

STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED  
**COUNTY BRIDGE**  
STATE AID PROJECT NO. XXX-XXXX(XXX)XX  
BRIDGE & APPROACH PLANS  
GARFIELD COUNTY  
OLB NBI# 00435 (NEW NBI# XXXXX)  
LOCATION NO. 24E0470N2810002  
SPRING CREEK  
STATE JOB NO. 29874(04)  
LAT. 36°19'58" LONG. 097°59'42"

FED. ROAD DIST. NO.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	XXX-XXXX(XXX)XX	1	XX

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R003	PLAN AND PROFILE
S001	ALIGNMENT, SURVEY REFERENCE & R\W
T001	TRAFFIC CONTROL PLAN
X001-X00X	CROSS SECTIONS

THE FOLLOWING ODOT STANDARDS SHALL BE USED:

2019 RDWY	2009 TRAFFIC	2009 BRIDGE	
RDI-4-0	DU1-1-00	CB26-C-SKD-ABUT-PC2	CB26..32-C-SKD-WING-PC2
RWF2-3-0	DU2-1-00	CB26-C-SKD-XSECT-PC234	CB26..32-C..I-SKD..30-PCB-DTL-1
SSS-2-0	TCS1-1-01	CB26-C-SKD-LSECT-PCB	CB26..32-C..I-SKD..30-PCB-DTL-2
TSC2-4-0	TCS2-1-00	CB26-C-SKD-DKSLB-BLIST	CB26..32-C..I-SKD..30-GRAU-BC
TSD-3-0	TCS3-1-01	CB26-C-SKD-DIA-END-PC234	
	TCS4-1-01	CB26-C-SKD-SPR-QUAN-PCB-1	
	TCS5-1-00	CB26-C-SKD-SPR-QUAN-PCB-2	
	TCS6-1-02	CB26-C-SKD..30-PCB-111-75	
	TCS7-1-02	CB26-C-SKD..DIA-INT-PCB	
	TCS9-1-01	CB26-C-SKD..30-BRG-PC3	
	TCS14-1-00	CB26..32-C-SKD-WING-PC3	

DATE \_\_\_\_\_

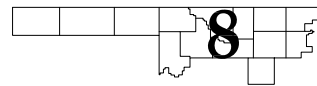
COMM. DIST. 1 \_\_\_\_\_

COMM. DIST. 2 \_\_\_\_\_

COMM. DIST. 3 \_\_\_\_\_

ATTEST \_\_\_\_\_  
COUNTY CLERK

TYLER D. SCHRODER  
REGISTERED PROFESSIONAL ENGINEER NO. 25837



CIRCUIT ENGINEERING DIST. 8

2901 N. VAN BUREN  
ENID, OK 73703  
(580) 237-4810

OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

DATE APPROVED \_\_\_\_\_

BY \_\_\_\_\_

CHIEF ENGINEER

SWO.

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

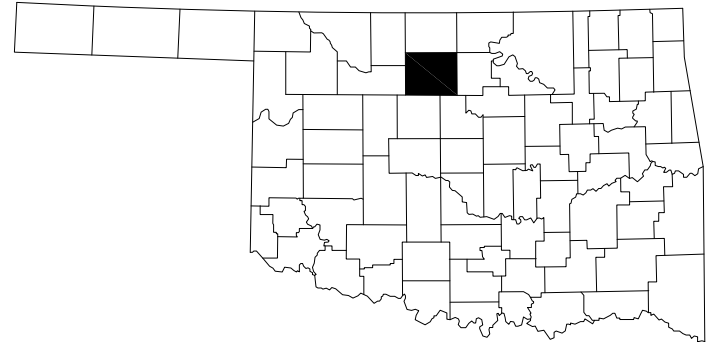
DATE APPROVED \_\_\_\_\_

BY \_\_\_\_\_

DIVISION ADMINISTRATION

S.A. Project No. XXX-XXXX(XXX)XX

Sheet No. 0001



DESIGN DATA

ADT 2020=50  
ADT 2040=75  
DESIGN SPEED=45 M.P.H.  
TERRAIN-FLAT

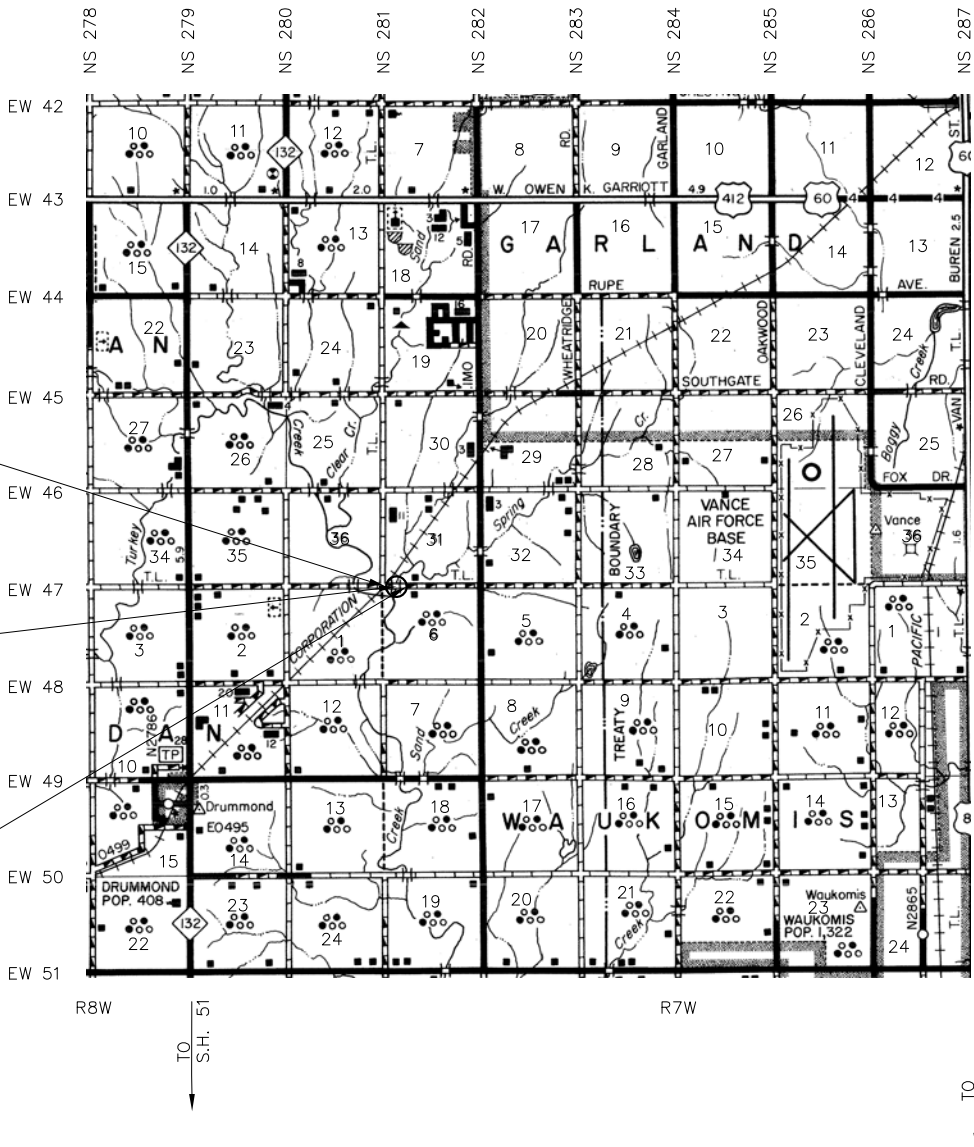
- HORIZONTAL CONTROL
  - HORIZONTAL CONTROL FOR THIS SURVEY IS THE ESTABLISHED SECTION CORNERS ALONG THE CONSTRUCTION REFERENCE LINE & SECTION LINE
- VERTICAL CONTROL
  - LEVEL DATUM IS MEAN SEA LEVEL (U.S.C. & G.S.)

Sta.104+00.00 Start Construction  
S.A. Proj. No. XXX-XXXX(XXX)XX

Begin Bridge Sta.106+60.92  
Bridge Length= 78'2"  
End Bridge Sta.107+39.08  
LAT. 36°19'58"  
LONG. 097°59'42"

Sta.110+78.00 End Construction  
S.A. Proj. No. XXX-XXXX(XXX)XX

PROJECT LENGTHS BASED ON CRL



ROADWAY LENGTH \_ \_ 599.83 FT. \_ \_ .0113 MI.  
BRIDGE LENGTH \_ \_ 78.17 FT. \_ \_ .015 MI.  
PROJECT LENGTH \_ \_ \_ \_ \_ .0128 MI.

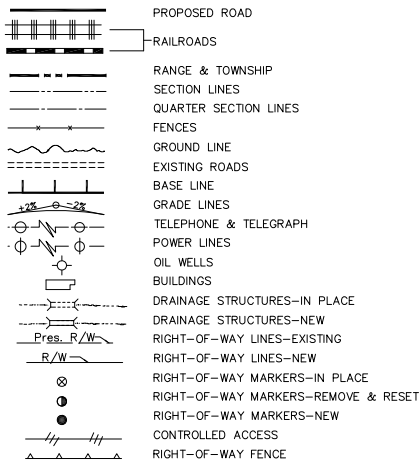
EXCEPTIONS \_ \_ \_ \_ \_ NONE  
EQUATIONS \_ \_ \_ \_ \_ NONE

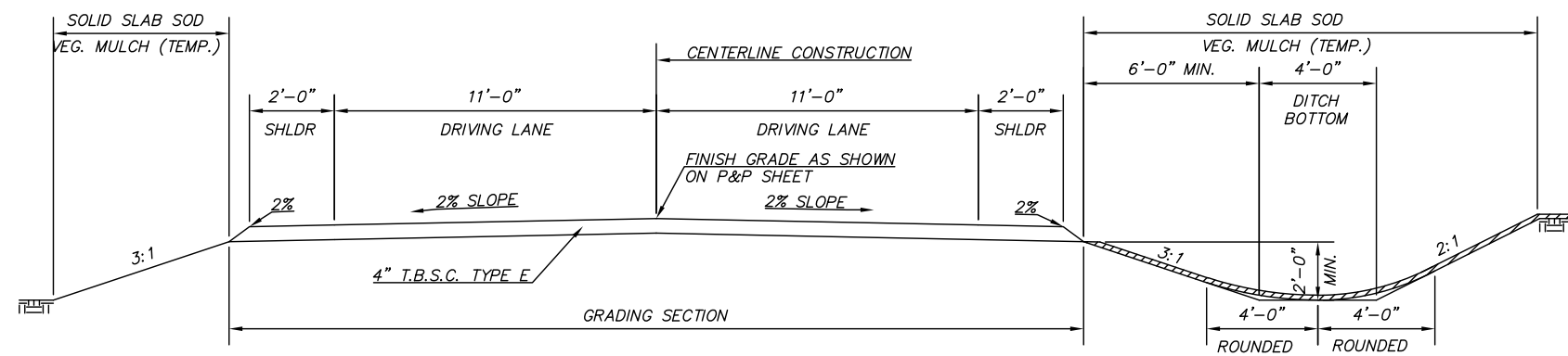
This Document is  
preliminary in nature &  
is not a final signed &  
sealed document.

60% Plans  
6-14-22

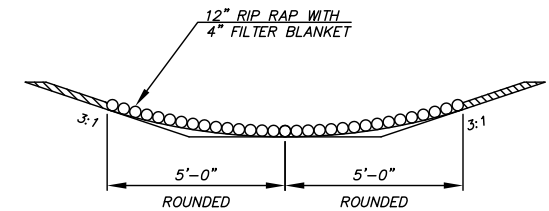
SCALES 1" = 50'  
PLAN 1"=50'  
PROFILE HOR. 1"=50'  
VER. 1"=5'  
LAYOUT MAP 1"=5,280'

CONVENTIONAL SIGNS



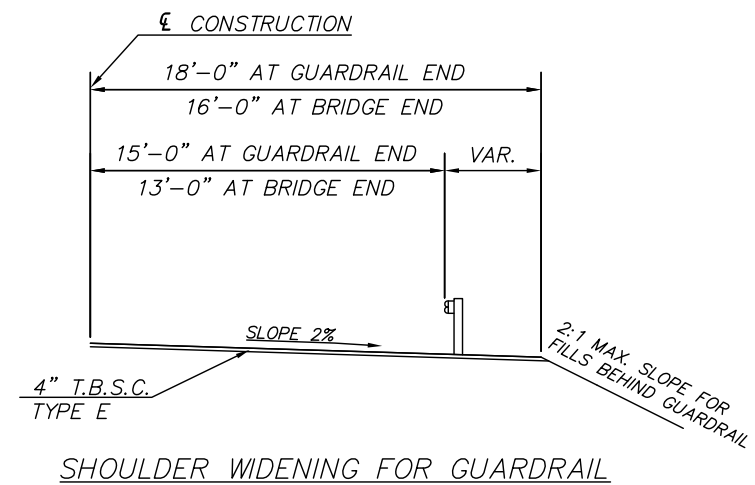


TYPICAL SECTION



RIP RAP DITCH LINER  
\*SEE CROSS SECTIONS

GUARDRAIL SCHEDULE			
STATION TO STATION	ANCHOR UNITS	ANCHOR UNITS	TOTAL LENGTH OF RAIL
	TYPE A EA.	D-BF EA.	
105+48.25 TO 106+48.25 LT.	1.00	1.00	100.00
105+48.25 TO 106+48.25 RT.	1.00	1.00	100.00
107+51.75 TO 108+51.75 LT.	1.00	1.00	100.00
107+51.75 TO 108+51.75 RT.	1.00	1.00	100.00
	4.00	4.00	400.00



GARFIELD COUNTY UNKNOWN CREEK

TYPICAL SECTIONS & SUMMARIES

J/P NO. 29874(04)

SHEET NO. 0002

GENERAL CONSTRUCTION NOTES (BRIDGE)

ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION ENGLISH VERSION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

THE BRIDGE SITE WILL BE CLOSED TO ALL PUBLIC TRAFFIC DURING CONSTRUCTION, ACCESS WILL BE OPEN TO LOCAL TRAFFIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TRAFFIC CONTROL. ALL SIGNS, BARRICADES, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES AND MEASURES, ETC. SHALL BE PROVIDED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION AS REVISED, AS SHOWN ON THE TCS STANDARDS AND ON DETAIL SHEETS. ALL CONSTRUCTION SIGNS WITH (10) SQUARE FEET OR MORE WILL BE DOUBLE POSTED.

THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE COUNTY, CED #8, AND ODOT DIV 4 FOURTEEN (14) CALENDAR DAYS BEFORE ANY CONSTRUCTION OR DEMOLITION BEGINS ON THIS PROJECT.

THE MAXIMUM FACTORED PILE LOAD HP 12X53 IS 82.0 TONS. ALL THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

AXIAL LOAD RESISTANCE =  $\phi [(0.875\sqrt{E} \log_{10} (10N)) - 50]$   
WHERE:  
 $\phi$  = RESISTANCE FACTOR OF 0.4  
 $E$  = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.  
 $N$  = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:

- THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY.)
- THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED, OR OTHERWISE DAMAGED.
- THE PENETRATION IS QUICK AND UNIFORM.
- THERE IS NOT APPRECIABLE REBOUND OF THE HAMMER, AND
- A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD. AS DETERMINED BY THE ENGINEER.

PAY ITEM NOTES

- (F-50) INCLUDES COST OF 4 TYPE 1 CODE 3 DELINEATORS (AMBER COLOR).
- (TC-84) 120 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEM IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.
- (10) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSIST OF REMOVAL OF 20'-24'-17'x20' WIDE STEEL I-BEAM BRIDGE. THE CONTRACTOR SHALL SALVAGE THE STEEL PIPE AND STOCKPILE ON THE R/W TO BECOME PROPERTY OF THE COUNTY AND REMOVED FROM THE JOBSITE BY COUNTY FORCES IN ACCORDANCE WITH SPECIFICATION 619.04(b)2 OF STANDARD SPECIFICATION AND IN A MANNER APPROVED BY THE ENGINEER.
- (11) SHALL INCLUDE ALL TRAFFIC CONTROL DEVICES NECESSARY TO REGULATE TRAFFIC DURING CONSTRUCTION. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TCS STANDARDS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- (12) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE 2019 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, "PLAN QUANTITIES" SECTION 109.01(B).

J/P NO. 29874				
PAY QUANTITIES				
200 BRIDGE 75 FT. TYPE III PCB BEAM SPAN, SKEW 0', 26'-0" CL. RDY				
ITEM		DESCRIPTION	UNIT	QUANTITY
501(B)	1300	SUBSTRUCTURE EXCAVATION COMMON (12)	C.Y.	0.00
501(F)	1700	GRANULAR BACKFILL (12)	C.Y.	0.00
503(A)	4230	PRESTRESSED CONCRETE BEAMS (TYPE III)	L.F.	0.00
504(D)	5410	CONCRETE RAIL (TR3)	L.F.	0.00
506(A)	7200	STRUCTURAL STEEL (12)	LB.	0.00
507(A)	8210	WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.	0.00
507(B)	8310	WEATHERING STEEL EXPANSION BEARING ASSEMBLY	EA.	0.00
509(A)	0210	CLASS AA CONCRETE (12)	C.Y.	0.00
509(B)	0320	CLASS A CONCRETE (12)	C.Y.	0.00
511(A)	2210	REINFORCING STEEL (12)	LB	0.00
514(A)	5210	PILES, FURNISHED (HP10X42)	L.F.	0.00
514(A)	5220	PILES, FURNISHED (HP12X53)	L.F.	0.00
514(B)	5310	PILES, DRIVEN (HP10X42)	L.F.	0.00
514(B)	5320	PILES, DRIVEN (HP12X53)	L.F.	0.00
514(L)	6300	PILE SPLICE, H-PILE (NON BIDDABLE)	EA.	0.00
518(B)	0300	SEALED EXPANSION JOINTS	L.F.	0.00
601(B)	1230	TYPE I-A PLAIN RIPRAP	TON	0.00
601(C)	1310	TYPE I-A FILTER BLANKET	TON	0.00
613(H)	6205	6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	0.00
613(I)	6305	6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.	0.00
619(D)	6700	REMOVAL OF EXISTING BRIDGE STRUCTURE (10)	L. SUM	0.00

JP# 29874				
PAY QUANTITIES				
300 TRAFFIC				
ITEM		DESCRIPTION	UNIT	QUANTITY
880(B)	6310	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF (11)	S.D.	0.00
880(C)	6410	CONSTRUCTION BARRICADES (TYPE III) (11)	S.D.	0.00
880(E)	6607	WARNING LIGHTS (TYPE A) (11)	S.D.	0.00

ENVIRONMENTAL MITIGATION NOTES

EARTHWORK NOTE:  
THE CONTRACTOR MUST ENSURE THAT ANY MATERIAL INCORPORATED INTO THE PROJECT IS FREE OF ANY HAZARDOUS, INDUSTRIAL OR CONTAMINATED WASTE, REFER TO SUB-SECTIONS 106.01 AND 202.02 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

IMPORTED MATERIAL (EG. BORROW) – IF MATERIAL IS IMPORTED TO THE PROJECT AND AT ANY POINT THE MATERIAL IS DETERMINED BY THE ENGINEER TO INCLUDE ANY TYPE OF UNACCEPTABLE CONTAMINATION, THE MATERIAL MAY REQUIRE REMOVAL, IN WHOLE, OR IN PART. IF REMOVAL IS REQUIRED, THEN THE INITIAL PLACEMENT, REMOVAL AND PROPER DISPOSAL OF THIS MATERIAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL OF THE UNACCEPTABLE MATERIAL SHALL BE APPROVED BY THE ENGINEER, REFER TO SUB-SECTION 107.15 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TO ASSIST THE CONTRACTOR, THE "OFF PROJECT FACILITY/ BORROW SITE HAZARDOUS MATERIALS QUESTIONNAIRE" IS PROVIDED ON THE DEPARTMENT'S WEB SITE:

[HTTPS://OK. GOV/ODOT/PROGRAMS AND PROJECTS/ENVIRONMENTAL/INDEX.HTML](https://ok.gov/odot/programs_and_projects/environmental/index.html)

THIS QUESTIONNAIRE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR SO THAT A CLEARER UNDERSTANDING OF THE CHARACTERISTICS OF THE PROPOSED SITE/MATERIAL IS ACHIEVED. COMPLETION AND SUBMITTAL OF THIS FORM TO THE ENGINEER DOES NOT EXCUSE THE CONTRACTOR FROM PROVIDING MATERIALS THAT ARE FREE OF HAZARDOUS AND INDUSTRIAL COMPOSITION IN ACCORDANCE WITH SUB-SECTIONS 106.01 AND 202.02 OF THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NON-COMPLIANCE NOTE:  
FAILURE TO IMPLEMENT THE COMMITMENTS SPECIFIED IN THE PLAN NOTES CAN RESULT IN NON-COMPLIANCE ISSUES ON THE PROJECT WORK ACTIVITIES MAY BE SUSPENDED ON THE PROJECT, FOR AN UNDETERMINED DURATION, WHILE WORKING WITH REGULATORS TO BRING THE PROJECT BACK INTO COMPLIANCE. THE CONTRACTOR WILL NOT BE COMPENSATED FOR TIME LOST.

WATER QUALITY CONSERVATION NOTE:  
APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES AND SEDIMENTATION IN STREAMS, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS, IN ORDER TO MINIMIZE ANY POTENTIAL IMPACTS TO ANY LISTED SPECIES. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE ORDINARY HIGH WATER MARK (OHWM). REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT PREVENTATIVE MEASURES MUST BE TAKEN TO PROHIBIT THE DISCHARGE OF CONTAMINANTS INTO ANY SURFACE WATERS.

GENERAL CONSTRUCTION NOTES – EROSION CONTROL

In accordance with the Oklahoma Underground Damage Prevention Act the contractor shall notify the Oklahoma One–Call Sytem, Inc. 48 hours prior to beginning excavation. Oklahoma One–Call System, Inc. "Call OKIE" 1–800–522–6543 or 811.

GRASS: ALL DISTURBED AREAS INCLUDING DITCHES AND SHOULDERS SHALL BE SODDED WITH BERMUDA SOLID SLAB SOD IN ACCORDANCE WITH SECTION 230.04(A) OF THE STANDARD SPECIFICATIONS.

FERTILIZER: AREAS ON WHICH BERMUDA SOLID SLAB SOD IS TO BE PLANTED SHALL HAVE 10–20–10 FERTILIZER APPLIED AT THE RATE OF 200 LBS. PER 1,000 SQ. YDS. OF SODDING, ONE HALF AFTER WATERING THE PREPARED SURFACE AND PRIOR TO PLANTING OF SOD, AND ONE HALF AFTER SODDING IS COMPLETED WITH WATERING USED TO INCORPORATE THE FERTILIZER INTO THE SOIL.

VEGETATIVE MULCH: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "MULCHING TILLER METHOD", AS SPECIFIED IN SECTION 233.04(B)2 OF THE STANDARD SPECIFICATIONS.

WATERING: ALL AREAS TO BE SODDED SHALL BE WATERED BEFORE SOD IS PLANTED TO OBTAIN ADEQUATE SOIL MOISTURE TO A DEPTH OF AT LEAST 5".

SEASONAL PLANTING RESTRICTIONS:

THE PLANTING OF BERMUDA SOLID SLAB SOD SHALL BE RESTRICTED TO THE PERIOD FROM APRIL 15TH TO SEPTEMBER 15TH.

IF THE DIRT WORK IS COMPLETED AFTER THE APPROVED SEASON FOR BERMUDA SOLID SLAB SODDING HAS ENDED, ALL DISTURBED AREAS WILL BE COVERED WITH VEGETATIVE MULCH IN ACCORDANCE WITH SECTION 233.04(B)2 OF THE STANDARD SPECIFICATIONS.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER SHALL NOT BE SODDED.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT–OF–WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED, AND PERMANENT RIGHT–OF–WAY FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST OF TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

- COUNTY TO BE RESPONSIBLE FOR THE FOLLOWING:
- 1. ACQUIRING ALL REQUIRED R/W.
  - 2. REMOVAL AND RESETTNG ALL FENCES ON RIGHT–OF–WAY LINES.
  - 3. RELOCATING ALL UTILITIES.

PAY ITEM NOTES

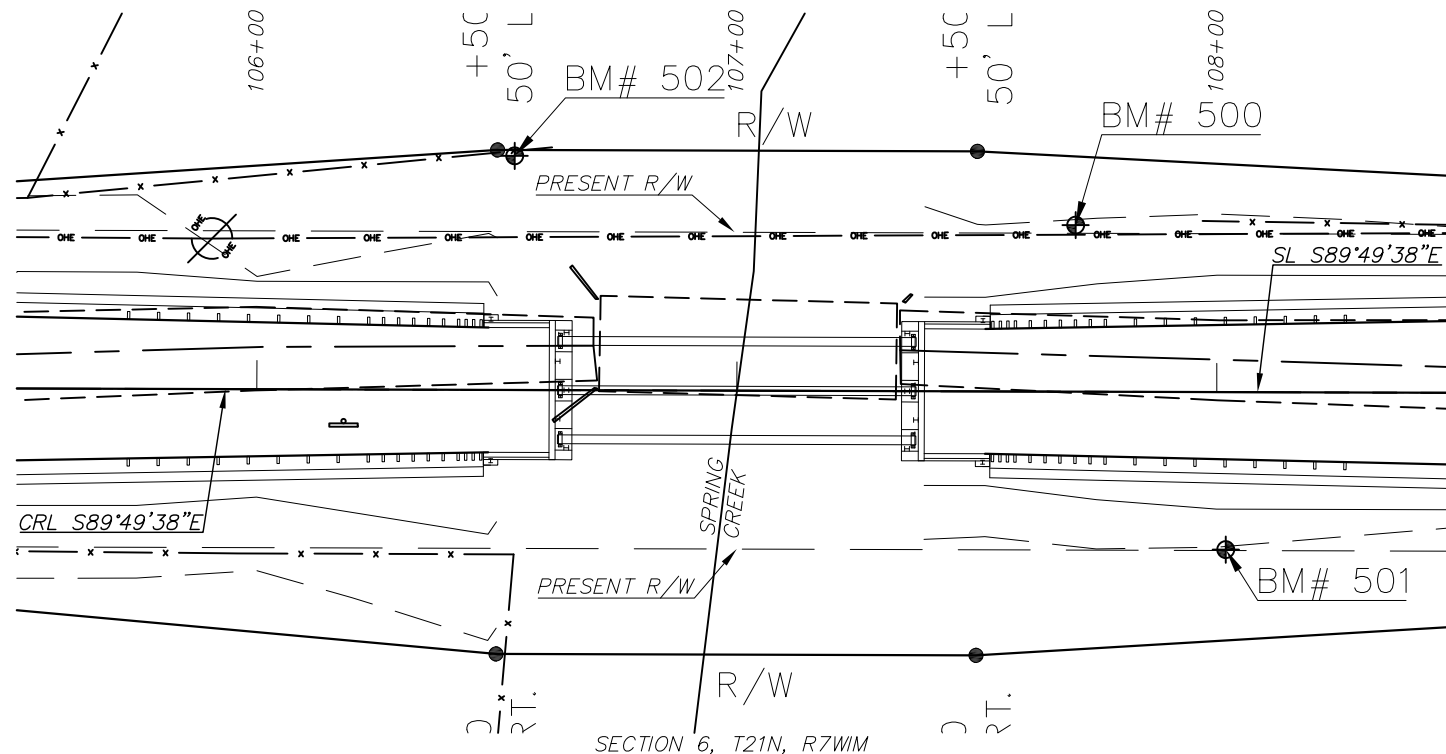
- (R–11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 1.70 ACRES. (ONE APPLICATION).
- (R–18) ESTIMATED AT 141 LBS. PER C.F.
- (R–40) INCLUDES 2% FOR GROUND MEASUREMENT.
- (R–41) ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (1) ESTIMATED QUANTITY ONLY. LOCATION AND ACTUAL QUANTITY REQUIRED TO BE DETERMINED BY THE ENGINEER.
- (2) PRICE BID TO INCLUDE COST OF SILT REMOVAL WHEN HALF FULL.
- (3) SOLID SLAB QUANTITIES TO BE FIELD MEASURED BEFORE CUTTING SOD. CONTRACTOR WILL SUPPLY SUFFICIENT WATER TO PRODUCE ADEQUATE GRASS GROWTH AS APPROVED BY THE ENGINEER. ESTIMATED AT 200 LBS. OF 10–20–10 FERTILIZER PER 1,000 SQ. YDS. OF SODDING. PRICE BID TO INCLUDE THE COST OF WATERING FERTILIZER.
- (4) INCLUDES 51.60 TONS FOR GUARDRAIL WIDENING AND 18.20 TONS FOR FIELD ENTRANCES.
- (5) INCLUDES 10 CU. YDS. TO BE USED IN A MANNER APPROVED BY THE ENGINEER.
- (6) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR RE–ESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS. STAKING THE CENTERLINE OF CONSTRUCTION AND RE–ESTABLISHING RIGHT–OF–WAY STAKES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING BENCH MARKS SHOWN ON THE PLANS AND FOR ESTABLISHING NEW BENCH MARKS AS NEEDED TO CONSTRUCT THE PROJECT.

J/P NO. 29874(04)			
PAY QUANTITIES			
100 ROADWAY			
ITEM	DESCRIPTION		UNIT QUANTITY
201(A) 1200	CLEARING AND GRUBBING		L. SUM 0.00
202(A) 2200	UNCLASSIFIED EXCAVATION		C.Y. 0.00
202(D) 2500	UNCLASSIFIED BORROW		C.Y. 0.00
205(A) 6200	TYPE A. SALVAGED TOPSOIL		L. SUM 0.00
221(B) 2300	TEMPORARY SILT FENCE (1)(2)		L.F. 0.00
221(E) 2600	TEMPORARY SILT DIKE (1)(2)		L.F. 0.00
230(A) 7200	SOLID SLAB SODDING (3)		S.Y. 0.00
233(A) 0200	VEGETATIVE MULCHING (R–11)		AC. 0.00
402(E) 2600	TRAFFIC BOUND SURFACE COURSE TYPE E (R–18)(4)		TON 0.00
509(D) 0500	CLASS C CONCRETE (5)		C.Y. 0.00
623(F) 1708	GUARDRAIL ANCHOR UNIT (TYPE A)		EA. 0.00
623(F) 1724	GUARDRAIL ANCHOR UNIT (TYPE D–BF)		EA. 0.00
624(C) 3410	FENCE, STYLE SWF (6 BARBED WIRE) (R–40)(R–41)		L.F. 0.00

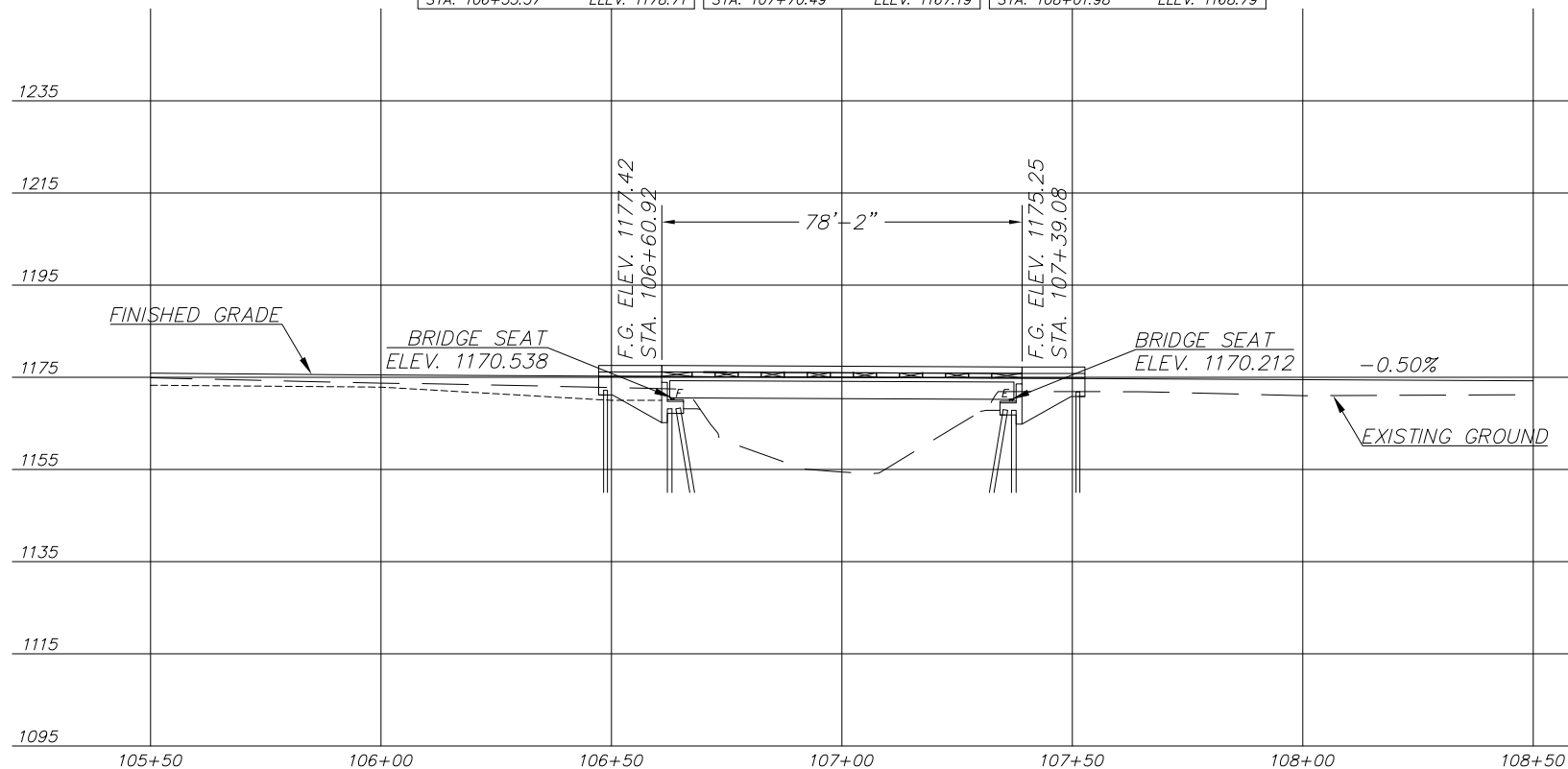
J/P NO. 29874(04)			
PAY QUANTITIES			
600 CONSTRUCTION STAKING			
ITEM	DESCRIPTION		UNIT QUANTITY
642(B) 3300	CONSTRUCTION STAKING LEVEL II (6)		L. SUM 1.00

J/P NO. 29874(04)			
PAY QUANTITIES			
640 CONSTRUCTION			
ITEM	DESCRIPTION		UNIT QUANTITY
220 1100	SWPPP DOCUMENTATION AND MANAGEMENT		L. SUM 1.00
641 2110	MOBILIZATION		L. SUM 1.00

PLAN  
SCALE: 1"=40'  
SECTION 31, T22N, R7WIM



BENCHMARK NO. 502 1/2" IRON PIN STA. 106+53.57	48.77 FT. LT. ELEV. 1178.71	BENCHMARK NO. 500 1/2" IRON PIN STA. 107+70.49	34.71 FT. RT. ELEV. 1167.19	BENCHMARK NO. 501 1/2" IRON PIN STA. 108+01.98	32.82 FT. LT. ELEV. 1168.79
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NOTE:  
SEE SHEET NO. B00X-B00X  
FOR BORING INFORMATION

ELEVATION  
SCALE: 1"=40'

LOADING DATA

ABUTMENT PILES (HP 12X53):

FACTOR PILE REACTION = 82.0 TONS/PILE. ALL ABUTMENT  
PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL.  
STEEL PILING SHALL BE DRIVEN TO POINT BEARING ON  
SOLID FOUNDATION MATERIAL UNTIL THE REQUIRED FACTOR  
PILE CAPACITY OF 82.0 TONS PER PILE IS OBTAINED.

DESIGN DATA

CONCRETE (CLASS A) F'C=3,000 PSI  
CONCRETE (CLASS AA) F'C=4,000 PSI  
REINFORCING STEEL (GR 60) FY=60,000 PSI  
STRUCTURAL STEEL (GR 50W) FY=50,000 PSI

LOADING: HL-93 20 PSF FUTURE WEARING SURFACE  
5 PSF STAY-IN-PLACE FORMS

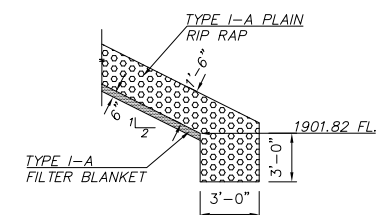
DESIGN SPECIFICATIONS - AASHTO LRFD BRIDGE DESIGN  
SPECIFICATIONS, 6TH EDITION, EXCEPT AS MODIFIED BY CURRENT  
ODOT BRIDGE DIVISION DESIGN POLICIES.  
ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.  
LFD OPERATING RATING: HS 43.0

HYDRAULIC DATA

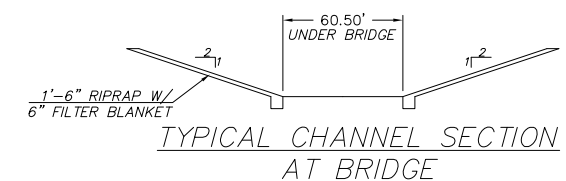
D.A. = 13.25 SQ. MI.  
SCS CONTROLLED D.A. = 0.00 SQ. MI.  
EFFECTIVE DRAINAGE AREA = 13.25 SQ. MI.  
Q<sub>25</sub> = 4420.00 C.F.S.  
V<sub>25</sub> = 6.71 F.P.S.  
Q<sub>25</sub> CALC. B.W. 1169.53 FEET  
Q<sub>50</sub> = 6350.00 C.F.S.  
V<sub>50</sub> = 8.78 F.P.S.  
Q<sub>50</sub> = CALC. B.W. 1171.93 FEET  
Q<sub>100</sub> = 8040.00 C.F.S.  
V<sub>100</sub> = 11.11 F.P.S.  
Q<sub>100</sub> = CALC. B.W. 1173.81 FEET  
Q<sub>o.r.</sub> = 13900 C.F.S.  
OVERTOPPING ELEV. (LOW) = 1181.24 FEET  
V<sub>o.r.</sub> (BRIDGE) = 19.21 F.P.S.  
EXTREME HIGHWATER ON RECORD = N/A  
MAXIMUM SCOUR DEPTH = N/A FEET

CONTRACTOR NOTE:  
EXTEND RIP RAP TO THE  
SECOND GUARDRAIL POST.

NOTE:  
"TOEING-IN" APPLIES TO  
THE ENTIRE LENGTH OF  
THE BASE OF RIPRAP.



DETAIL OF TYPE I-A PLAIN RIPRAP



GARFIELD COUNTY SPRING CREEK

GENERAL PLAN & ELEVATION

CL STA. 107+00.00  
78'-2" SINGLE SPAN PCB TYPE III W/26'-0" CL. RDY.  
0 DEG. L.F. TR3 W/RAILS

J/P NO. 29874(04)

SHEET NO. B001



# STORM WATER MANAGEMENT PLAN

REVISIONS	
DESCRIPTION	DATE

## SITE DESCRIPTION

**PROJECT LIMITS:** BRIDGE OVER SPRING CREEK, 5.0 MI. E., 4.0 MI. S., & 0.2 MI. E. OF LAHOMA ON COUNTY ROAD EW-470.

**PROJECT DESCRIPTION:** BRIDGE & APPROACH PLANS, ROADWAY LENGTH= 599.83' OF TRAFFIC BOUND SURFACE COURSE TYPE "E" AT 4", 75' TYPE III PCB SPAN = 78.167 FT. LONG BRIDGE, SKEWED 0° L.F. TR3 GUARDRAIL & RIP RAP CHANNEL. X,XXX.00 S.Y. OF SOLID SLAB SODDING.

**SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:** PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE, INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING. REPLACE SALVAGED TOPSOIL. REMOVE TEMPORARY DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

**SOIL TYPE:** PULASKI AND ASHPORT SOILS

**TOTAL AREA OF THE CONSTRUCTION SITE:** X.XX ACRES

**ESTIMATED AREA TO BE DISTURBED:** X.XX ACRES

**OFFSITE AREA TO BE DISTURBED:** N/A  
(FOR CONTRACTOR USE)

**TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION:** 0.XX ACRES

**TOTAL IMPERVIOUS AREA POST-CONSTRUCTION:** 0.XX ACRES

**POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE:** 0.XX

**LATITUDE & LONGITUDE OF CENTER OF PROJECT:** N36°19'58" & W097°59'42"

**PROJECT WILL DISCHARGE TO:**

**NAME OF RECEIVING WATERS:** SPRING CREEK

**SENSITIVE WATERS OR WATERSHEDS:** YES ☐ NO ☒

**303(d) IMPAIRED WATERS:** YES ☐ NO ☒

**IF YES, LIST IMPAIRMENT:**

**LOCATED IN A TMDL:** YES ☐ NO ☒

**LAKE THUNDERBIRD TMDL:** YES ☐ NO ☒

**MS4 ENTITY** YES ☐ NO ☒

**IF YES, LOCATION:**

**NOTE:**  
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

## EROSION AND SEDIMENT CONTROLS

### SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- X PERMANENT SODDING, SPRIGGING OR SEEDING
- X VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- X PRESERVATION OF EXISTING VEGETATION

**NOTE:** TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

### STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- X TEMPORARY SILT FENCE
- X TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- X TEMPORARY SEDIMENT REMOVAL
- X RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMS
- X TEMPORARY STREAM CROSSINGS

### OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

### NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

### MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

### WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

### HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

### GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
  - 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
  - 221 TEMPORARY SEDIMENT CONTROL

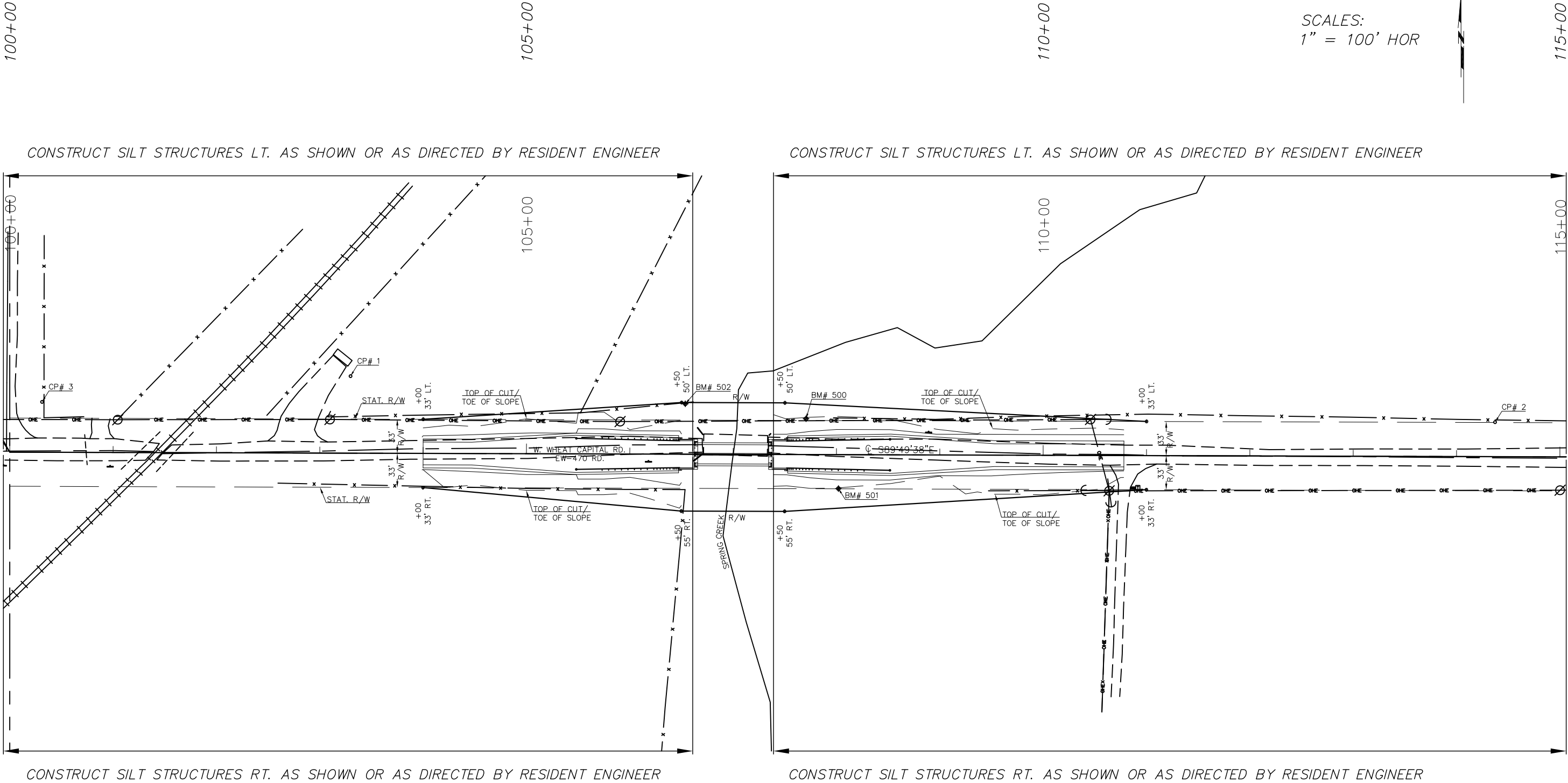
### IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

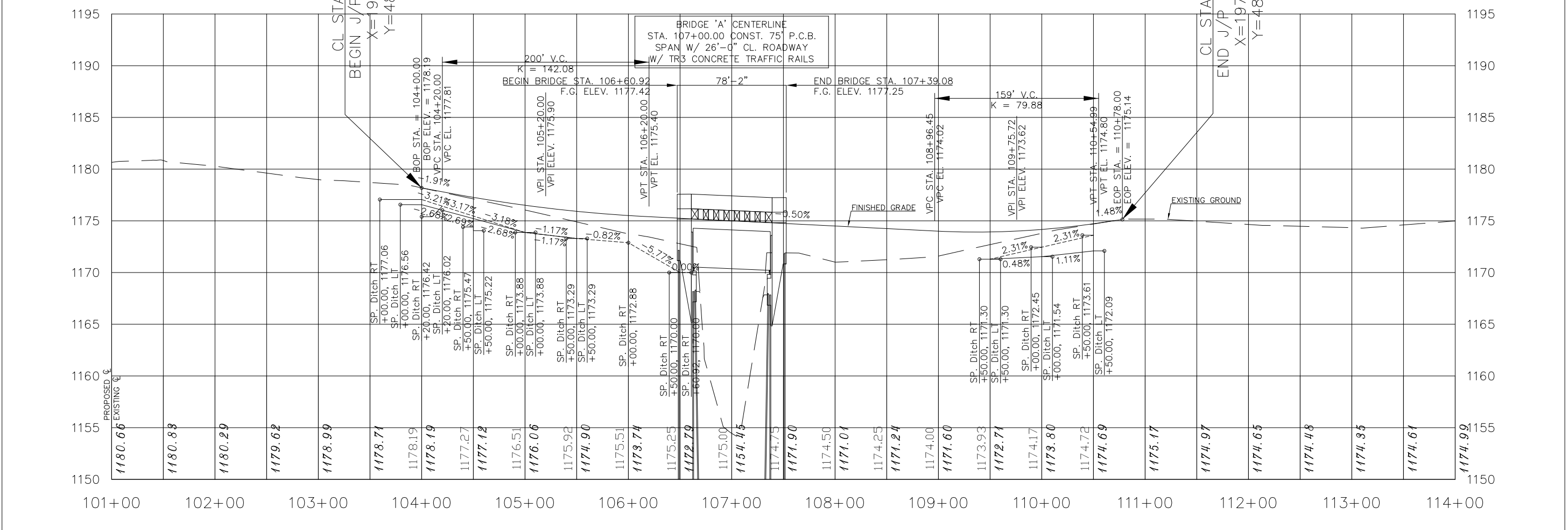
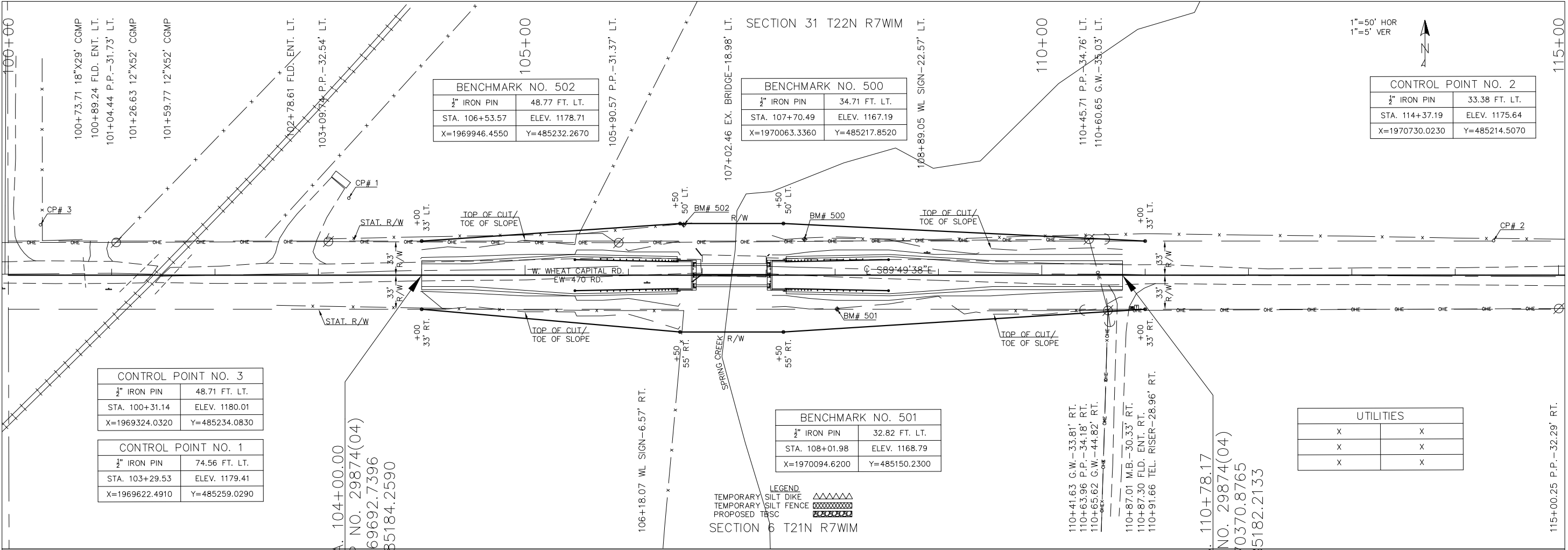
DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION	
DRAWN			<div>STORM WATER MANAGEMENT PLAN</div>	
CHECKED				
APPROVED				
SQUAD		CED8		
COUNTY	GARFIELD		HIGHWAY	EW-470
			STATE JOB NO.	JP#29874(04)
			SHEET NO.	R001

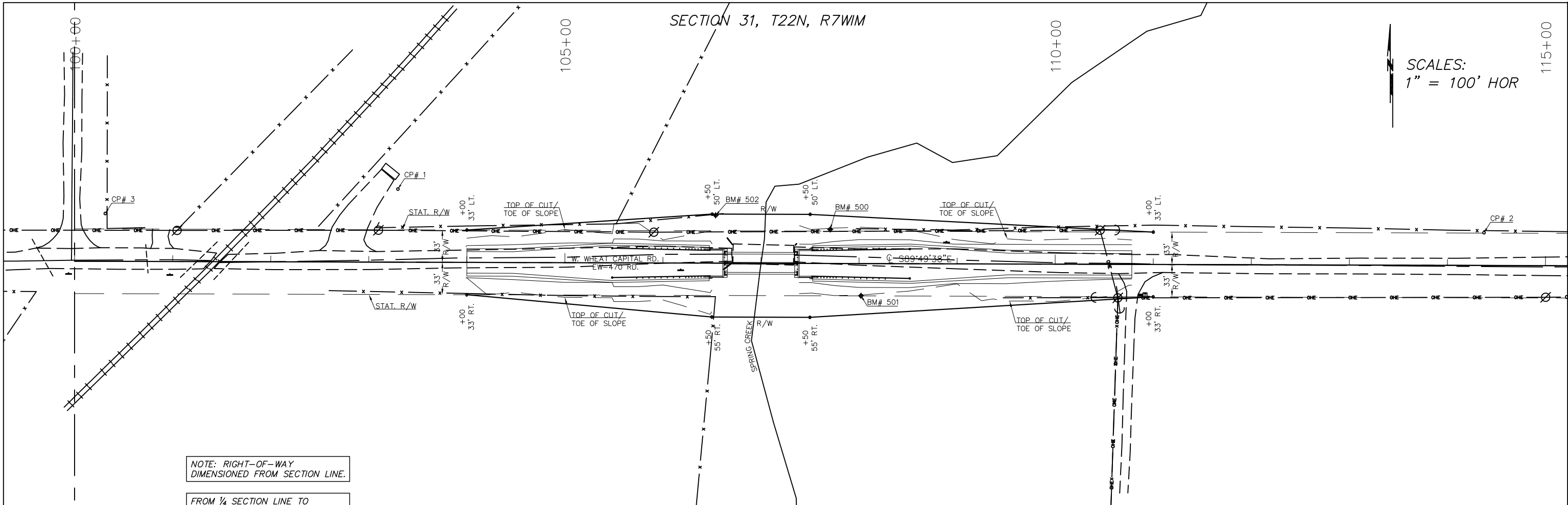


SCALES:  
1" = 100' HOR



LEGEND	
TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	
RIPRAP	





SCALES:  
1" = 100' HOR

NOTE: RIGHT-OF-WAY  
DIMENSIONED FROM SECTION LINE.

FROM 1/4 SECTION LINE TO  
SECTION LINE IS 2609.98'

ALL BENCHMARKS ARE  
REFERENCED FROM SECTION LINE.

CONTROL POINT NO. 3  
1/2" IRON PIN 48.71 FT. LT.  
STA. 100+31.14 ELEV. 1180.01  
X=1969324.0320 Y=485234.0830

CONTROL POINT NO. 1  
1/2" IRON PIN 74.56 FT. LT.  
STA. 103+29.53 ELEV. 1179.41  
X=1969622.4910 Y=485259.0290

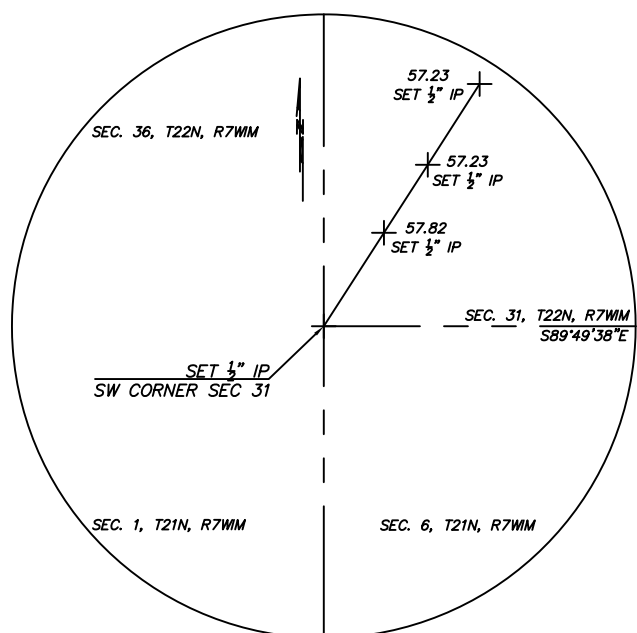
BENCHMARK NO. 502  
1/2" IRON PIN 48.77 FT. LT.  
STA. 106+53.57 ELEV. 1178.71  
X=1969946.455 Y=485232.267

BENCHMARK NO. 500  
1/2" IRON PIN 34.71 FT. LT.  
STA. 107+70.49 ELEV. 1167.19  
X=1970063.336 Y=4852174.852

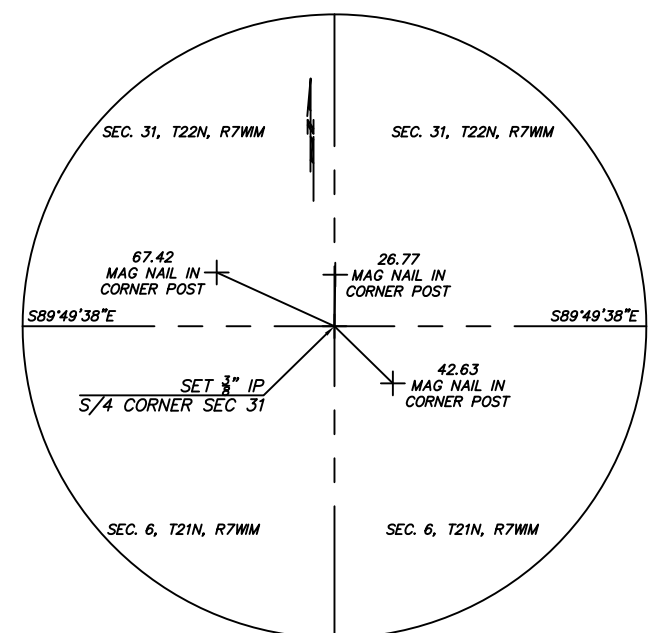
BENCHMARK NO. 501  
1/2" IRON PIN 32.82 FT. LT.  
STA. 108+01.98 ELEV. 1168.79  
X=1970094.620 Y=485150.230

CONTROL POINT NO. 2  
1/2" IRON PIN 33.38 FT. LT.  
STA. 114+37.19 ELEV. 1175.64  
X=1970730.0230 Y=485214.5070

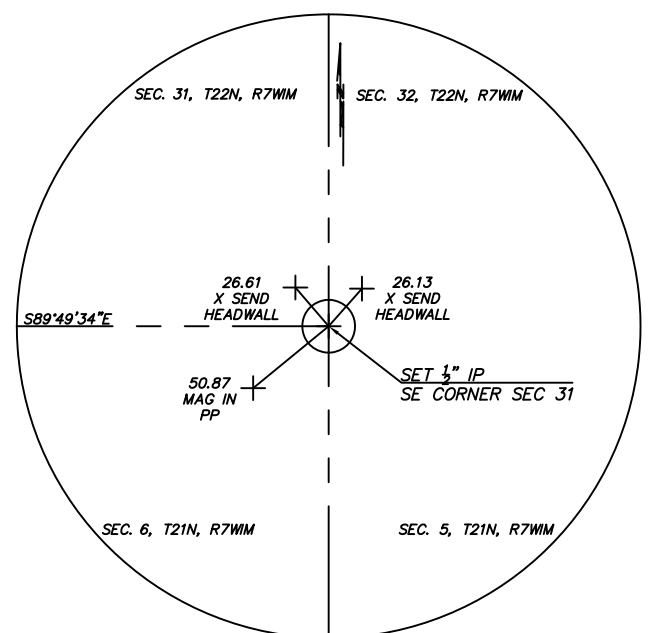
SECTION 6, T21N, R7WIM



S.W. SECTION CORNER  
SECTION 31, T22N, R7WIM  
X=1969292.7414  
Y=485185.4657



S. 1/4 SECTION CORNER  
SEC. 31, T21N, R7WIM  
X=1971902.7133  
Y=485177.5922



S.E. SECTION CORNER  
SEC. 31, T22N, R7WIM  
X=1974546.4172  
Y=485169.5727

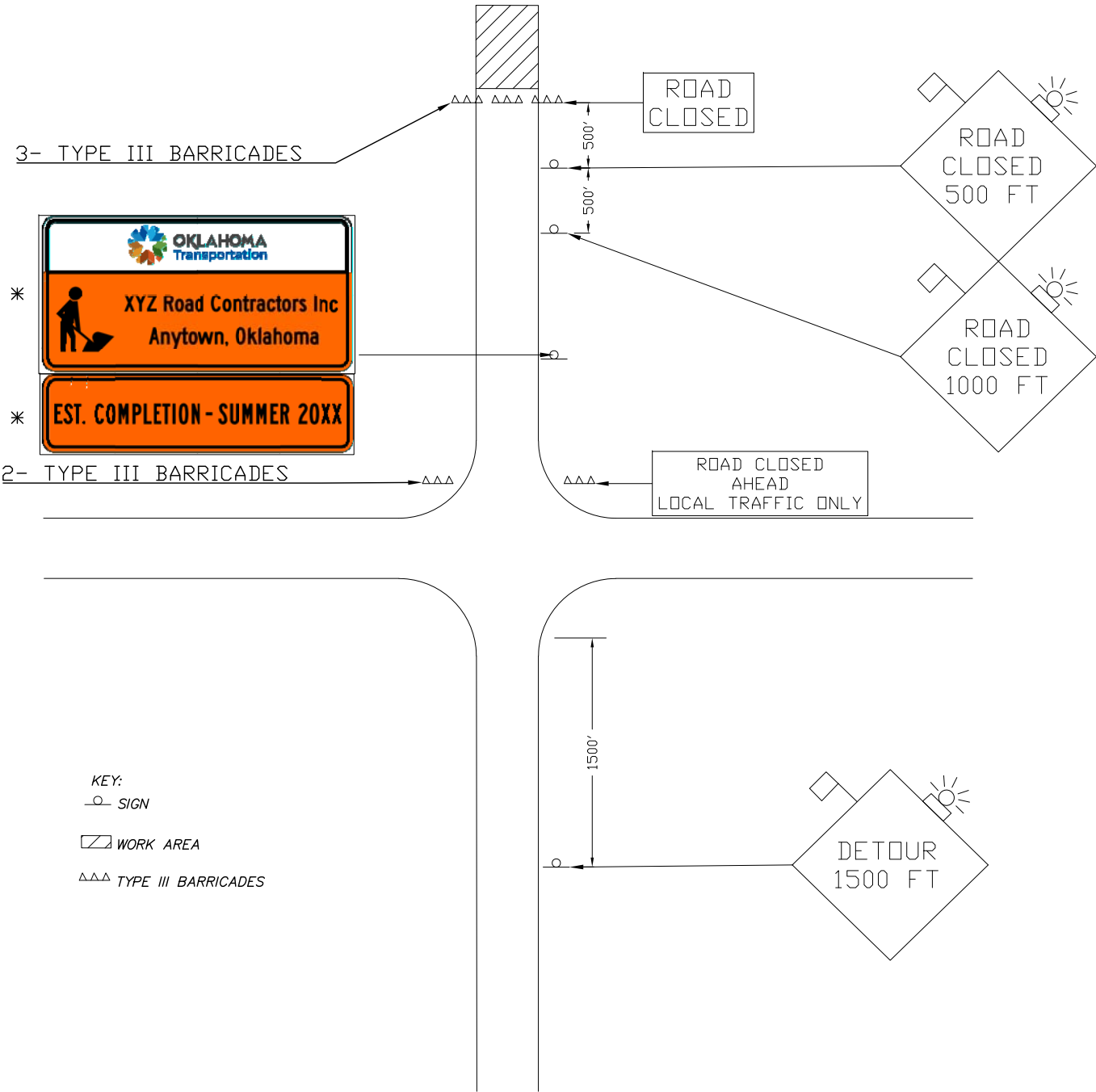
GARFIELD COUNTY SPRING CREEK  
ALIGNMENT, SURVEY  
REFERENCES AND R/W  
J/P NO. 29874(04) SHEET NO. S001

SUMMARY OF CONSTRUCTION SIGNS 6.26 TO 15.99 S.F.						
DESCRIPTION	TYPE	DIM.	SIZE (S.F.)	NO.	DAYS	S.D.
ROAD CLOSED	R11-2	48X30	10.00	6.00	180.00	1,080.00
ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60X30	12.50	4.00	180.00	720.00
ROAD CLOSED 1000 FT	W20-3	36X36	9.00	2.00	180.00	360.00
ROAD CLOSED 500 FT	W20-3	36X36	9.00	2.00	180.00	360.00
DETOUR 1500 FT	W20-2	36X36	9.00	2.00	180.00	360.00
EST. COMPLETION - SUMMER 20XX		72X18	9.00	2.00	180.00	360.00
SIGNS TO BE USED AT THE DISCRETION OF THE ENGINEER		36X36	9.00	2.00	180.00	360.00
SHEET TOTALS						3,600.00

SUMMARY OF CONSTRUCTION SIGNS 16.00 TO 32.99 S.F.					
DESCRIPTION	DIM.	SIZE (S.F.)	NO.	DAYS	S.D.
OKLAHOMA, XYZ ROAD CONTRACTORS INC.	72X36	18.00	2.00	180.00	360.00
SHEET TOTALS					360.00

NOTES:  
WHEN A DETOUR ROUTE IS ESTABLISHED IN CONJUNCTION WITH THE CONSTRUCTION, THE DETOUR ROUTE SHALL BE SHOWN IN THE PLANS. EITHER THE CONTRACTOR OR THE COUNTY WILL BE RESPONSIBLE FOR THE DTOUR SIGNING AND THIS RESPONSIBILITY SHALL BE STATED IN THE PLANS.

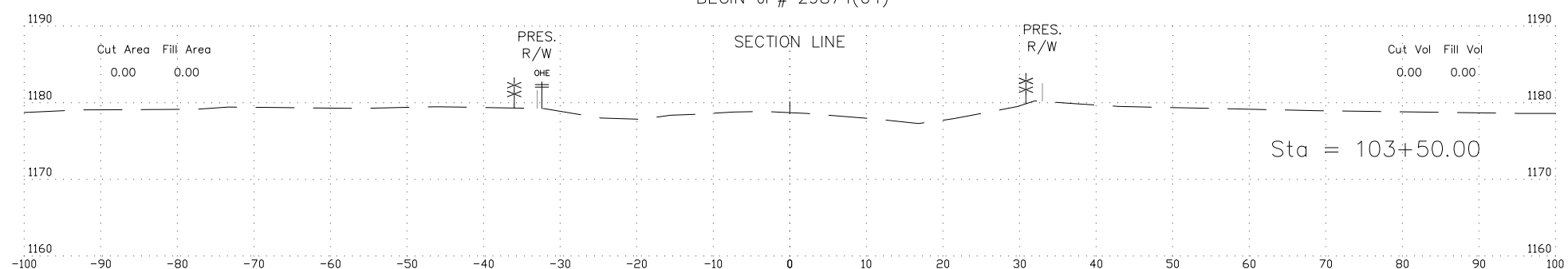
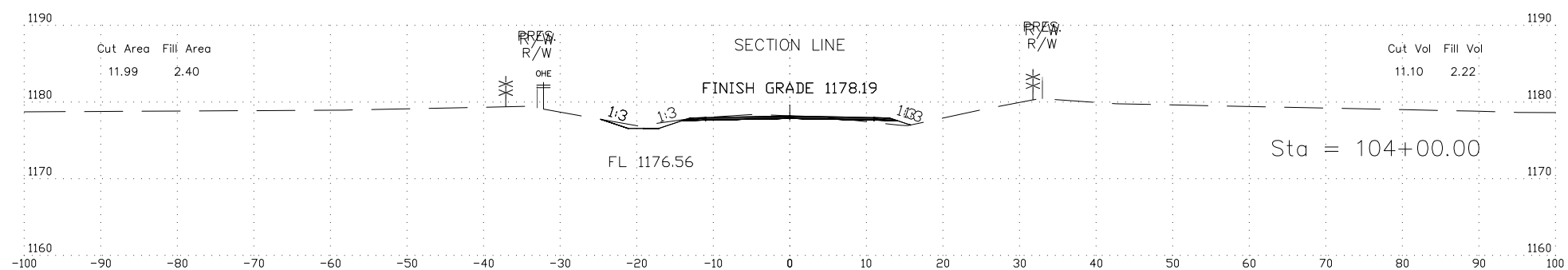
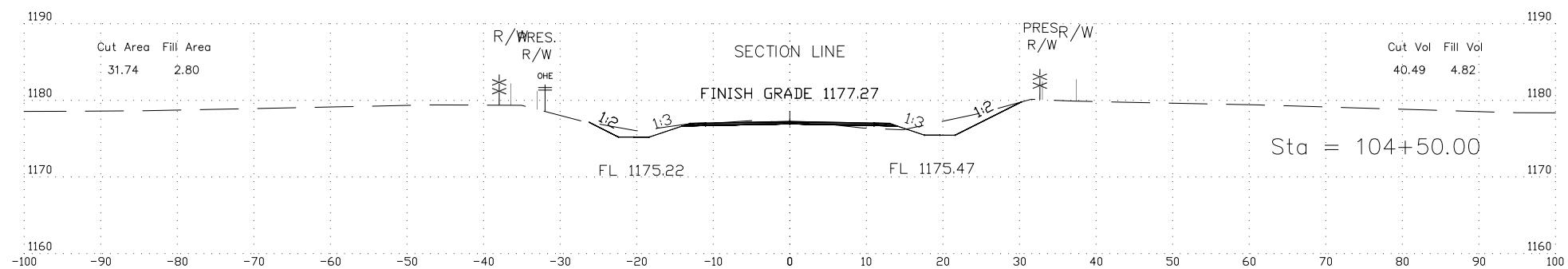
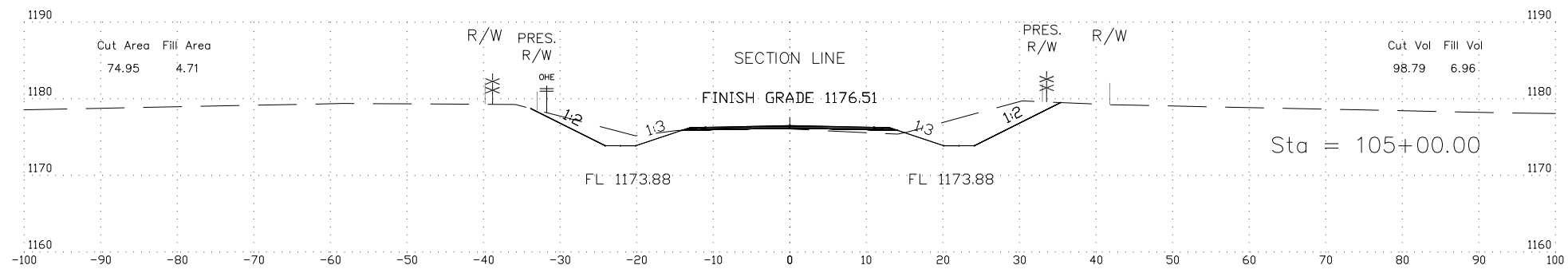
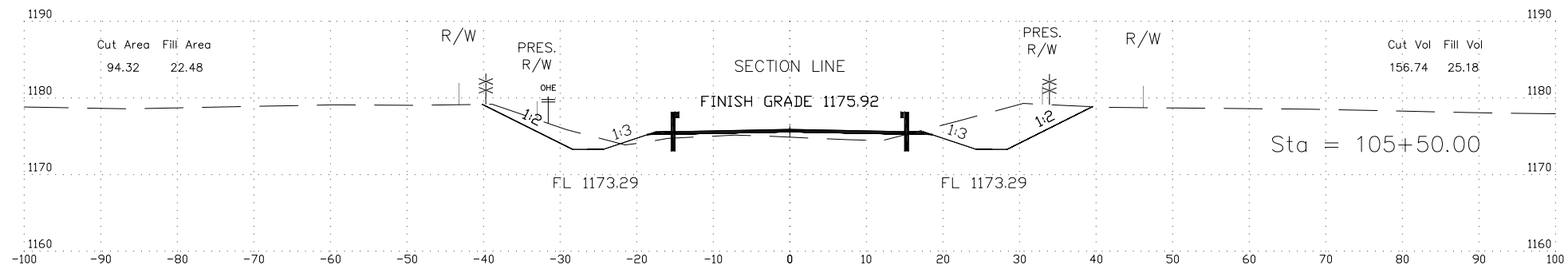
THE CONSTRUCTION SIGNING SHOWN ON THIS PLAN SHEET AND FROM THE OPPOSITE DIRECTION (NOT SHOWN) SHALL ALWAYS BE THE RESPONSIBILITY OF THE CONTRACTOR.



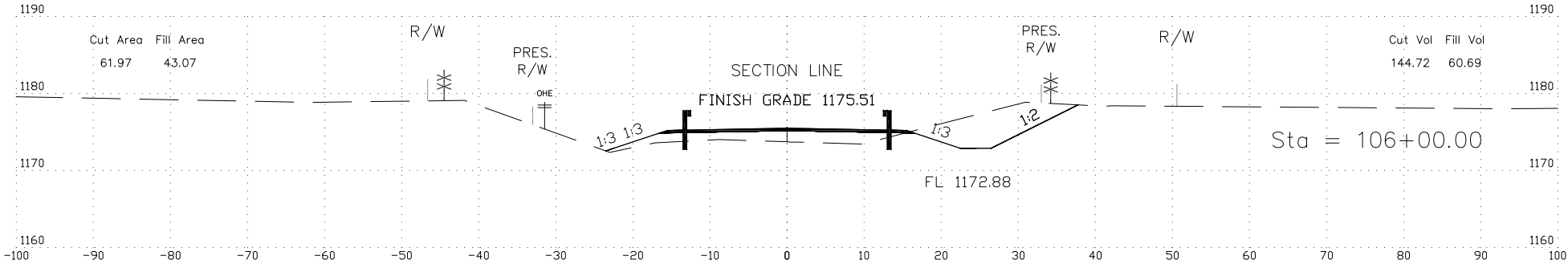
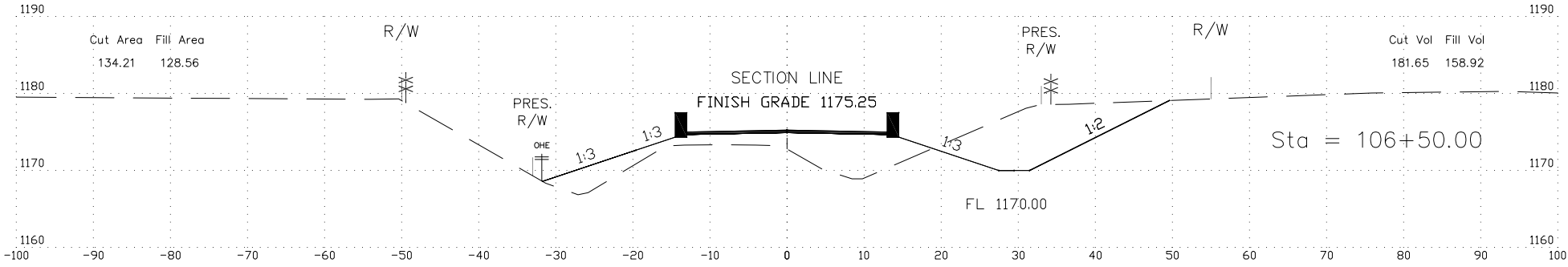
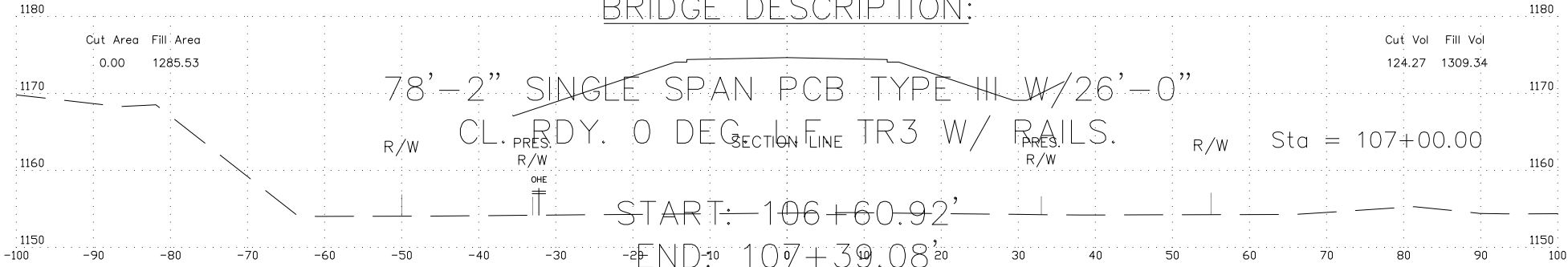
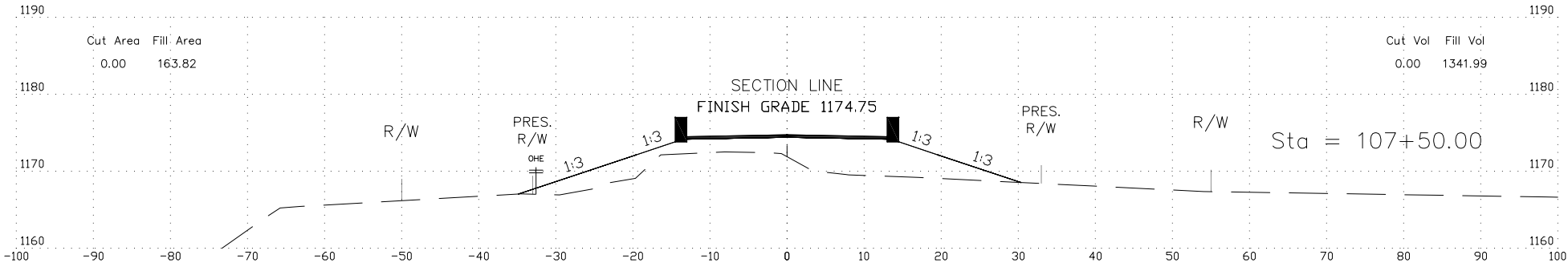
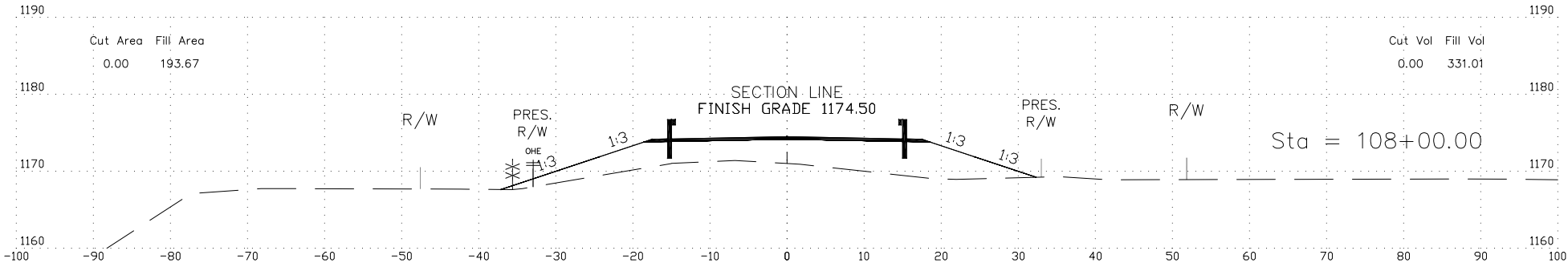
TYPICAL APPLICATION  
COUNTY ROAD (NO DETOUR IS ESTABLISHED)

\* TO BE FILLED IN WITH THE CORRECT CONTRACTORS INFORMATION AND THE CORRECT COMPLETION DATE.

ALL BARRICADES SHALL BE LIGHTED.

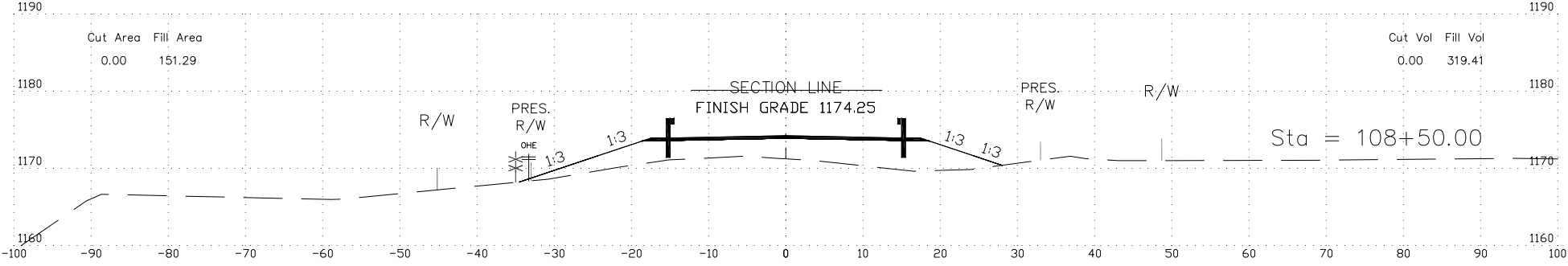
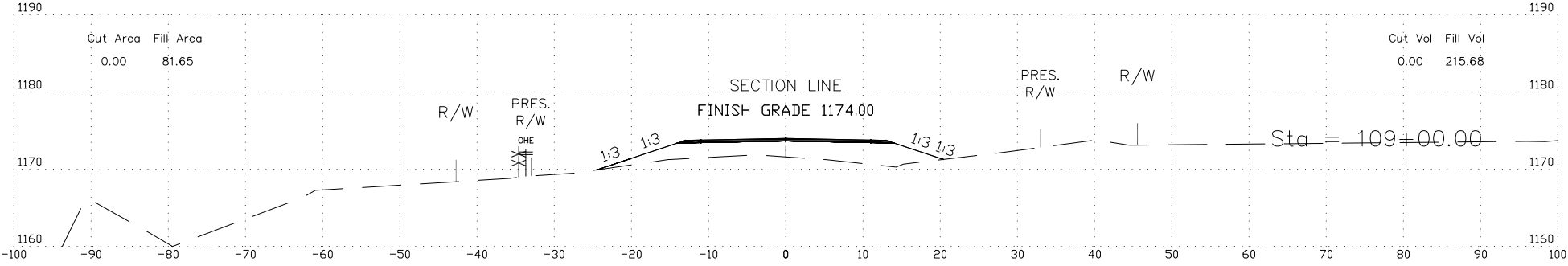
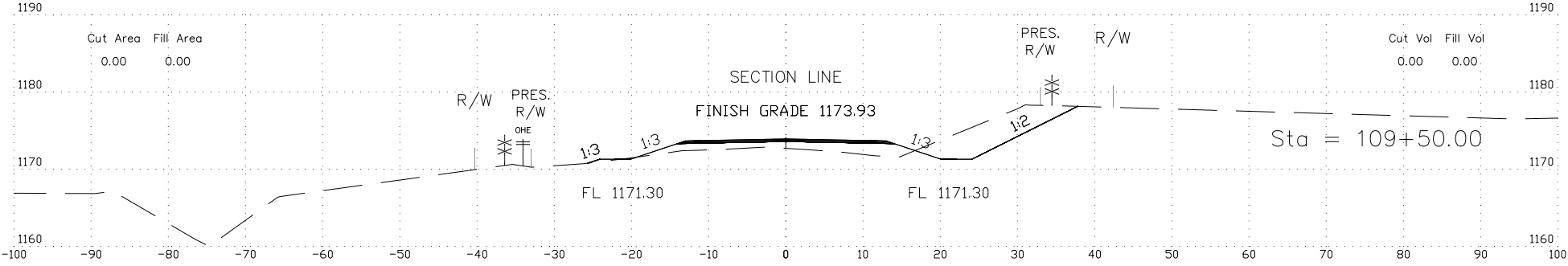
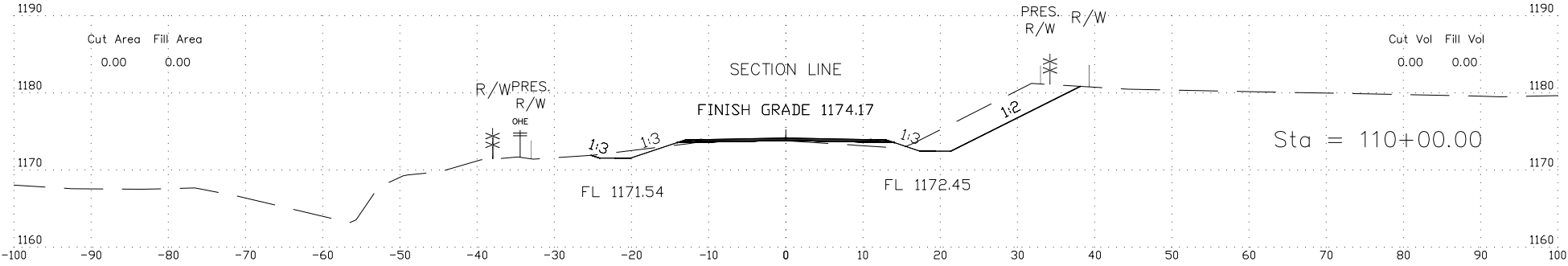
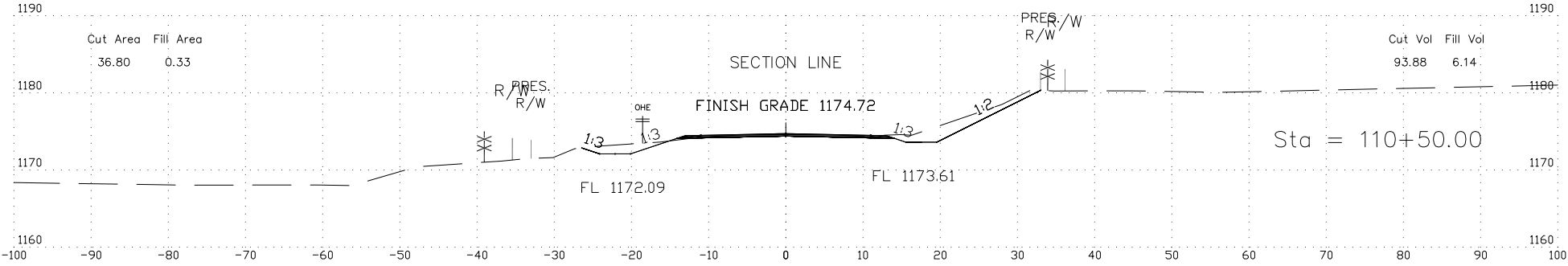


SCALE:  
1" = 10'

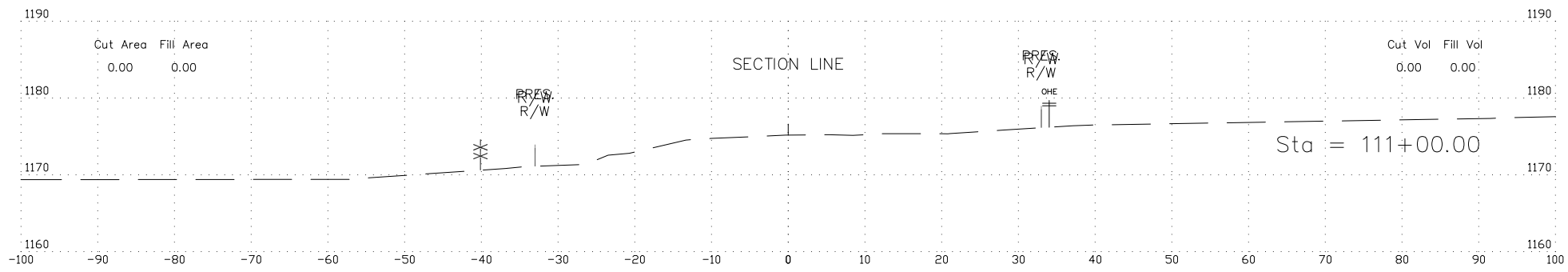


SCALE:  
1" = 10'

STA. 110+78.14  
END JP# 29874(04)



SCALE:  
1" = 10'



SCALE:  
1" = 10'