

NOTES

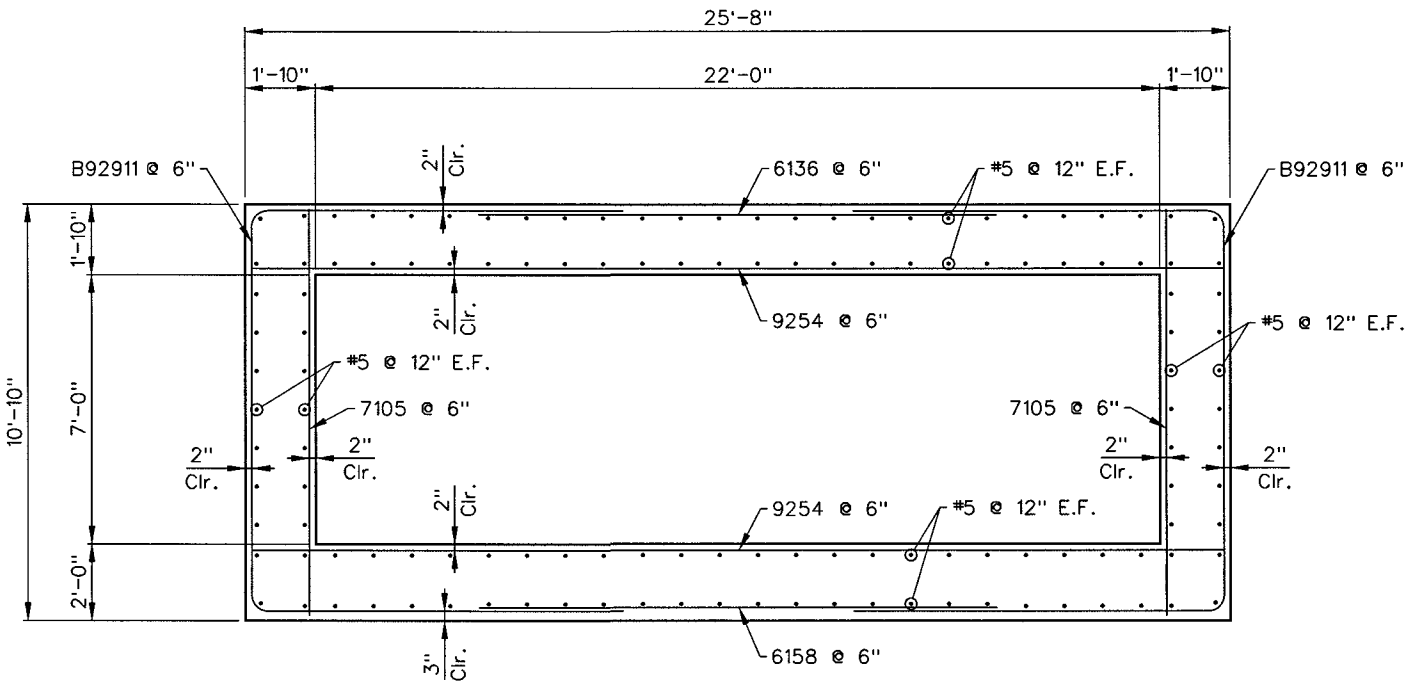
1. DESIGN SPECIFICATIONS: "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2012"
2. CONSTRUCTION SPECIFICATIONS: "STATE OF NEVADA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2001"
3. LIVE LOADS:
HL-93 DESIGN TRUCK (32.0 KIP AXLE)
HL-93 DESIGN TANDEM (TWO 25.0 KIP AXLES SPACED 4 FT. APART)
CA-P13 PERMIT VEHICLE (48.0 KIP AXLES SPACED 18 FT. APART)
LATERAL LIVE LOAD PRESSURE:
EQUIVALENT TO 2 FT. OF EARTH SURCHARGE APPLIED HORIZONTALLY = 240 PSF
- DEAD LOADS:
SOIL UNIT WEIGHT = 120 PCF
MIN LATERAL EARTH PRESSURE = 30 PCF
MAX LATERAL EARTH PRESSURE = 60 PCF
4. CONCRETE: CLASS D MODIFIED (MAJOR) F'C=5,000 PSI @ 28 DAYS
5. REINFORCING STEEL: ALL REINFORCING STEEL TO BE ASTM A706. DIMENSIONS RELATING TO BAR SPACING ARE CENTER TO CENTER.
6. SEE SHEET B2 FOR SPECIAL UPTURNED BEAM EACH SIDE OF MANHOLE OPENINGS. AND END CAP DETAIL.
7. MAXIMUM EARTH COVER OF 20 FT.
MINIMUM EARTH COVER OF 10 FT.
8. CONSTRUCTION TYPE CODE: X928

QUANTITIES

(FOR CULVERT ONLY, EXCLUDES UPTURNED BEAM MANHOLE SUPPORTS & END CAP)

ITEM	DESCRIPTION	QUANTITY	UNITS
502 0970	CLASS D CONCRETE MODIFIED (MAJOR)	4.60	CU.YD./LIN.FT.
505 0100	REINFORCING STEEL	1,061.87	LBS./LIN.FT.

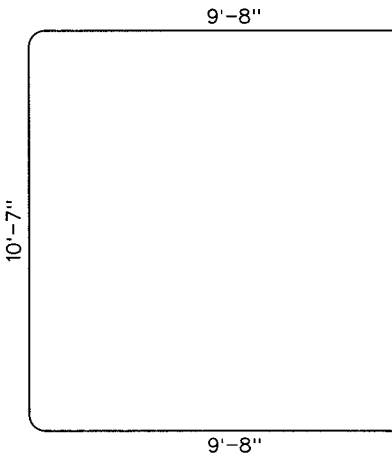
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	B1



FOR EARTH COVER OF 10 FT. THRU 20 FT.

LAP SPLICE LENGTHS

#5 To #5 Min. Length 2'-2"
#9 To #8 Min. Length 3'-9"
#9 To #9 Min. Length 4'-10"



B92911
BENT BAR

STRUCTURAL DESIGN DIVISION	
DESIGNED BY:	RYAN HORNBACK
PRINCIPAL:	JESSEN MORTENSEN
PHONE:	(775) 888-7554

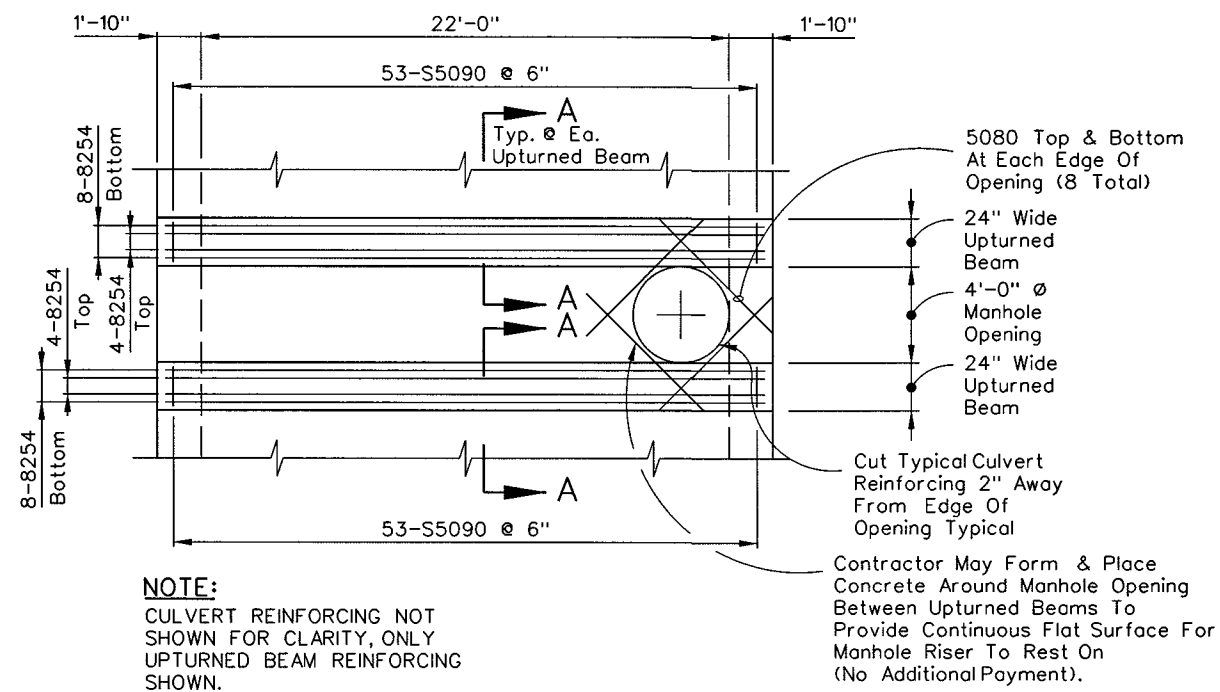
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

US 95 - CLARK COUNTY
FLOOD CONTROL BOX
CULVERT 22 FT x 7 FT

362

B-3041

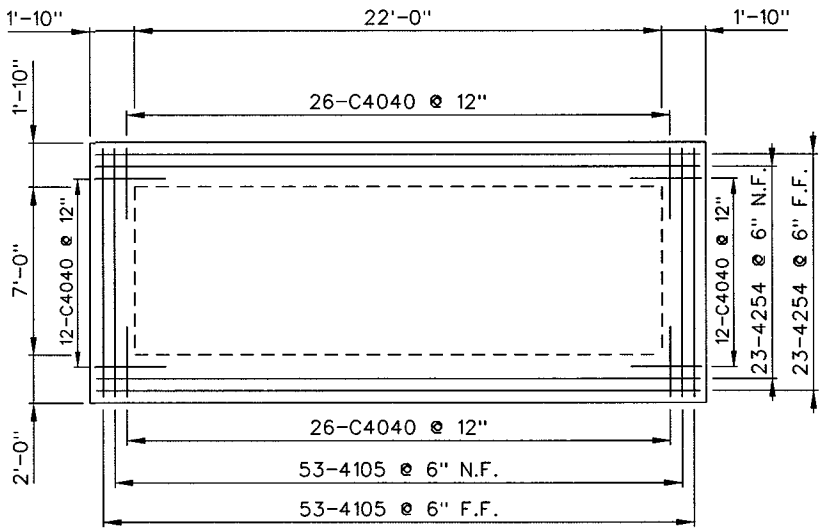
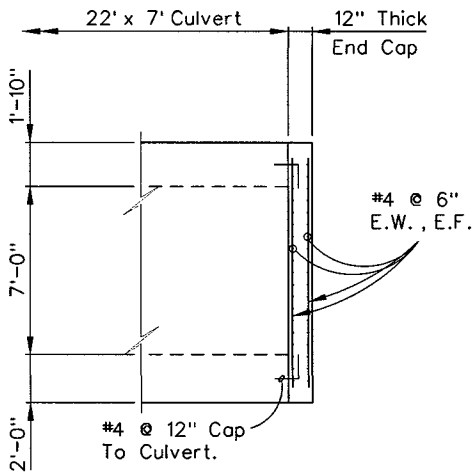
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	B2



CULVERT TOP SLAB MANHOLE OPENING PLAN

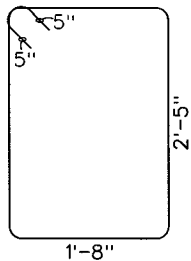
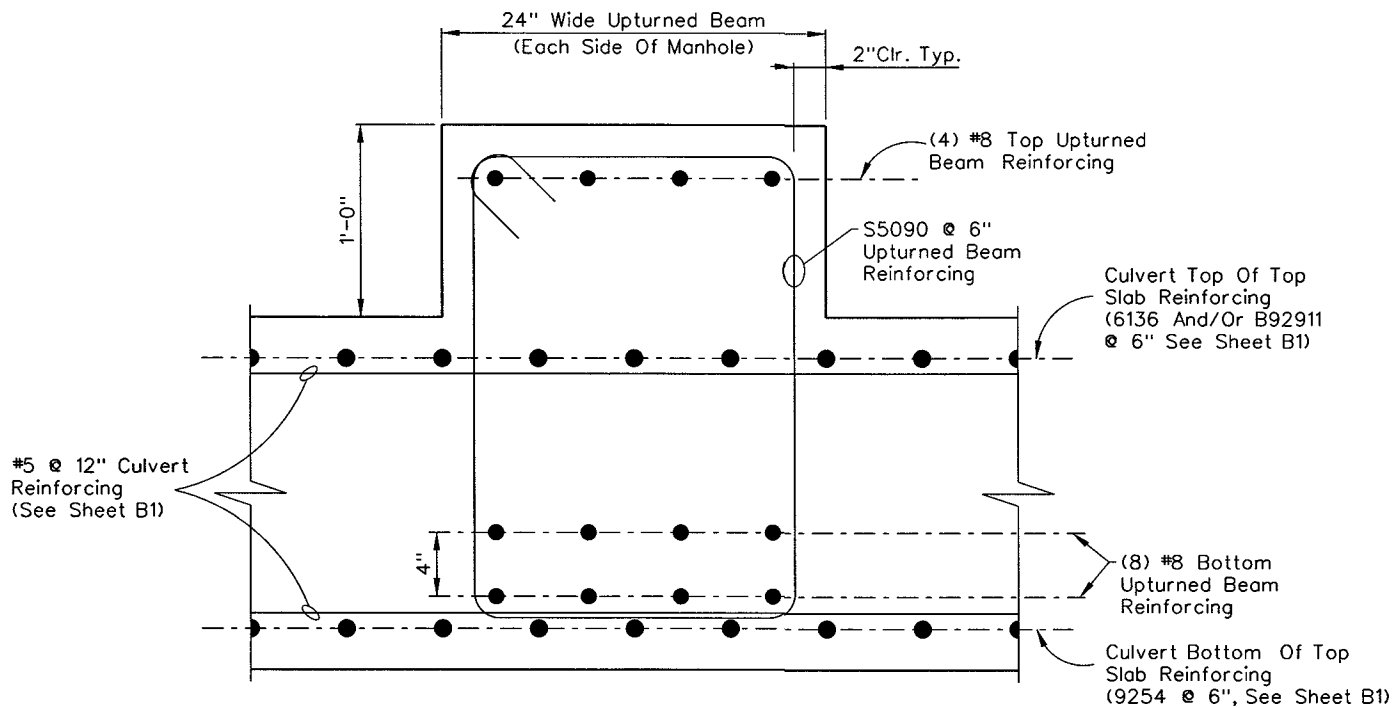
QUANTITIES (FOR SIX UPTURNED BEAMS AT THREE MANHOLE OPENINGS, IN ADDITION TO CULVERT QUANTITIES SHOWN ON SHEET B1)

ITEM	DESCRIPTION	QUANTITY	UNITS
502 0970	CLASS D CONCRETE MODIFIED (MAJOR)	11.41	CU.YD.
505 0100	REINFORCING STEEL	8,055.40	LBS.



QUANTITIES (FOR TWO END CAPS.)

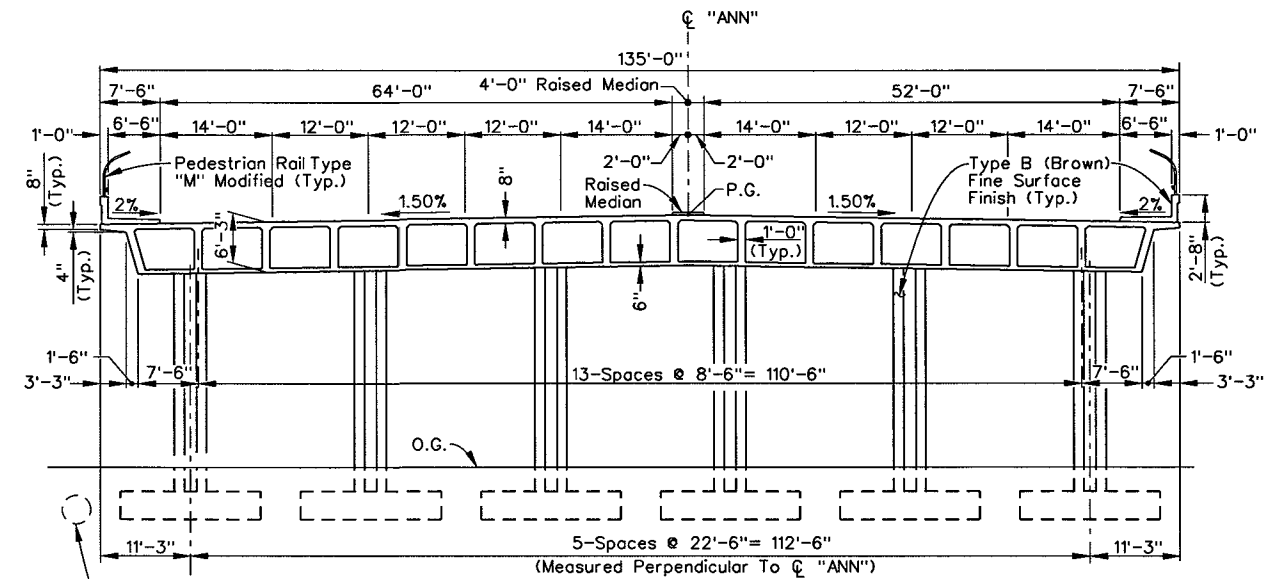
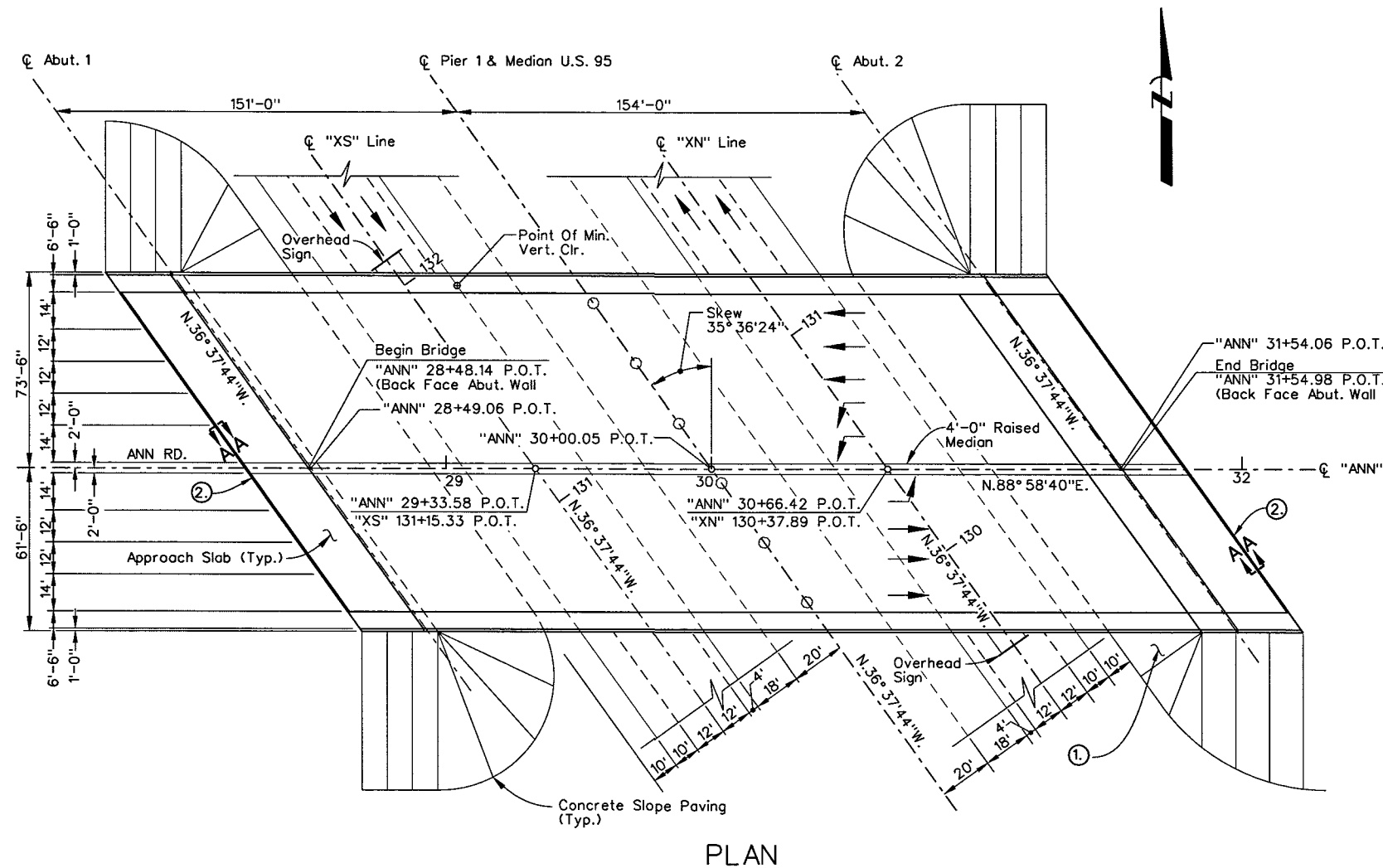
ITEM	DESCRIPTION	QUANTITY	UNITS
502 0970	CLASS D CONCRETE MODIFIED (MAJOR)	20.60	CU.YD.
505 0100	REINFORCING STEEL	3,438.18	LBS.



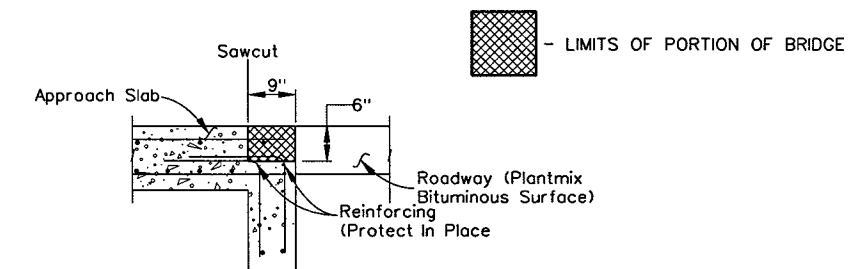
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

MANHOLE OPENING
SUPPORT AT 22'x7'
CULVERT & END CAP
DETAIL 363 B-3041

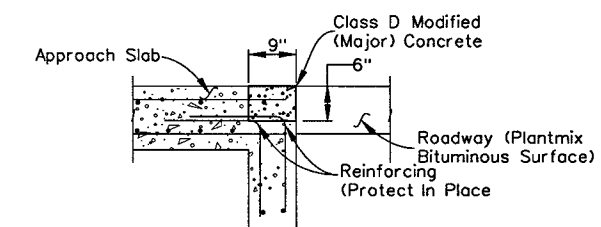
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	B3



TYPICAL SECTION



SECTION A-A
AS CONSTRUCTED



SECTION A-A
MODIFIED

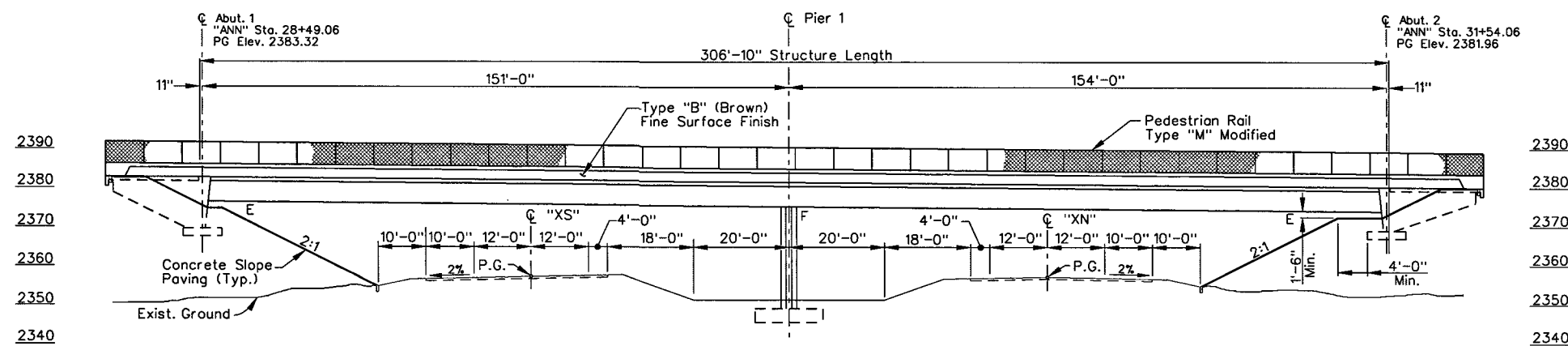
NOTE:
1. PROTECT ALL EXISTING REINFORCING IN PLACE
2. ROUGHEN SURFACES TO 1/4" AMPLITUDE

ORIGINAL CONTRACT 2727

- GENERAL NOTES:**
- DESIGN SPECIFICATION: AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS" SIXTH EDITION 2012 WITH 2013 INTERIMS.
 - CONSTRUCTION SPECIFICATIONS: STATE OF NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2001", EXCEPT AS NOTED BELOW AND IN THE SPECIAL PROVISIONS OF THIS CONTRACT.
- DESCRIPTION OF WORK:**
- REMOVE UPPER PORTION OF SLOPE PAVING TO TWO (2) FEET BELOW EXISTING CRACK, FULL WIDTH, AS DIRECTED BY THE ENGINEER. PLACE NEW CONCRETE SLOPE PAVING. ON NEW SLOPE PAVING, MATCH COLOR OF EXISTING SLOPE PAVING (NO DIRECT PAYMENT), FOR APPROVAL BY ENGINEER.
 - REMOVE EXISTING ELASTOMERIC HEADER AT END OF APPROACH SLABS AND PLACE NEW CONCRETE HEADER. SEE DETAILS FOR LIMITS OF CONCRETE AND ELASTOMERIC CONCRETE REMOVALS

QUANTITIES:

ITEM No.	ITEM	UNIT	QUANTITY
202 0125	Removal of Portion of Bridge	LS	1
202 1270	Removal of Slope Paving	SQYD	210
502 0970	Class D Concrete, Modified (Major)	CUFT	5
611 0110	Class A Concrete Slope Pavement	CUYD	18



ELEVATION
PERPENDICULAR TO C "XN" & "XS"

STRUCTURAL DESIGN DIVISION
DESIGNED BY: MICHAEL TAYLOR
PRINCIPAL: TROY MARTIN
PHONE: (775) 888-7549

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
U.S. 95-CL86.75
ANN RD.

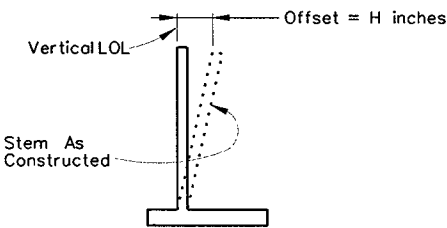
364

I-1415

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW01

CAST-IN-PLACE WALL GENERAL NOTES:

1. DESIGN SPECIFICATIONS: "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION - 2010" AND AASHTO "GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS 1989", WITH INTERIM REVISIONS THRU 2002.
2. CONSTRUCTION SPECIFICATIONS: STATE OF NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2001" EXCEPT AS NOTED BELOW AND IN THE SPECIAL PROVISIONS FOR THIS CONTRACT.
3. LIVE LOAD: LIVE LOAD SURCHARGE PRESSURE EQUAL TO 2' OF EARTH.
4. WIND LOAD: WIND PRESSURE = 25 psf.
5. SEISMIC LOAD: EFFECTIVE PEAK ACCELERATION COEFFICIENT = 0.15g ATC-6 RESPONSE SPECTRA WITH TYPE II SOIL.
6. CONCRETE: CONCRETE SHALL BE CLASS D MODIFIED (MAJOR) f'c = 4000 psi UNLESS OTHERWISE SHOWN ON THE PLANS.
7. REINFORCING STEEL: ALL REINFORCING STEEL TO BE AASHTO M31 GRADE 60 OR ASTM A706. DIMENSIONS RELATING TO BAR SPACING ARE CENTER TO CENTER. BENDING DIMENSIONS ARE FROM OUT TO OUT OF THE BARS. BAR SIZES THREE (3) TO NINE (9) ARE INDICATED BY THE FIRST NUMBER OF THE MARK, TEN (10) OR LARGER BY THE FIRST TWO NUMBERS. LENGTH IS INDICATED BY THE FOLLOWING TWO NUMBERS IN FEET AND THE LAST ONE OR TWO NUMBERS IN INCHES. THE LENGTH OF BAR SIZES FOUR (4) AND FIVE (5), WHEN CONSIDERED AS BARS TO CONTROL TEMPERATURE, SHRINKAGE, AND DISTRIBUTION STRESSES BY THE ENGINEER, MAY BE ADJUSTED UPON CONCURRENCE AND APPROVAL OF THE ENGINEER. STAGGER ALL HORIZONTAL SPLICES.
8. FOUNDATION: SPREAD FOOTINGS ALLOWABLE BEARING PRESSURE: 4 kips/sq. ft.
ULTIMATE BEARING PRESSURE: 10 kips/sq. ft.
9. THE GEOTECHNICAL INVESTIGATION SUMMARY REPORT WAS PREPARED BY NDOT - GEOTECHNICAL SECTION.
10. SEE NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION SHEET B-30.1.4 FOR WEEP HOLE DETAILS AND REQUIREMENTS. WEEP HOLES ARE CONSIDERED INCIDENTAL AND THERE IS NO DIRECT PAYMENT FOR WEEP HOLE MATERIALS.
11. STATIONING AND OFFSETS ARE PROVIDED AS INFORMATION ONLY AND MUST BE FIELD VERIFIED TO ENSURE PROPER PLACEMENT. WHERE NEW WALLS ARE CONSTRUCTED ADJACENT TO EXISTING WALLS, CONTRACTOR MUST FIELD VERIFY EXISTING WALL HEIGHT AND ADJUST NEW WALL HEIGHT TO MATCH. DO NOT ORDER REINFORCING STEEL UNTIL FIELD VERIFICATION IS COMPLETE. CONTRACTOR IS RESPONSIBLE TO ENSURE PROPER CLEARANCE AT ANY UNDERGROUND OR ABOVE GROUND OBSTACLES.
12. FORM LINER FINISH: FORM LINERS FOR ARCHITECTURAL TREATMENT SHALL BE FABRICATED IN A MANNER WHICH GIVES A CONSISTENT APPEARANCE THROUGHOUT THE ERECTED SOUND BARRIER.
13. CONCRETE FINISH AND COLOR: SEE SPECIAL PROVISIONS.
14. IF OPENING DETAILS OTHER THAN TYPE 1 OR TYPE 2 AS SHOWN ON SHEET SW11 ARE REQUIRED, NOTIFY THE ENGINEER FOR FURTHER DIRECTION.
15. APPLY CONCRETE PAINT TO BOTH SIDES OF WALL. PAINT SHALL BE APPLIED FROM TOP OF WALL TO 12" BELOW FINISHED GRADE OR 6" BELOW TOP OF BARRIER RAIL (AS APPLICABLE).
16. CONTRACTOR MAY OPT TO USE ALTERNATE KEY DETAIL (SHEET SW11) AT OWN EXPENSE IN LIEW OF ROUGHENED CONSTRUCTION JOINT.



STANDARD BAR LAPS	
BAR#	UNCOATED
4	20"
5	26"
6	31"
7	39"
8	51"
9	59"
10	75"
11	91"

CIP RETAINING WALL
OFFSET VALUES

"ADSE" - H = 3/16"
"ADSE1" - H = 3/16"
"SPD" - H = 1/8"
"DDSE" - H = 1/16"
"DDNB" - H = 1/16"

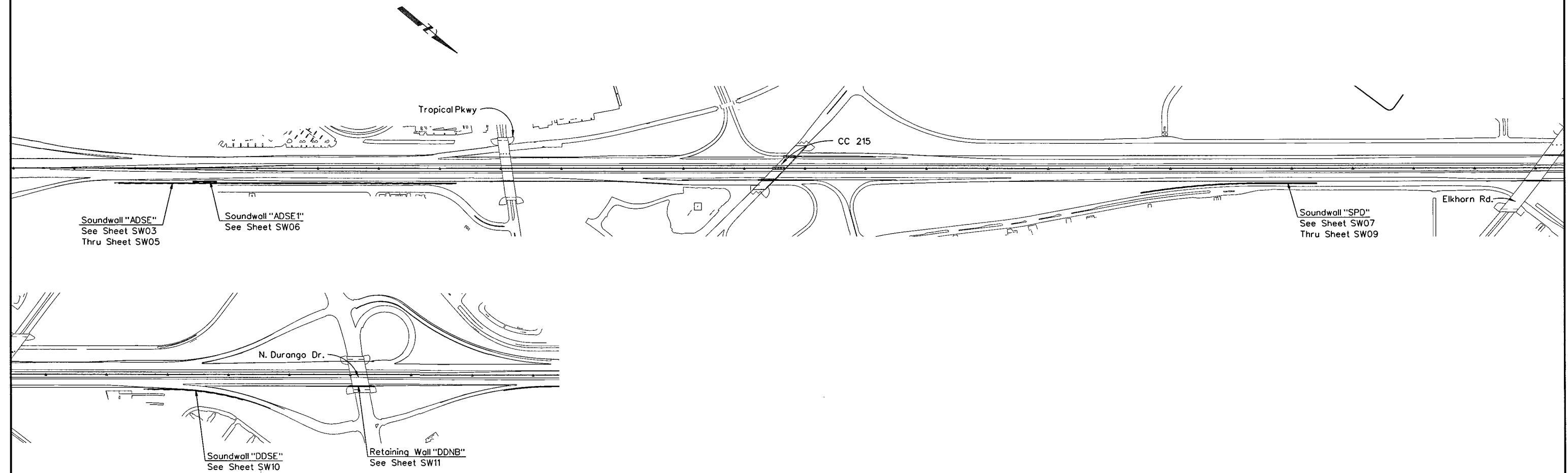
GEOTECHNICAL DESIGN	
DESIGNED BY:	DANA BOOMHOWER
PRINCIPAL:	JEFF PALMER
PHONE: (775) 888-7873	
STRUCTURAL DESIGN DIVISION	
DESIGNED BY:	BOB KULIK
PRINCIPAL:	NANCY KENNEDY
PHONE: (775) 888-7905	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CAST-IN-PLACE
WALL GENERAL NOTES
PHASE 2A

365

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW02

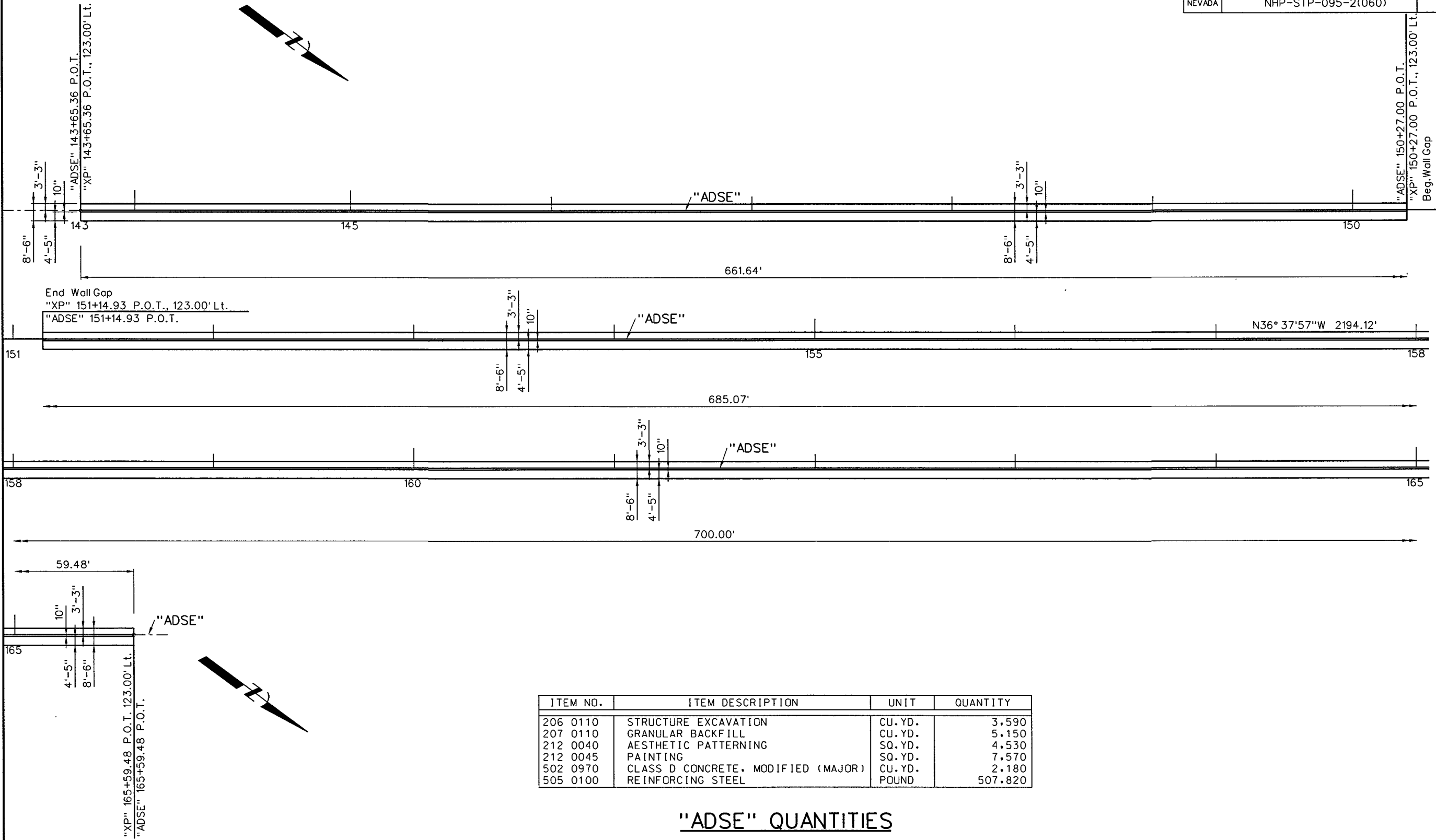


PHASE 2A

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CIP WALL
LOCATIONS
PHASE 2A

366

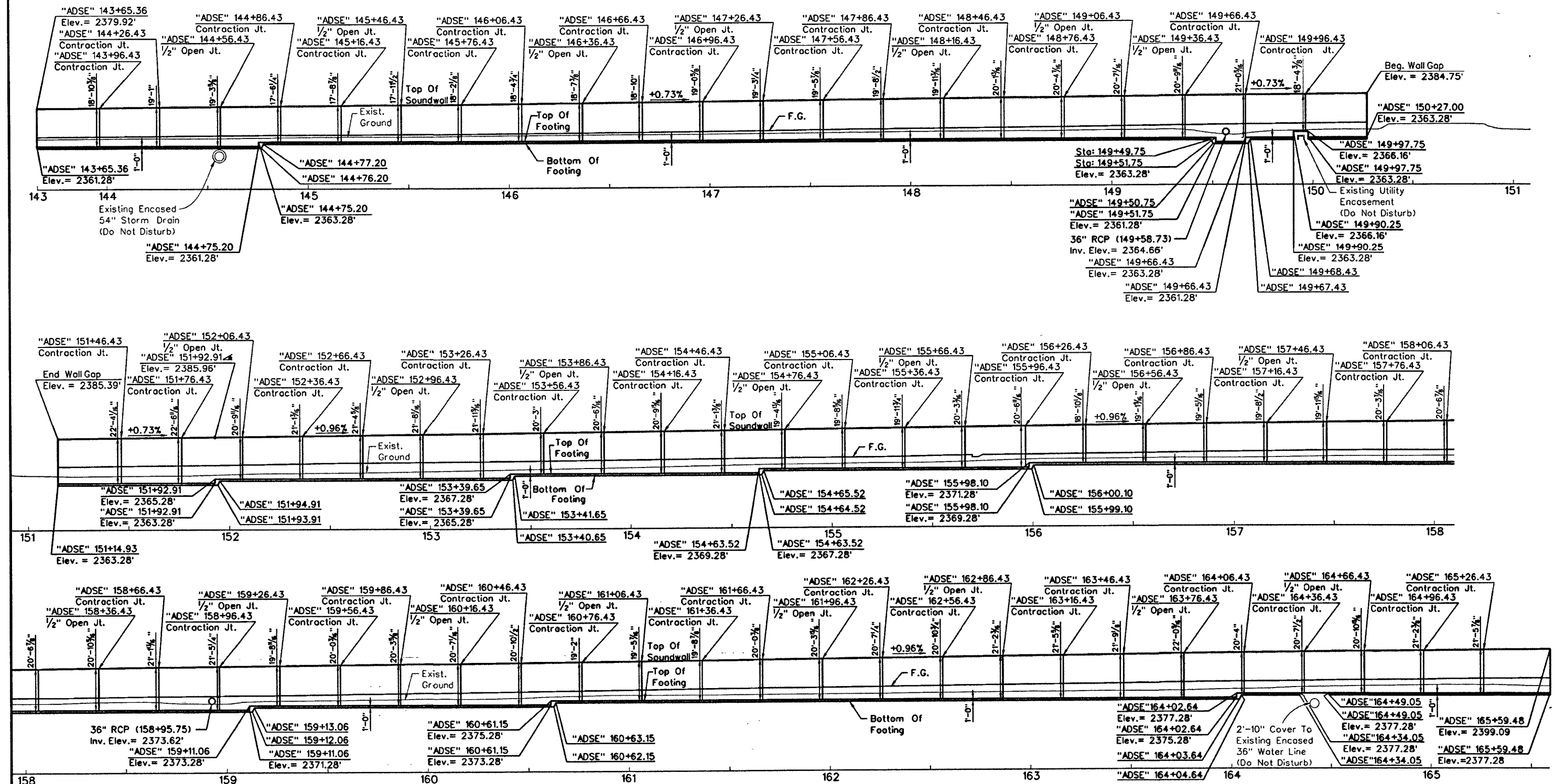


ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
206 0110	STRUCTURE EXCAVATION	CU. YD.	3.590
207 0110	GRANULAR BACKFILL	CU. YD.	5.150
212 0040	AESTHETIC PATTERNING	SQ. YD.	4.530
212 0045	PAINTING	SQ. YD.	7.570
502 0970	CLASS D CONCRETE, MODIFIED (MAJOR)	CU. YD.	2.180
505 0100	REINFORCING STEEL	POUND	507.820

"ADSE" QUANTITIES

"ADSE" PLAN

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW04



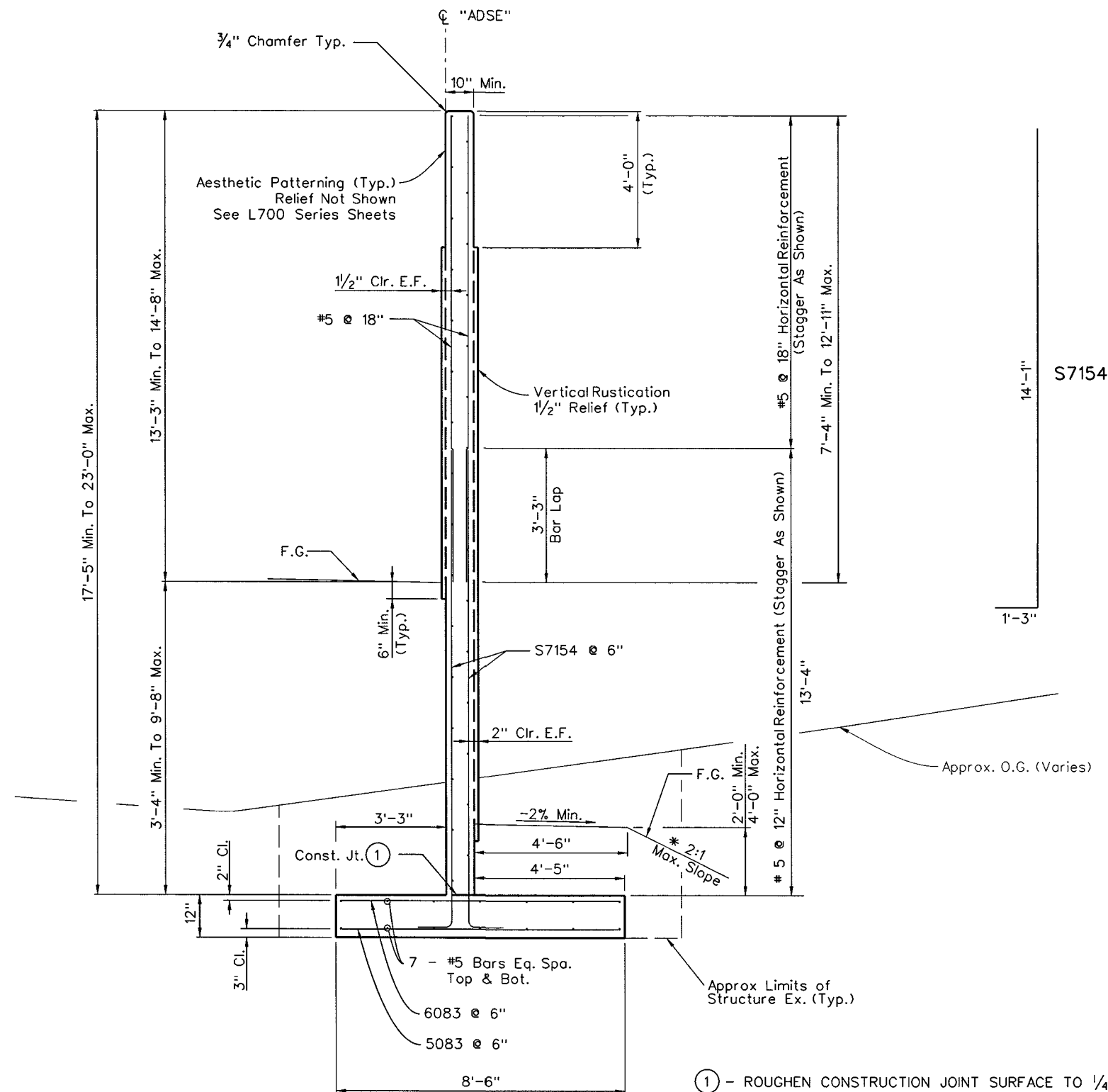
"ADSE" ELEVATION

APPROVED FOR CONSTRUCTION
M. D. SHAR FOR *DOA MEADE*
 Los Vegas Valley Water District Engineering Services Manager
 Project No. 122042 Date: 9/26/13

STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ADSE SOUNDWALL
 ELEVATION VIEW
 PHASE 2A

368

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW05



"ADSE" TYPICAL SECTION

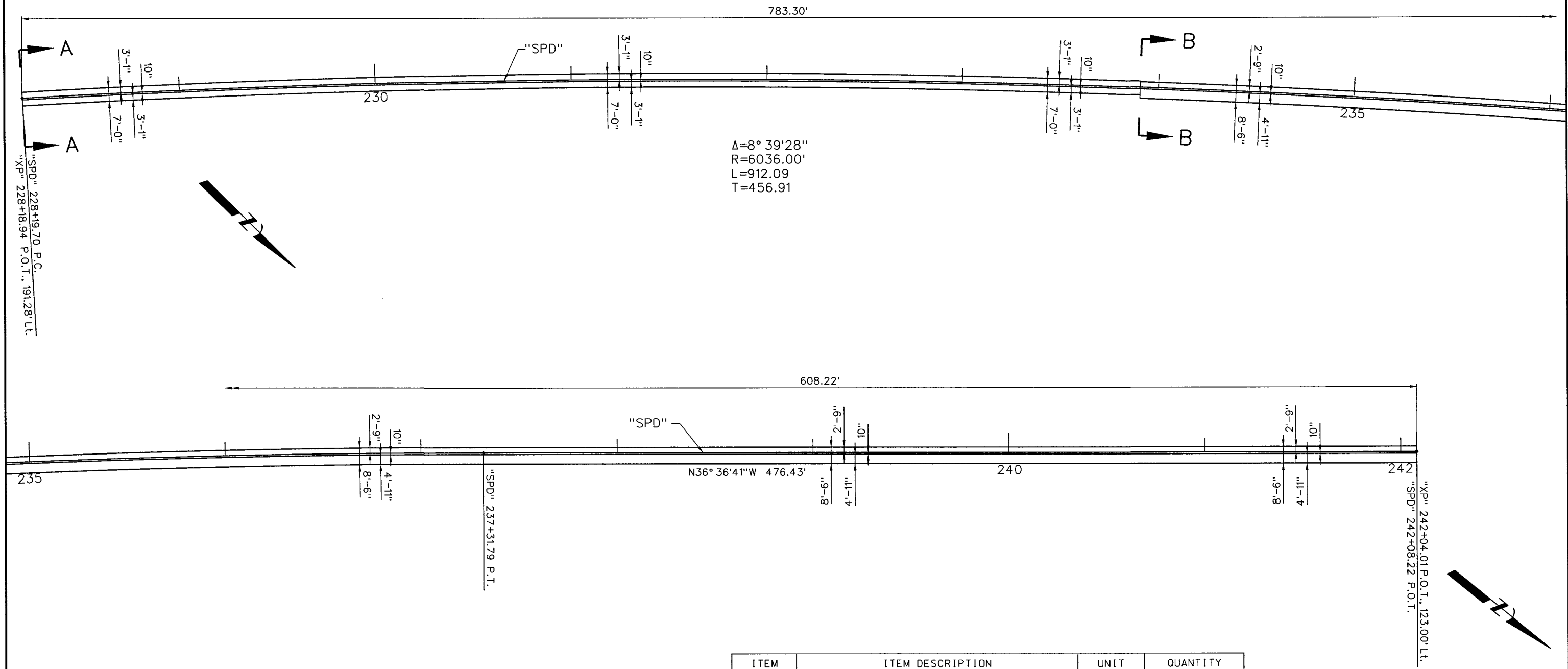
"ADSE" 143+65.36 To "ADSE" 150+27.00
 "ADSE" 151+14.93 To "ADSE" 165+59.48

(1) - ROUGHEN CONSTRUCTION JOINT SURFACE TO 1/4" AMPLITUDE.

* - SEE NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION SHEET R-1.1.4 FOR STRUCTURE EXCAVATION AND BACKFILL METHOD OF MEASUREMENT.
 FOR DITCHES, SEE SHEET SD3.

STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ADSE SOUNDWALL
 SECTION DETAIL
 PHASE 2A

369



ITEM	ITEM DESCRIPTION	UNIT	QUANTITY
206 0110	STRUCTURE EXCAVATION	CU.YD.	2.250
207 0110	GRANULAR BACKFILL	CU.YD.	1.640
212 0040	AESTHETIC PATTERNING	SQ.YD.	3.720
212 0045	PAINTING	SQ.YD.	4.490
502 0970	CLASS D CONCRETE, MODIFIED (MAJOR)	CU.YD.	1.307
505 0100	REINFORCING STEEL	POUND	195.630

"SPD" QUANITITES

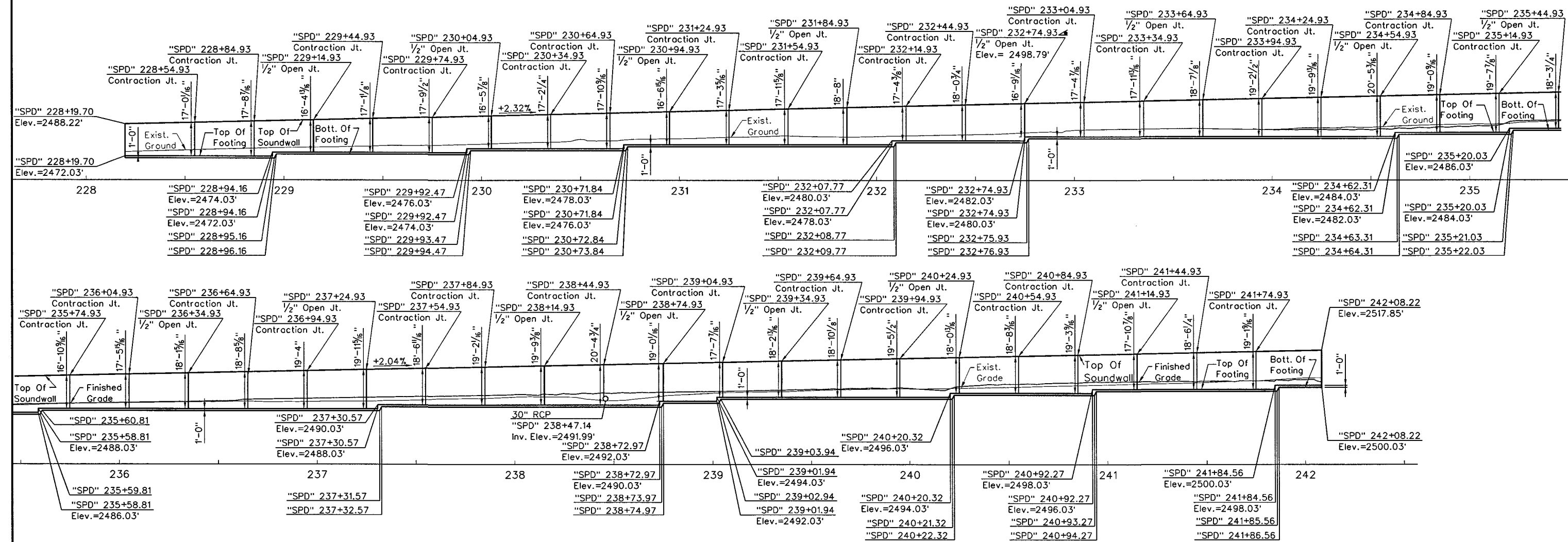
"SPD" PLAN VIEW

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SPD SOUNDWALL
PLAN VIEW
PHASE 2A

371

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW08

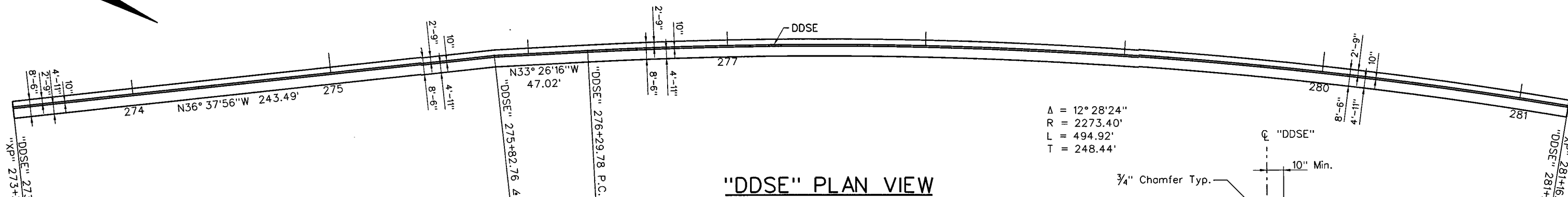


"SPD" ELEVATION VIEW

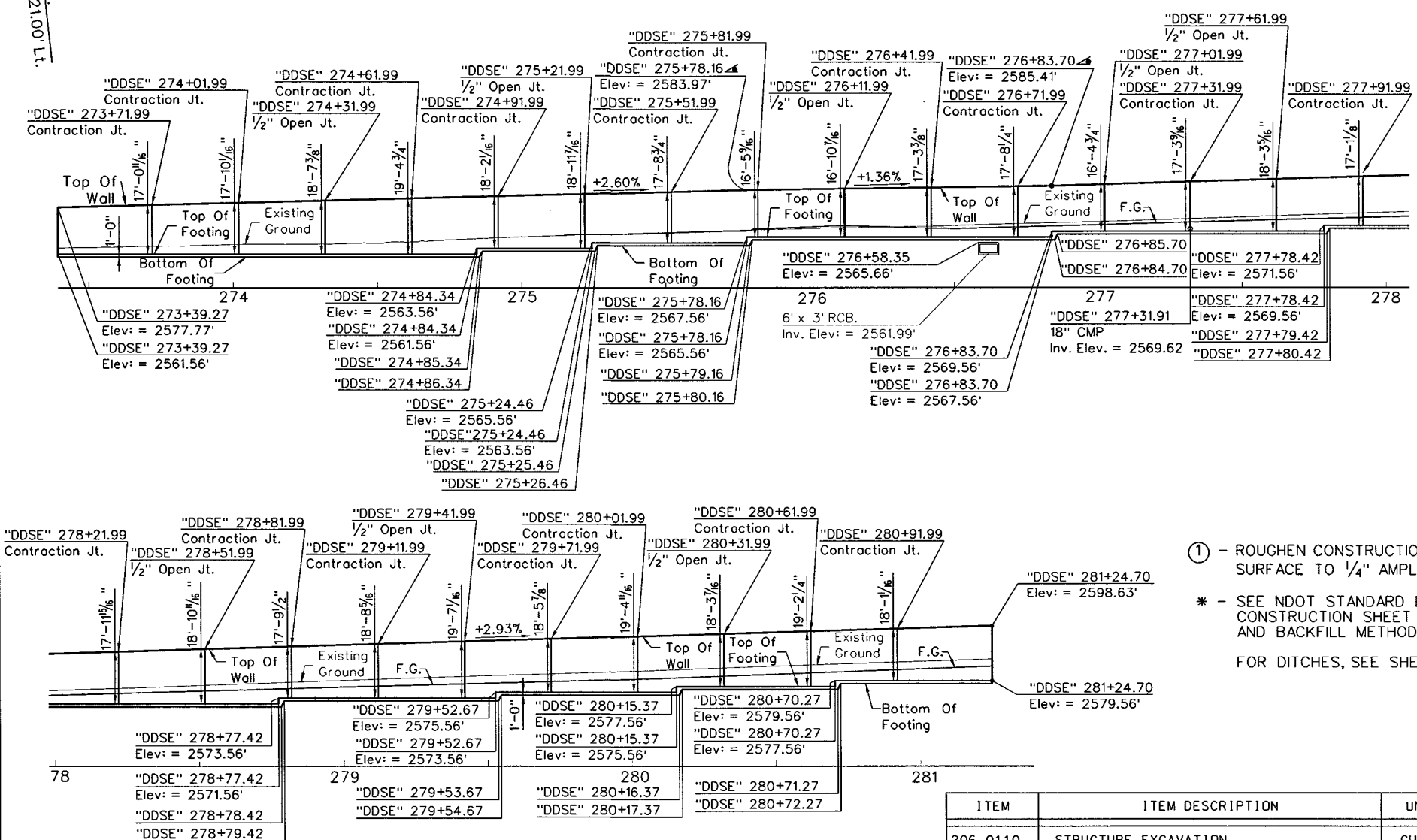
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SPD SOUNDWALL
ELEVATION VIEW
PHASE 2A

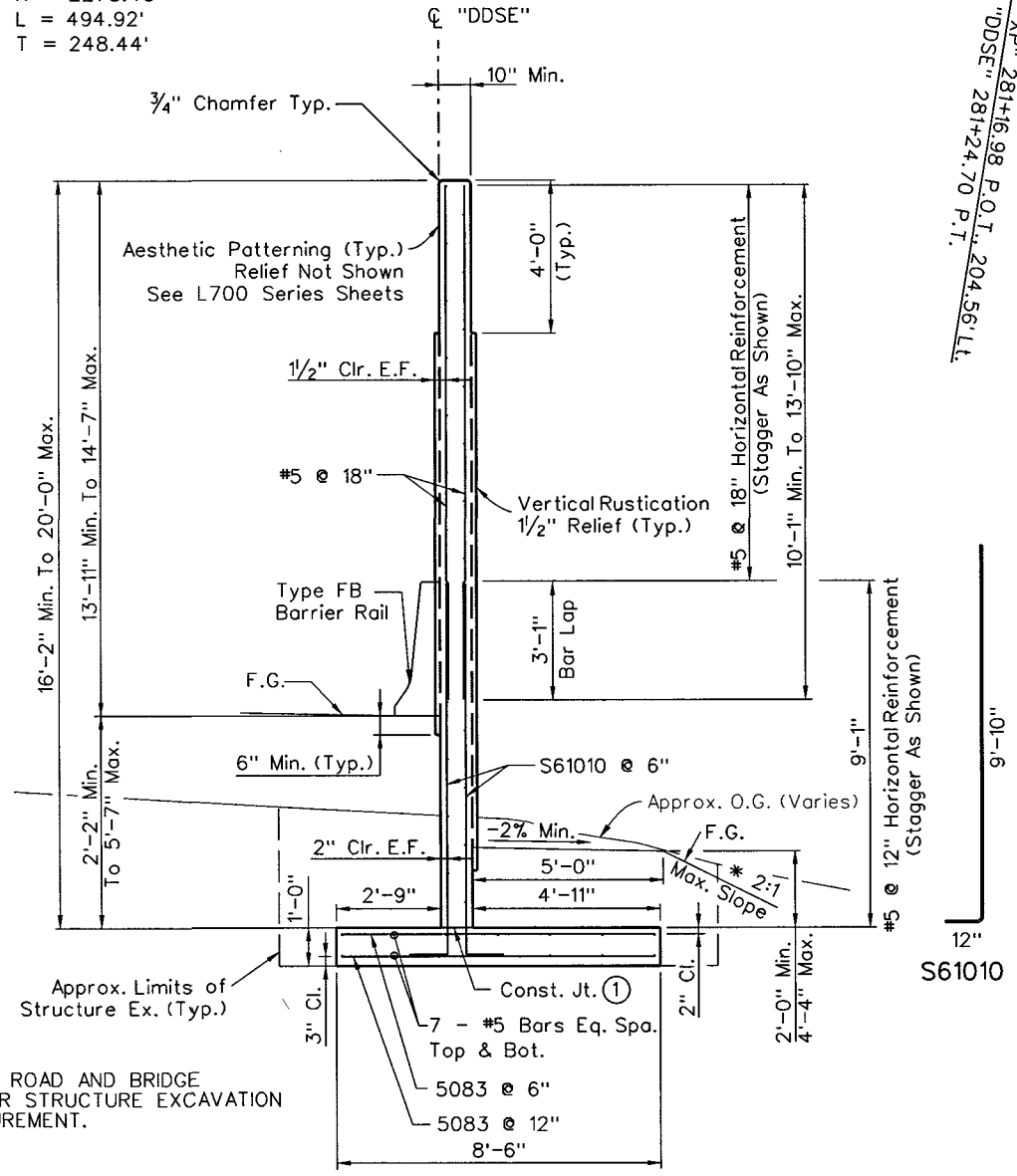
372



"DDSE" PLAN VIEW



"DDSE" ELEVATION VIEW



"DDSE" SECTION VIEW

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY
206 0110	STRUCTURE EXCAVATION	CU. YD.	2,600
207 0110	GRANULAR BACKFILL	CU. YD.	1,740
212 0040	AESTHETIC PATTERNING	SO. YD.	1,900
212 0045	PAINTING	SO. YD.	2,340
502 0970	CLASS D CONCRETE, MODIFIED (MAJOR)	CU. YD.	751
505 0100	REINFORCING STEEL	POUND	124,380

"DDSE" QUANTITIES

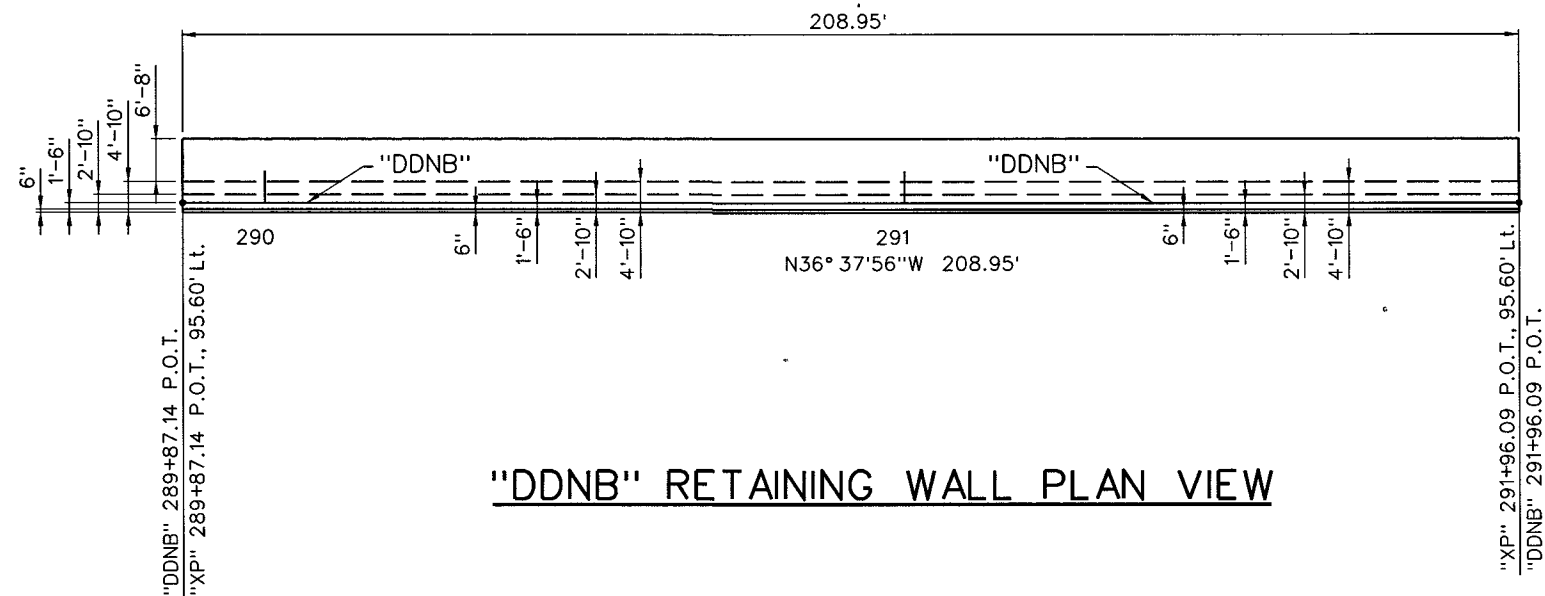
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DDSE SOUNDWALL

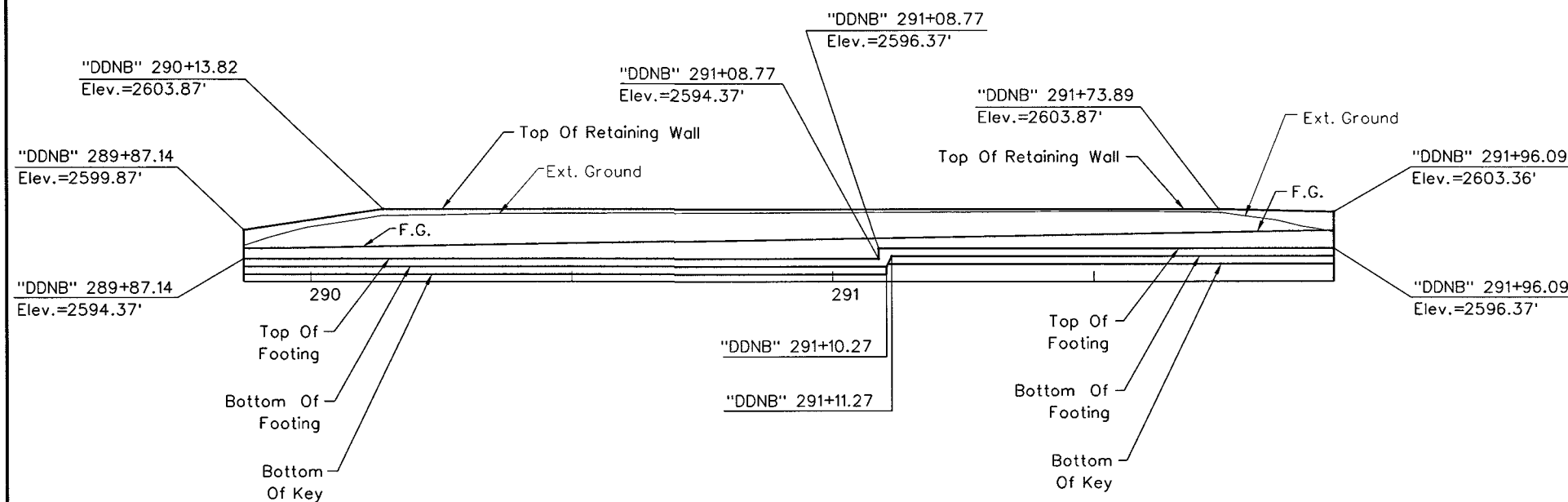
PHASE 2A

374

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW11



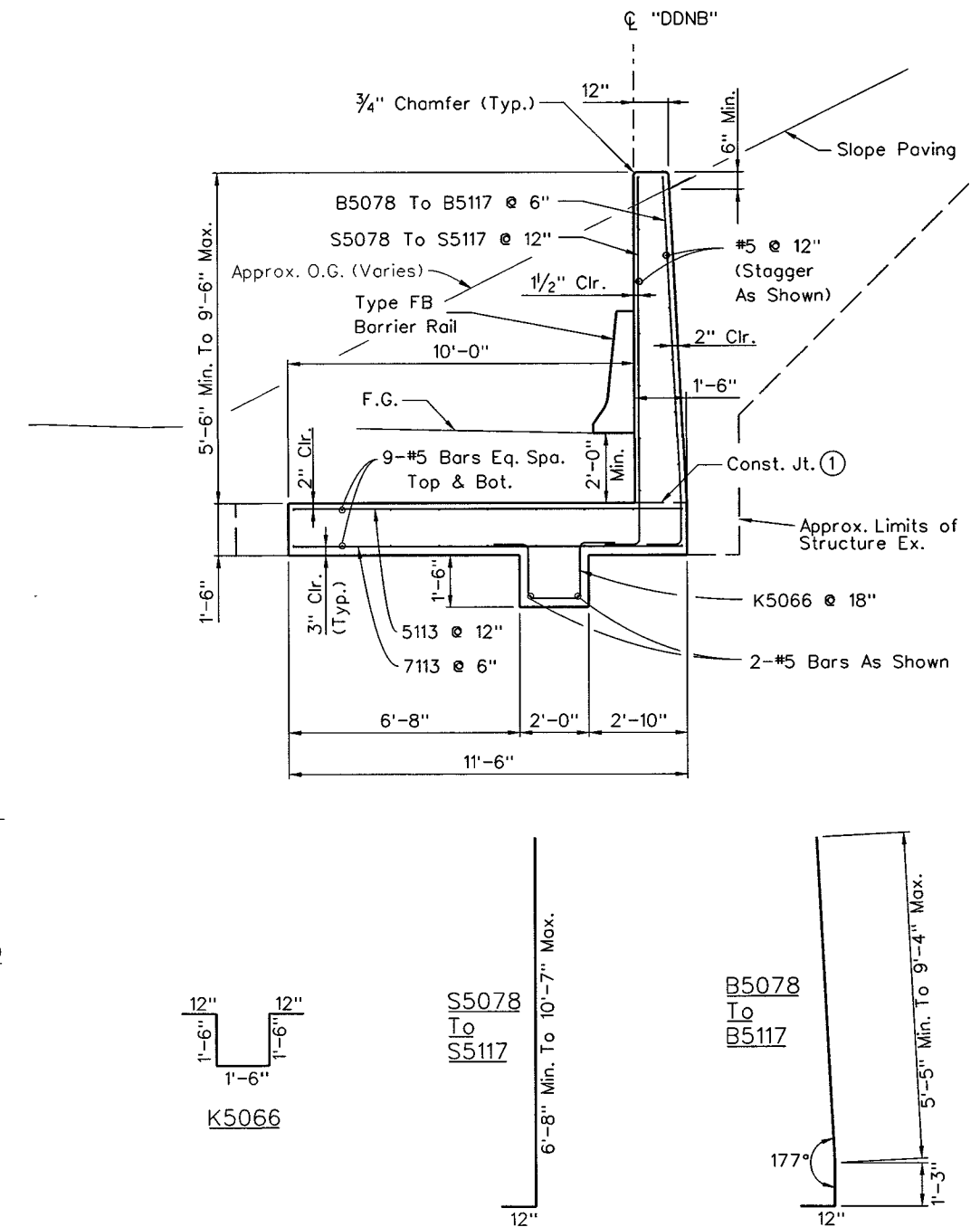
"DDNB" RETAINING WALL PLAN VIEW



"DDNB" RETAINING WALL ELEVATION VIEW

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY
202 1270	REMOVAL OF SLOPE PAVING	SQ. YD.	810
206 0110	STRUCTURE EXCAVATION	CU. YD.	730
207 0110	GRANULAR BACKFILL	CU. YD.	490
212 0045	PAINTING	SQ. YD.	50
502 0970	CLASS D CONCRETE, MODIFIED (MAJOR)	CU. YD.	215
505 0100	REINFORCING STEEL	POUND	28,620
611 0110	CLASS A CONCRETE SLOPE PAVEMENT	CUYD	50

"DDNB" QUANTITIES



①- ROUGHEN CONSTRUCTION JOINT SURFACE TO 1/4" AMPLITUDE.

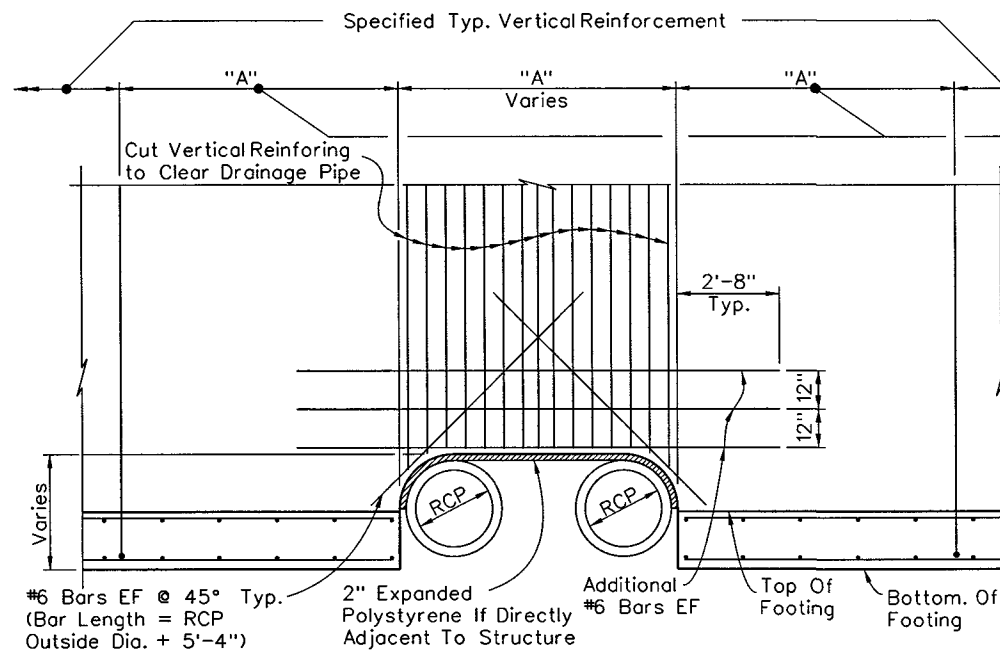
"DDNB" RETAINING WALL SECTION VIEW.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DDNB RETAINING WALL
SHEET
PHASE 2A

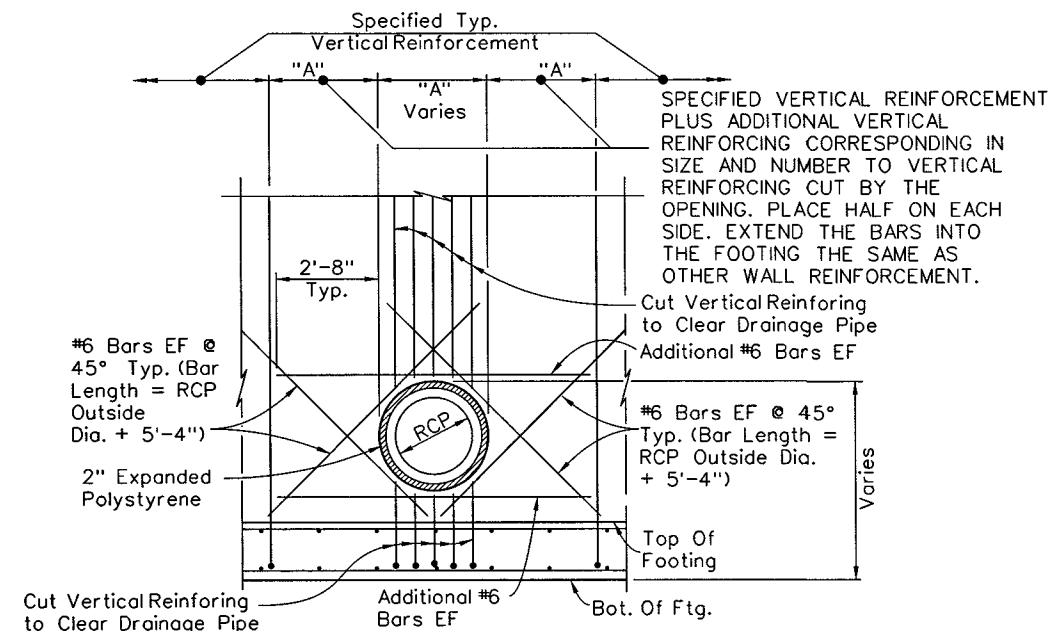
375

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW12



DRAINAGE PIPE / UTILITY ENCASEMENT OPENING DETAIL - TYPE 1

FOR TWO PIPES, "A" = PIPE OUTSIDE DIAMETER + PIPE SPACING CENTER TO CENTER + 4"
FOR ONE PIPE, "A" = PIPE OUTSIDE DIAMETER + 4"
FOR UTILITY ENCASEMENT, "A" = DISTANCE SPECIFIED IN PLANS



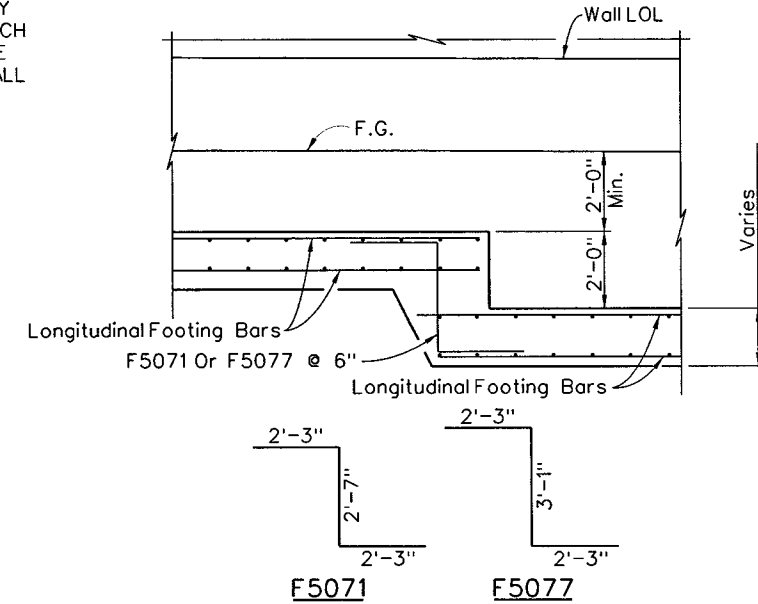
DRAINAGE PIPE OPENING DETAIL - TYPE 2

"A" = PIPE OUTSIDE DIAMETER + 4"

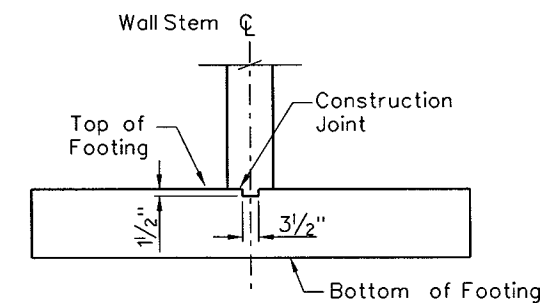
DRAINAGE PIPE OPENING NOTES:

1. ALL REINFORCING TO CLEAR OPENING BY 2".
2. EXPANSION JOINTS SHALL NOT BE LOCATED WITHIN THE LIMITS OF SPECIAL REINFORCING UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. USE DRAINAGE PIPE OPENING DETAIL - TYPE 1 WHEN PIPES INTERFERE WITH FOOTING.
USE DRAINAGE PIPE OPENING DETAIL - TYPE 2 WHEN PIPE IS ABOVE FOOTING.

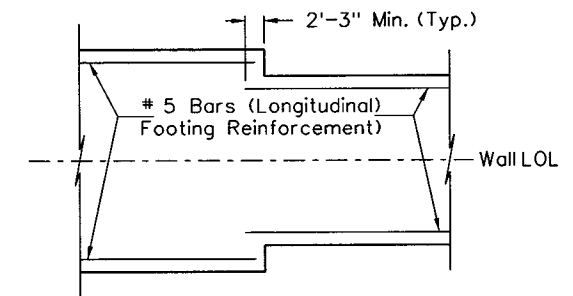
SPECIFIED VERTICAL REINFORCEMENT PLUS ADDITIONAL VERTICAL REINFORCING CORRESPONDING IN SIZE AND NUMBER TO VERTICAL REINFORCING CUT BY THE OPENING. PLACE HALF ON EACH SIDE. EXTEND THE BARS INTO THE FOOTING THE SAME AS OTHER WALL REINFORCEMENT.



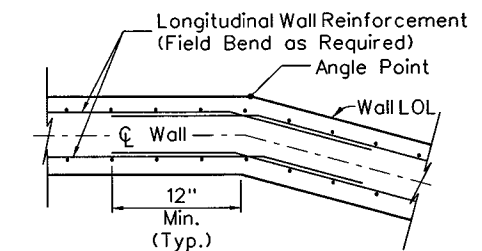
2'-0" FOOTING STEP DETAIL



ALTERNATE KEY DETAIL



FOOTING WIDTH TRANSITION DETAIL



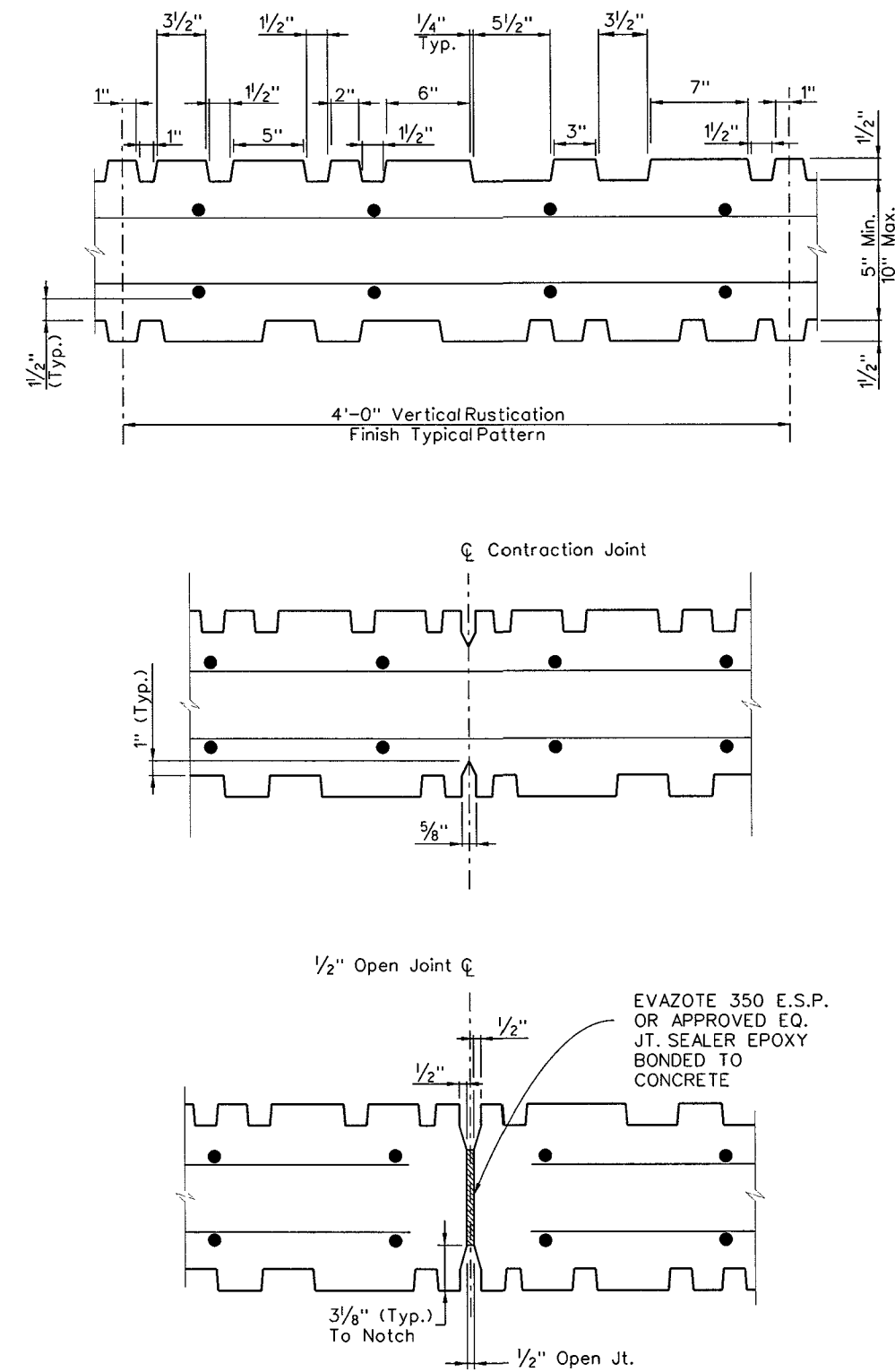
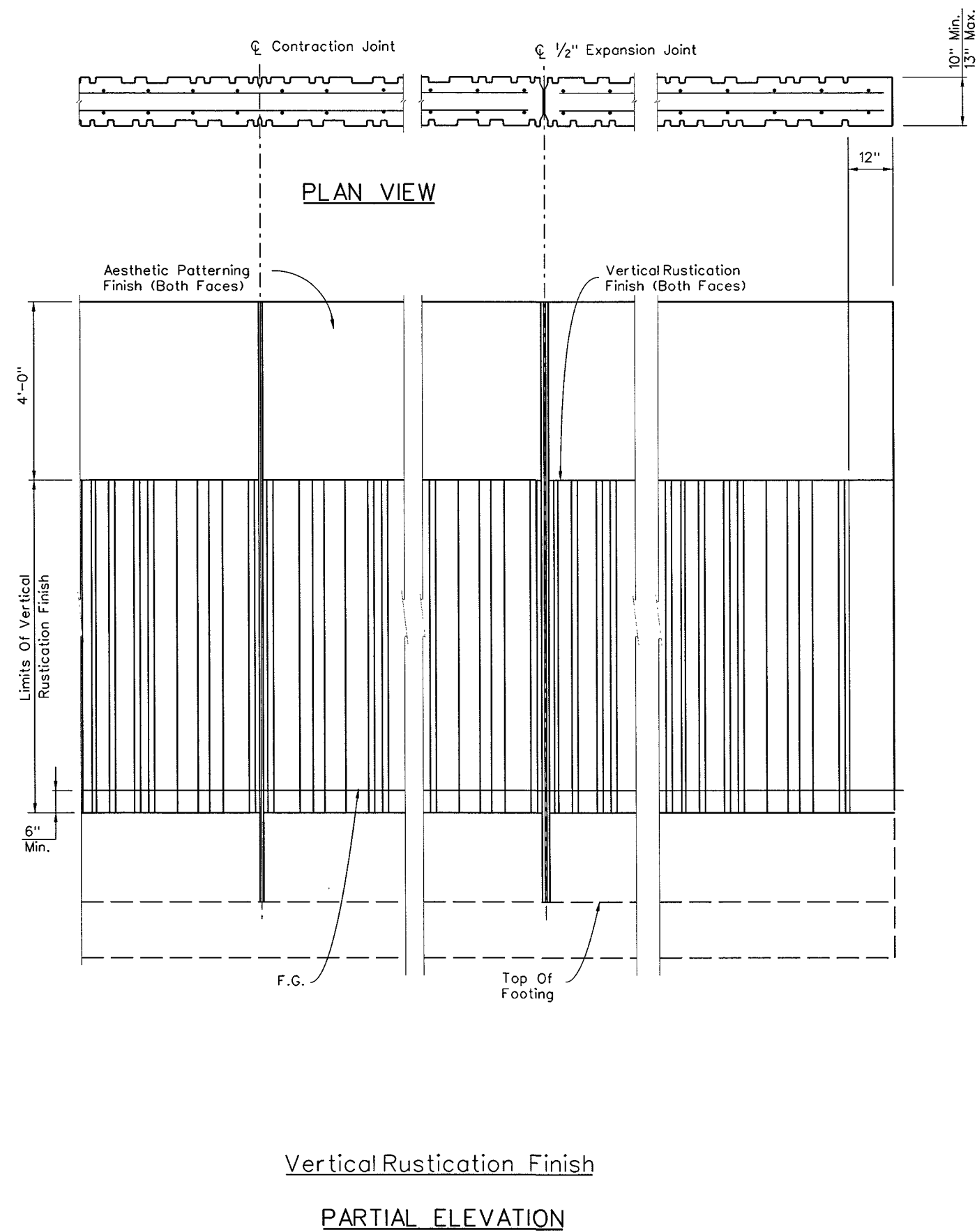
WALL ANGLE POINT PLAN

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SOUNDWALL
SPECIAL DETAILS-1
PHASE 2A

376

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW13



Vertical Rustication

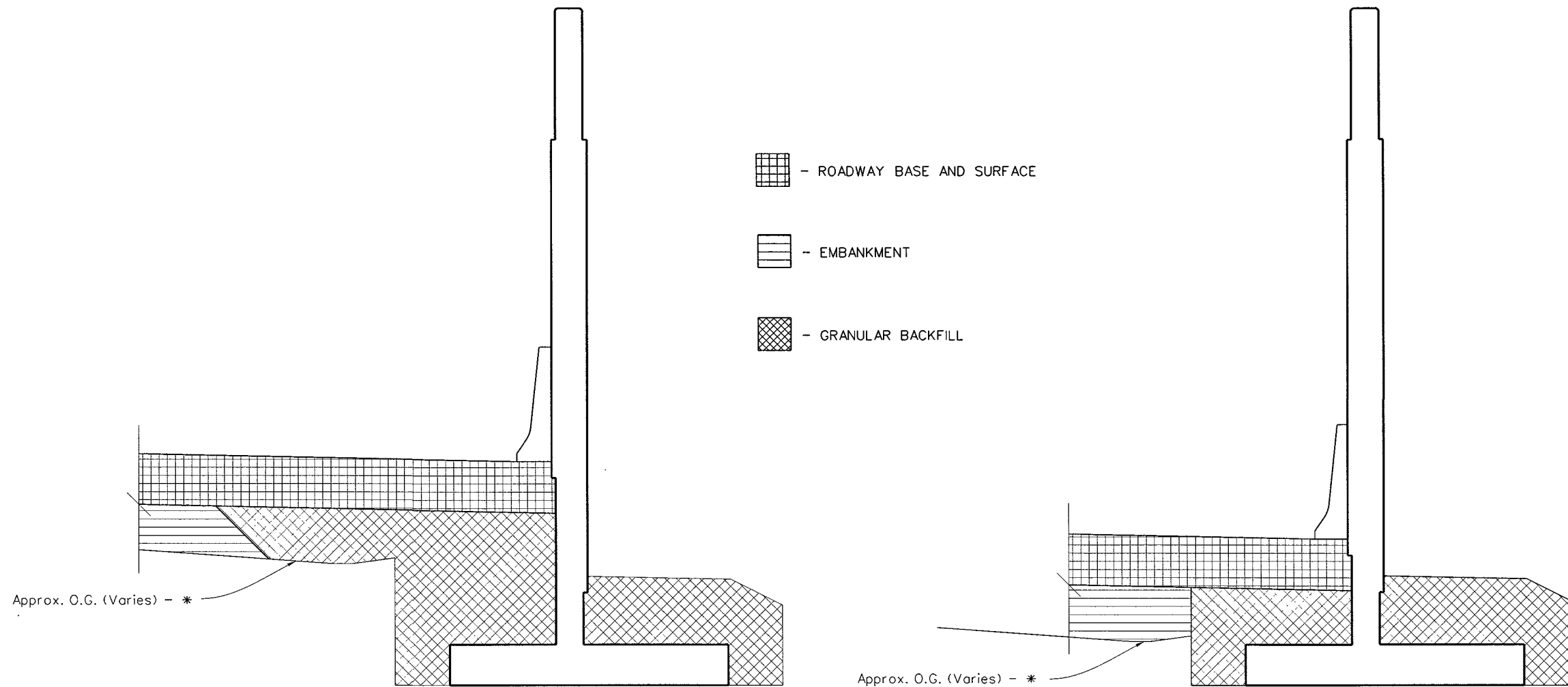
FINISH DETAILS

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SOUNDWALL
SPECIAL DETAILS-2
PHASE 2A

377

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW14



THEORETICAL METHOD OF MEASUREMENT

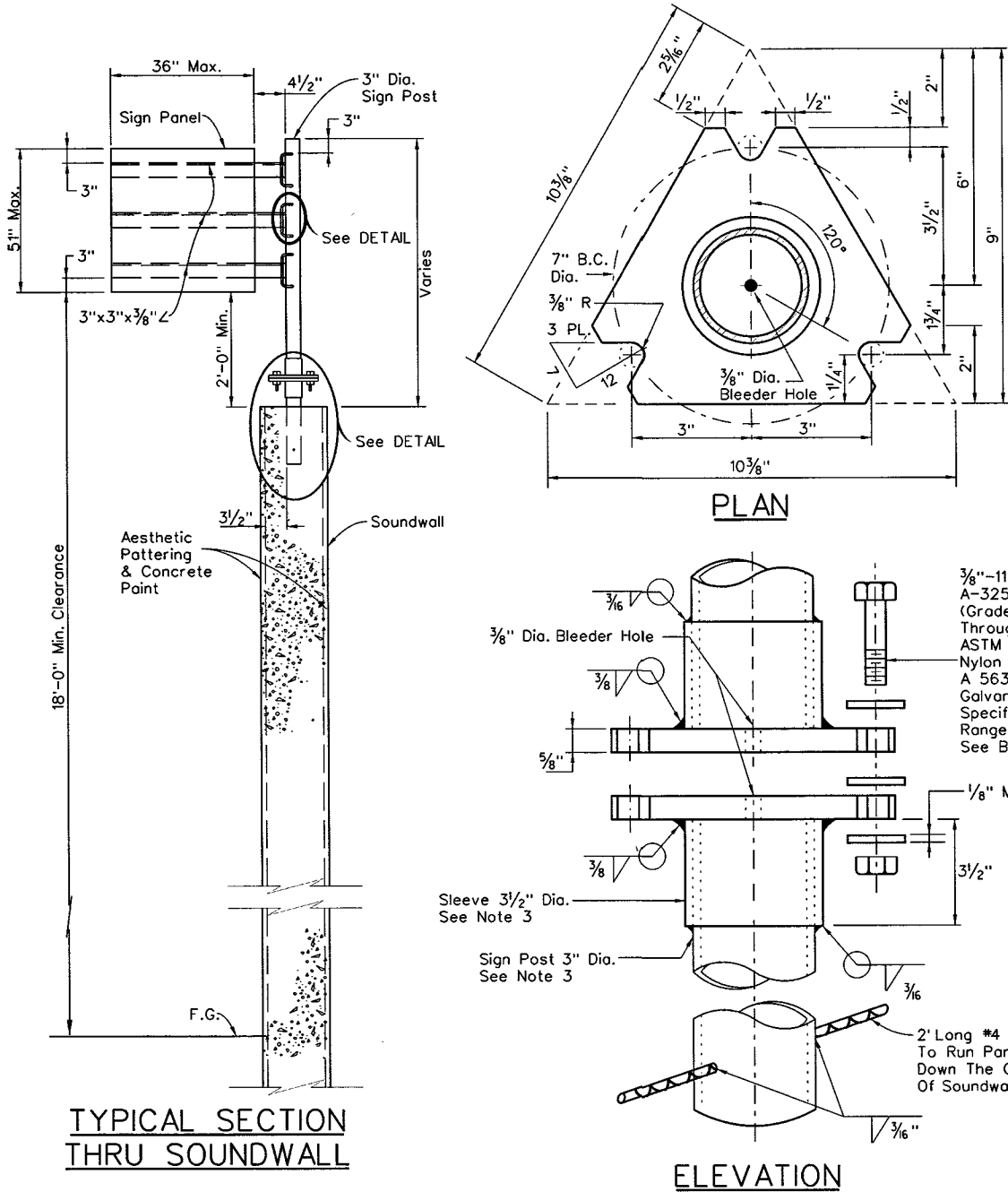
* - SEE NDOT STANDARD PLANS FOR ROAD AND BRIDGE
CONSTRUCTION SHEET R-1.1.4 FOR STRUCTURE EXCAVATION
AND BACKFILL METHOD OF MEASUREMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

THEORETICAL METHOD
OF MEASUREMENT
PHASE 2A

378

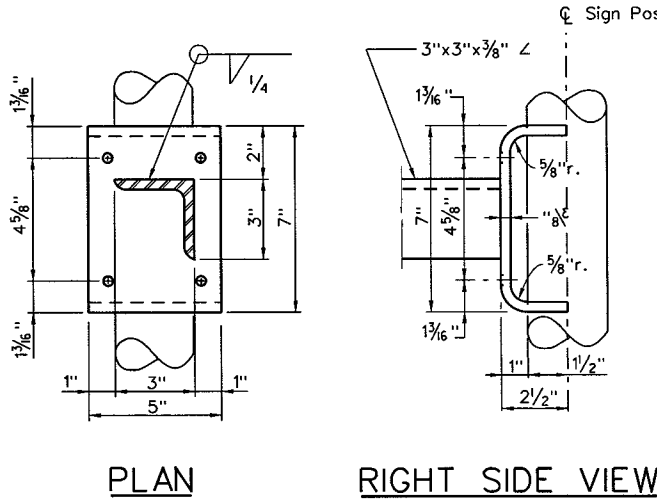
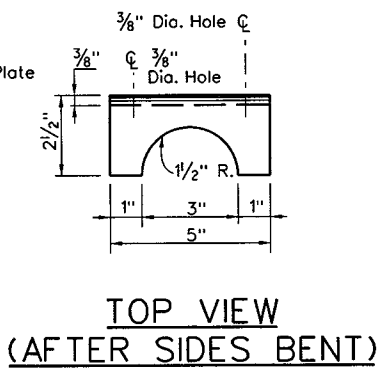
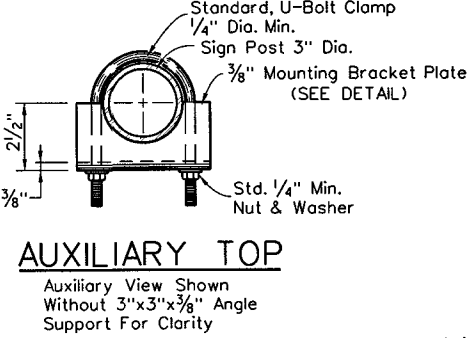
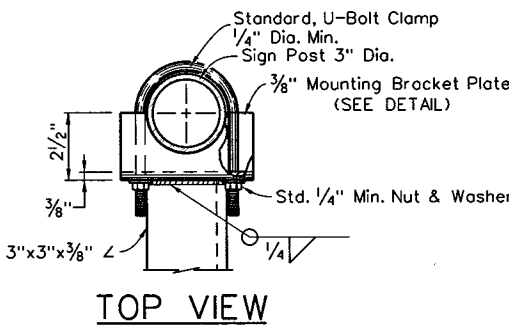
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(060)	CLARK	SW15



RT.
"XN1" 157+85
"XN1" 161+00

GENERAL NOTES:

- ALL PARTS AND HARDWARE SHALL BE GALVANIZED AS PER SECTION 715 OF THE NEVADA DOT STANDARD SPECIFICATIONS, EXCEPT AS NOTED.
- USE STANDARD WEIGHT PIPE FOR SIGN POST AND SLEEVE. SEE ASTM A 53.
- FOR DETAILS ON SIGN LOCATION, POST TYPE, PANEL BRACING, AND SIGN ISLANDS, SEE STANDARD PLAN T-31.1.1 THRU T-31.1.6.
- FOR SIGN INSTALLATION NUMBERS AND LOCATIONS SEE TS SHEETS.



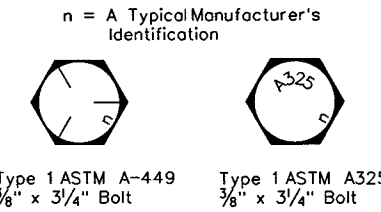
SUPPORT MOUNT PLATE DETAIL

ORTHOGRAPHIC PROJECTION SHOWN WITHOUT U-BOLT FOR CLARITY U-BOLT SHOWN IN TOP VIEW

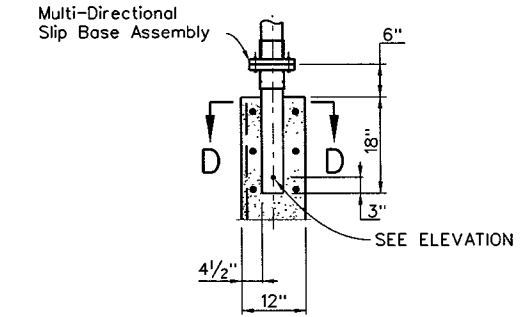
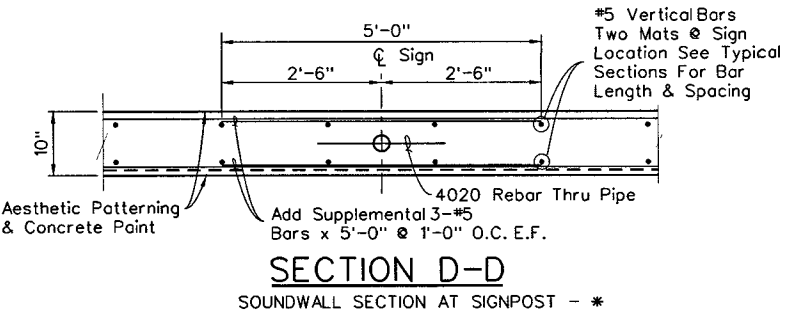
LEFT SIDE VIEW (AFTER SIDES BENT)

PLAN (FLAT PATTERN)

3/8" MOUNTING BRACKET PLATE



TOP VIEW BOLT DETAIL



SIGN POST EMBEDMENT DETAIL

* - No Direct Payment For Additional Reinforcement

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
SIGN POST
CONNECTION DETAILS
PHASE 2A

379

