)	5	
										LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6	
										57	601	32205	57	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC, AS PER PLAN	5	
<b>STRUCTURE REPAIR (LIC-16-21.68 or 4501020)</b>																	
										9	203	10001	9	CY	EXCAVATION, AS PER PLAN	5	
										6	518	12500	6	EACH	SCUPPER, MISC.: 6" CONDUIT	5 & 7	
										64	SPECIAL	51911600	64	SF	PATCHING CONCRETE STRUCTURE, VERTICOAT	4	
										6	601	20000	6	SY	CRUSHED AGGREGATE SLOPE PROTECTION		
<b>STRUCTURE REPAIR (LIC-16-22.34 or 4501179)</b>																	
										9	203	10001	9	CY	EXCAVATION, AS PER PLAN	5	
										6	518	12500	6	EACH	SCUPPER, MISC.: 6" CONDUIT	5 & 7	
										3	601	20000	3	SY	CRUSHED AGGREGATE SLOPE PROTECTION		
<b>STRUCTURE REPAIR (LIC-16-20.38 or 4504410)</b>																	
										LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, (SUBSTRUCTURE)	3	
										121	202	32800	121	SY	CONCRETE SLOPE PROTECTION REMOVED		
										9	202	98500	9	CY	REMOVAL MISC.: PORTIONS OF PARAPET REMOVED	4	
										9,012	509	10000	9,012	LB	EPOXY COATED STEEL REINFORCEMENT		
										352	510	10001	352	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	3	
										9	511	34451	9	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	4	
										45	511	53012	45	CY	CLASS QC2 CONCRETE, MISC.: WITH EARLY STRENGTH PUMPED SELF CONSOLIDATING CONCRETE	3 & 4	
										13	516	13601	13	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	6	
										96	601	21000	96	SY	CONCRETE SLOPE PROTECTION		
<b>STRUCTURE REPAIR (LIC-79-13.78 or 4504429)</b>																	
										10	202	98500	10	CY	REMOVAL MISC.: PORTIONS OF PARAPET REMOVED	4	
										10	511	34451	10	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	4	
										4	516	31001	4	FT	JOINT SEALER, AS PER PLAN (A)	5	
										8	519	11101	8	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4	
										3	609	98000	3	FT	CURB, MISC.: REMOVED AND REPLACED	5	

DESIGN AGENCY



DESIGNER  
**TDF**

REVIEWER  
**TAG**

PROJECT ID  
**110414**

SHEET TOTAL  
P.11 | 79

SHEET NUM.

PART.  
01/NHS/14

ITEM

ITEM  
EXT

GRAND  
TOTAL

UNIT

DESCRIPTION

SEE  
SHEET  
NO.

14

0.08  
200  
1  
1

0.08  
200  
1  
1

646  
646  
646  
646

10200  
10300  
20300  
20410

0.08  
200  
1  
1

MILE  
FT  
EACH  
EACH

CENTER LINE  
CHANNELIZING LINE, 8"  
LANE ARROW  
WORD ON PAVEMENT, 96"

**TRAFFIC CONTROL**

**MAINTENANCE OF TRAFFIC**

500 614 11110 500 HOUR  
 6 614 18601 6 SNMT  
 8 808 18700 8 SNMT

LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE  
 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN  
 DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY

9

8

INCIDENTALS  
 MAINTAINING TRAFFIC  
 MOBILIZATION

LS 614 11000 LS  
 LS 624 10000 LS

GENERAL SUMMARY 4

DESIGN AGENCY



DESIGNER

TDF

REVIEWER

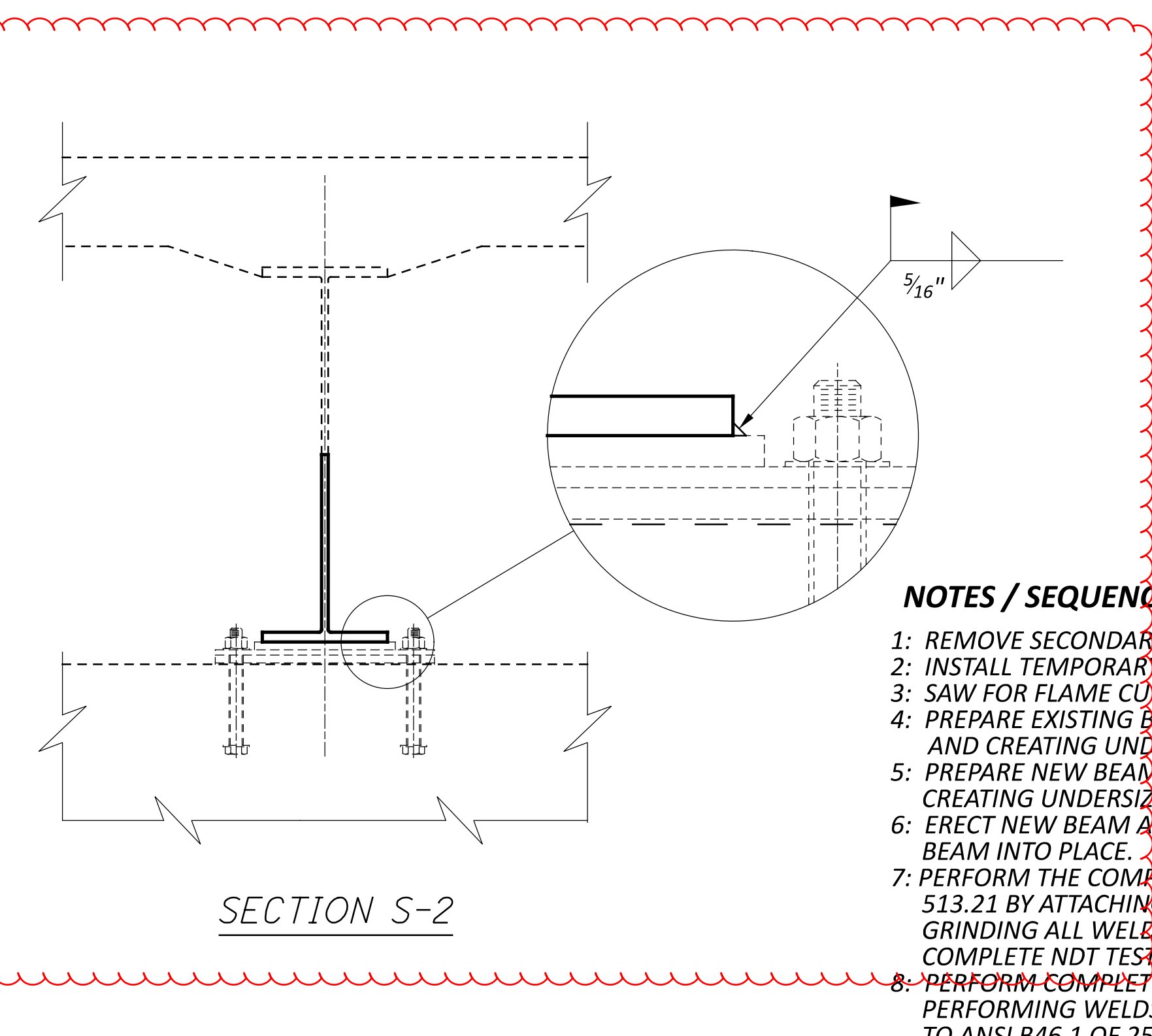
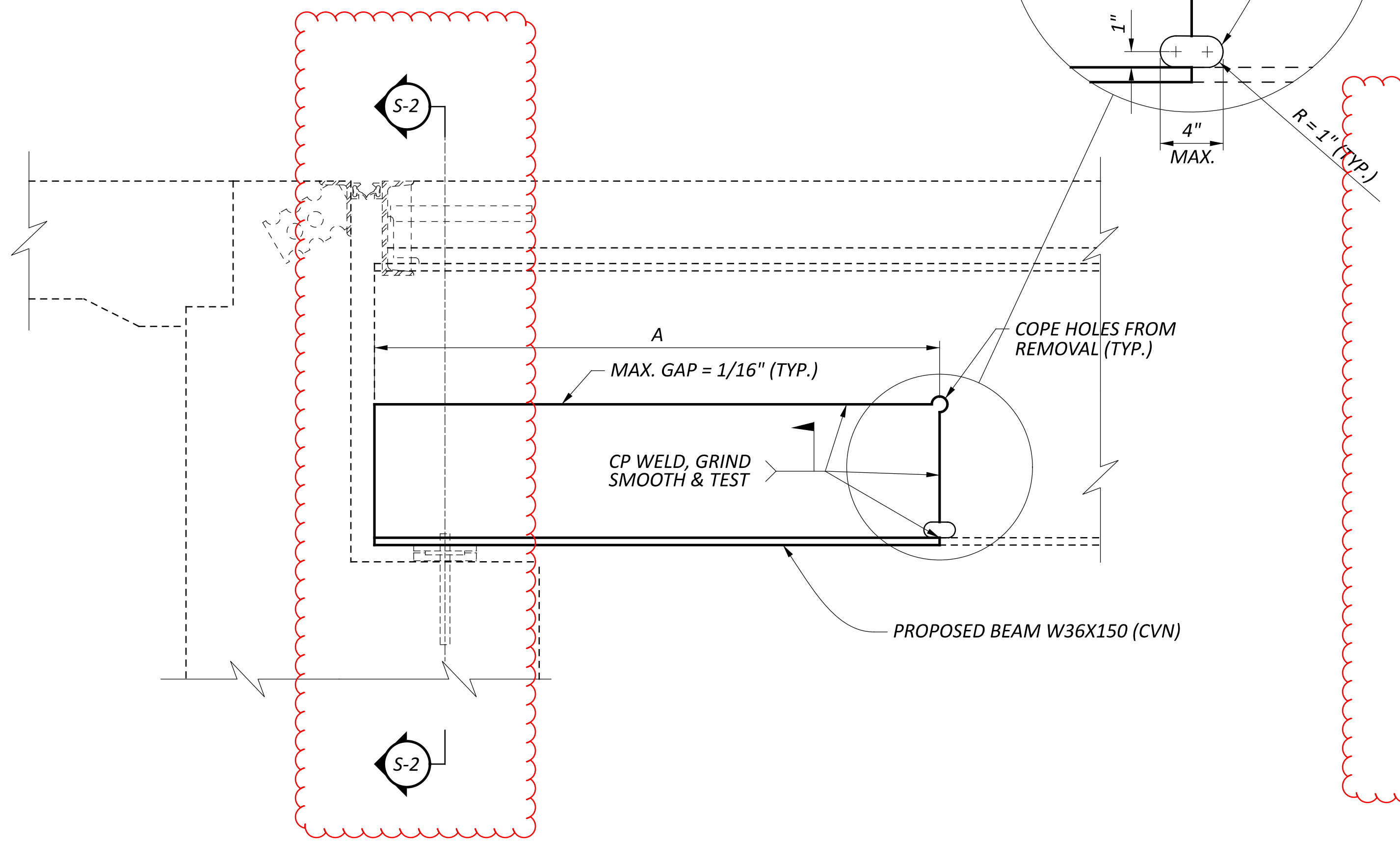
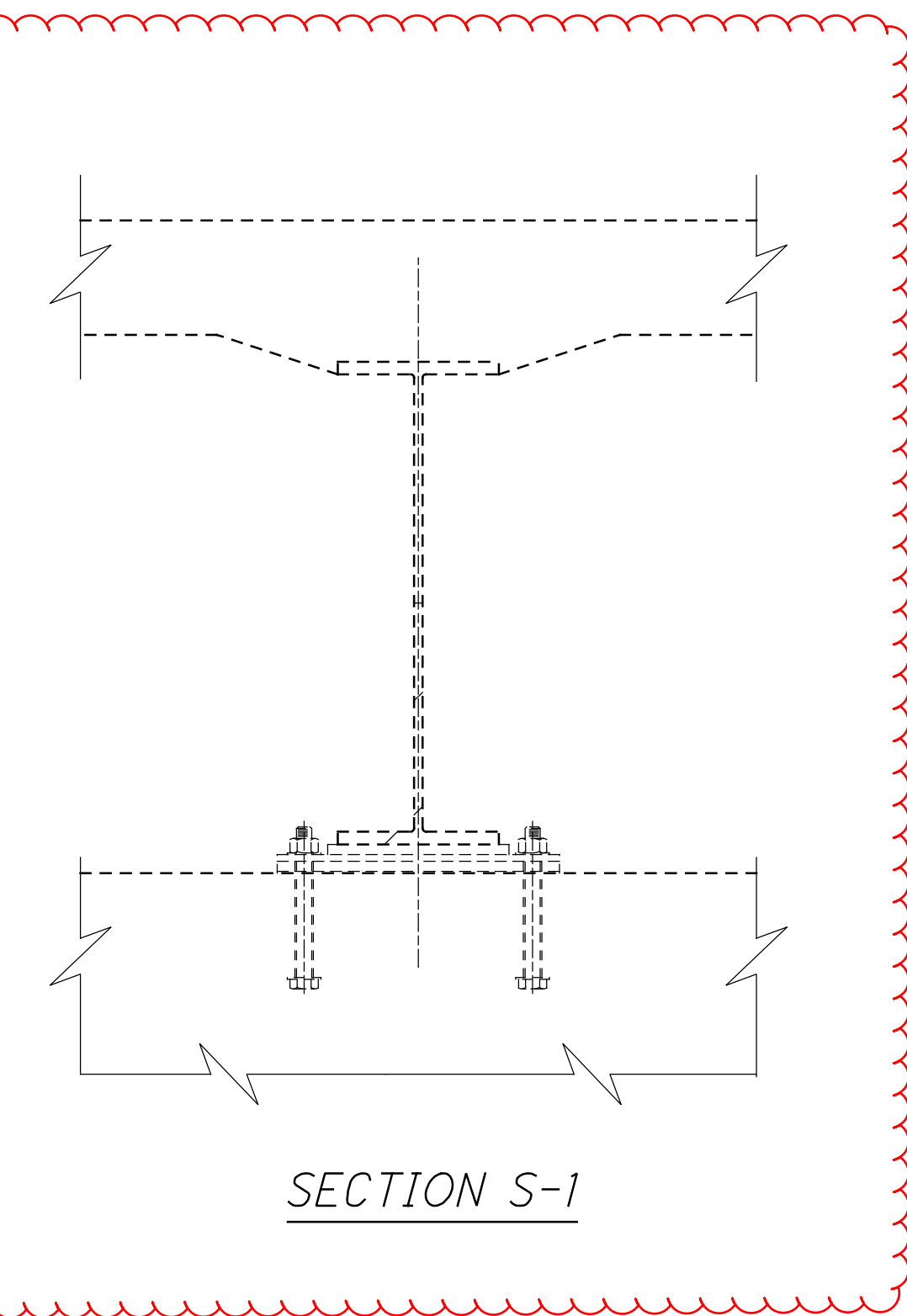
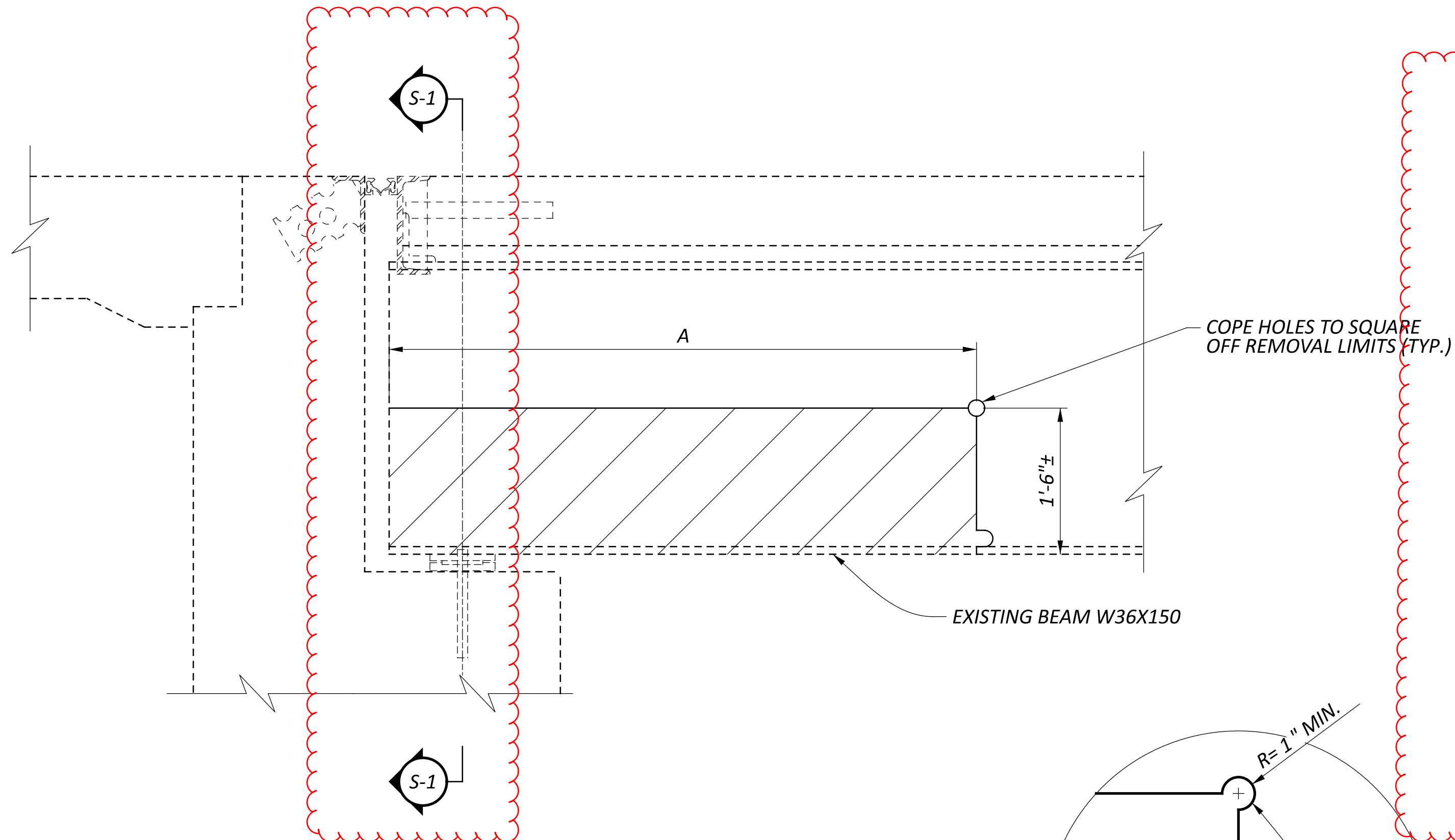
TAG 01/30/23

PROJECT ID

110414

SHEET TOTAL

P.13 79



**DAMAGED MAIN MEMBERS ESTIMATED QUANTITIES**

BEAM	202	202	513	513	513	513	514
	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS)	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS)	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	STRUCTURAL STEEL MISC.: REPAIR OF DAMAGED MAIN MEMBERS, COMPLETE PENETRATION WELDING	STRUCTURAL STEEL MISC.: REPAIR OF DAMAGED SECONDARY MEMBER, FILLET WELDING	STRUCTURAL STEEL MISC.: REPAIR OF DAMAGED MEMBERS, COPE HOLES	FIELD PAINTING, MISC.: MAIN AND SECONDARY MEMBERS
	LB	LB	LB	FT	FT	EACH	SQ FT
1 (SPAN 1)	281	100	225	5.5	3	2	26
5 (SPAN 1)	328	100	263	6	3	2	29
6 (SPAN 1)	281	100	225	5.5	3	2	26
10 (SPAN 1)	563	100	450	8.5	3	2	44
10 (SPAN 3)	281	100	225	5.5	3	2	26
<b>TOTAL</b>	<b>1734</b>	<b>500</b>	<b>1388</b>	<b>31</b>	<b>15</b>	<b>10</b>	<b>151</b>

FINAL QUANTITIES FOR STRUCTURAL STEEL SHALL BE DETERMINED BY SHOP DRAWINGS.

**STEEL NOTCH TOUGHNESS REQUIREMENT (CHARPY V-NOTCH)**  
 WHERE A SHAPE OR MATERIAL IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS SPECIFIED IN 711.01.

**NOTES / SEQUENCE OF EVENTS**

- 1: REMOVE SECONDARY MEMBERS AS NECESSARY.
- 2: INSTALL TEMPORARY SUPPORT.
- 3: SAW FOR FLAME CUT TO REMOVE DAMAGED BEAM USING A MECHANICAL GUIDE.
- 4: PREPARE EXISTING BEAM FOR COMPLETE PENETRATION WELD BY EDGE BEVELING AND CREATING UNDERSIZED WEB COPES.
- 5: PREPARE NEW BEAM FOR COMPLETE PENETRATION WELD BY EDGE BEVELING AND CREATING UNDERSIZED WEB COPES.
- 6: ERECT NEW BEAM AND CHECK FIT UP, NO GAP EXCEEDING 1/16", TACK WELD BEAM INTO PLACE.
- 7: PERFORM THE COMPLETE PENETRATION FLANGE WELDING ACCORDING TO CMS 513.21 BY ATTACHING RUN OFF TABS, PERFORM WELDS, REMOVING TABS AND GRINDING ALL WELD SURFACES SMOOTH ACCORDING TO ANSI B46.1 OF 250 MIL. COMPLETE NDT TESTING ACCORDING TO CMS 513.25A.
- 8: PERFORM COMPLETE PENETRATION WEB WELDS ACCORDING TO 513.21 BY PERFORMING WELDS, GRINDING COPES AND ALL WELDS SMOOTH ACCORDING TO ANSI B46.1 OF 250 MIL. COMPLETE NDT TESTING ACCORDING TO CMS 513.25A.
- 9: REPAIR SECONDARY MEMBERS.

BEAM REPAIR DETAILS  
 BRIDGE NO. LIC-16-2142  
 S.R. 16 & S.R. 79 OVER FRONT ST.

SFN  
 4500962  
 DESIGN AGENCY

DESIGNER: TDF  
 CHECKER: CPS  
 REVIEWER: TAG  
 PROJECT ID: 110414  
 SUBSET: TOTAL  
 SHEET: P.38  
 TOTAL: 79