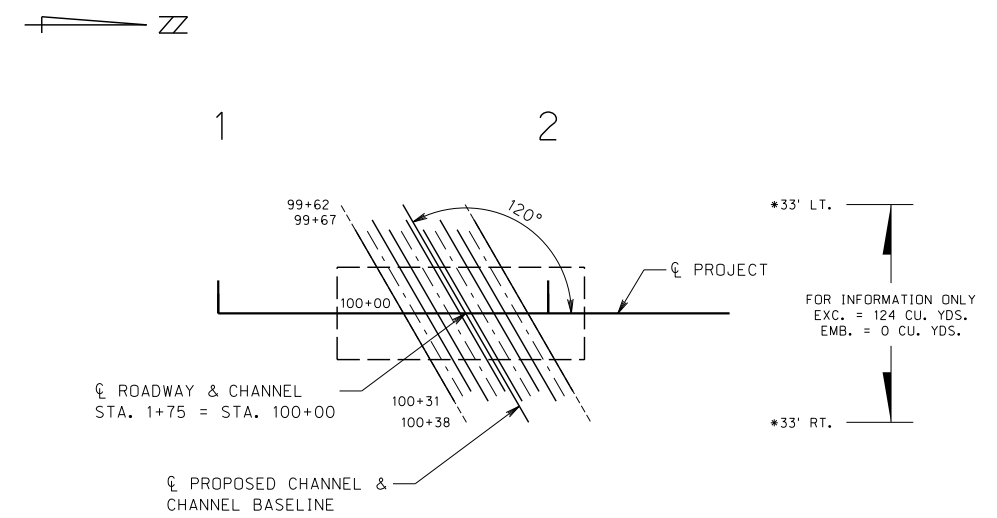
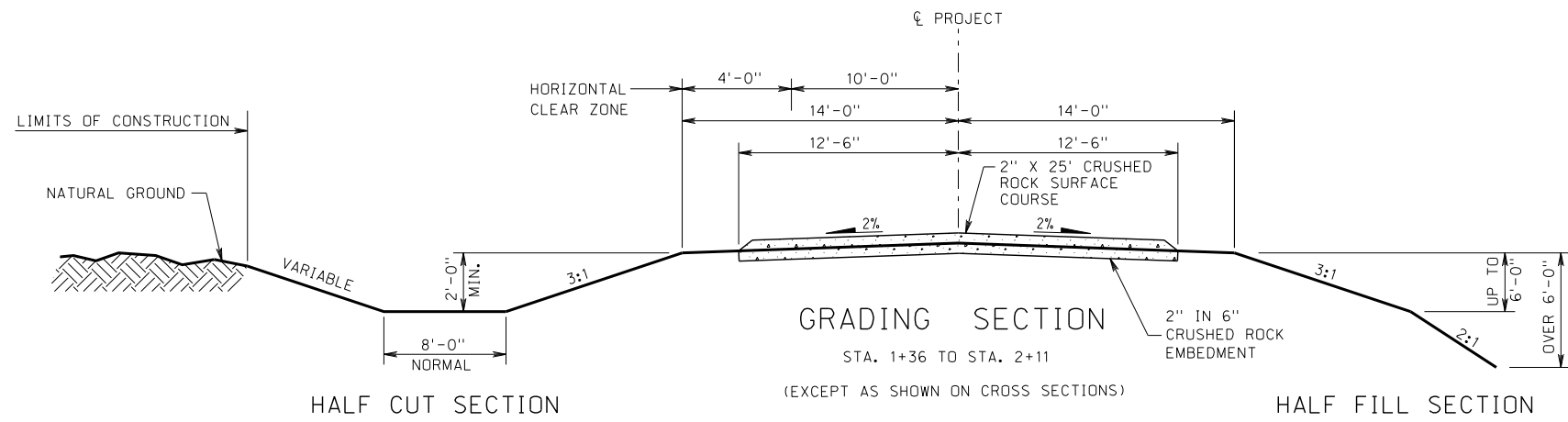


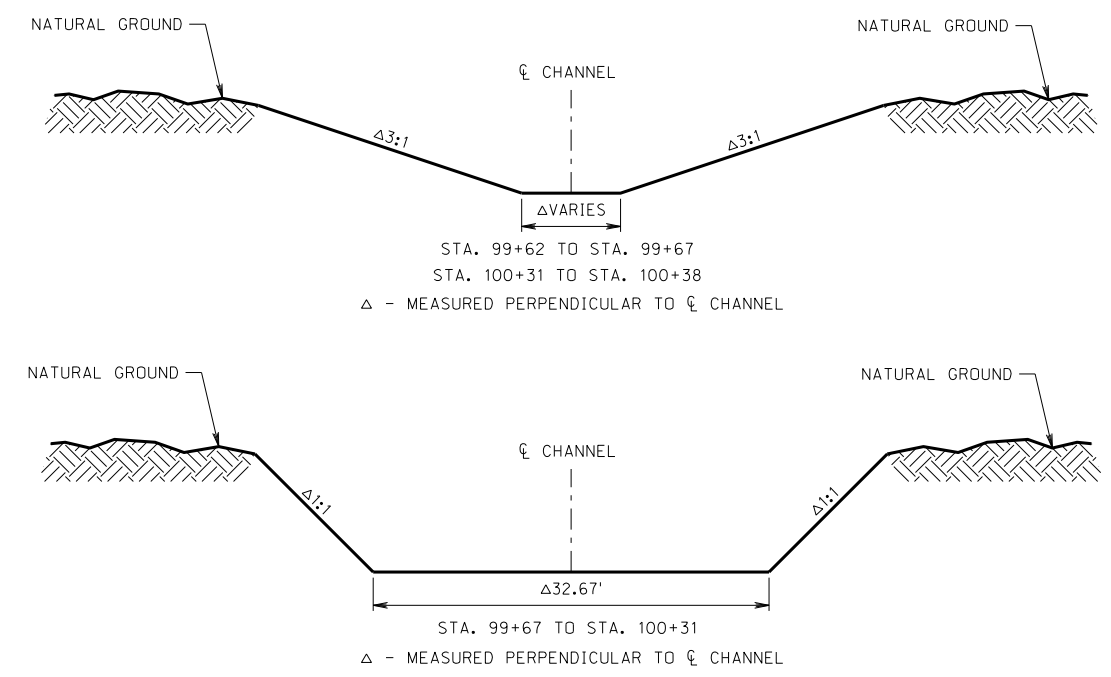


# TYPICAL CROSS SECTIONS



## QUANTITIES

ITEM	QUANTITY	UNIT
SITE PREPARATION	1.00	LS
EARTHWORK MEASURED IN EMBANKMENT	350.00	CY
CRUSHED ROCK SURFACE COURSE	31.00	TONS
CRUSHED ROCK EMBEDMENT	208.00	SY
WATER, APPLIED	2.00	M GAL
COVERCROP SEEDING	1.00	ACRES
SEEDING, TYPE A	1.00	ACRES
MULCH	2.00	TONS
TEMPORARY SILT FENCE	50.00	LF
SILT CHECK, TYPE WATTLE	180.00	LF
EROSION CONTROL, CLASS 1D	300.00	LF
60" ROUND EQUIVALENT CULVERT PIPE, TYPE 5	240.00	LF



TYPICAL CROSS SECTIONS  
 OF IMPROVEMENT

RICHARDSON C007404105P

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### EARTHWORK QUANTITIES

STATION TO	STATION	DESCRIPTION	EXCAVATION AVAILABLE (CU. YDS.)	EARTHWORK MEASURED IN EMBANKMENT (CU. YDS.)
1+36	2+11	ROADWAY	12	350
99+62	100+38	CHANNEL	124	0
TOTALS			136	350

GEOPAK ALIGNMENT INFORMATION		
ALIGNMENT	CHAIN	PROFILE
PROJECT	MAINLINE	PRO.MAINLINE
CHANNEL	CHANNEL	*

#### MAINLINE

Beginning chain MAINLINE description  
Feature: Mainline

Point MAINLINE1    N    103,519.24 E    2,864,112.02 Sta    1+00.00

Course from MAINLINE1 to MAINLINE2 N 4° 01' 49.69" W Dist 175.00

Point MAINLINE2    N    103,693.81 E    2,864,099.72 Sta    2+75.00

Ending chain MAINLINE description

#### CHANNEL

Beginning chain CHANNEL description

Point 30    N    103,572.73 E    2,864,075.17 Sta    99+61.89

Course from 30 to 31 N 55° 58' 10.31" E Dist 76.21

Point 31    N    103,615.38 E    2,864,138.33 Sta    100+38.11

Ending chain CHANNEL description

#### LEGEND

- G --- GAS LINE
- E --- ELECTRICAL SERVICE
- P --- POWER LINE
- OP --- OVERHEAD POWER LINE
- SAN --- SANITARY SEWER
- SS --- STORM SEWER
- T --- TELEPHONE LINE
- FO --- FIBER OPTIC TELE. LINE
- OT --- OVERHEAD TELEPHONE LINE
- TV --- CABLE TV LINE
- OTV --- OVERHEAD CABLE TV LINE
- W --- WATER LINE
- O --- FENCE - CHAIN LINK
- X --- FENCE - R.O.W. OR WIRE
- □ --- FENCE - WOOD
- --- FLOWLINE
- --- CENTER LINE DRIVE
- Ⓜ BENCH MARK
- ⊙ CENTER PIVOT
- ⊙ CONTROL POINT
- XXXXXXXXX DIKE
- ⊙ GAS METER
- ⊗ GAS VALVE
- ⊕ GRID TICK
- GUARDRAIL
- GUARD POST
- GUY POLE
- GUY WIRE
- ⊙ OR ⊗ LIGHT POLE
- Ⓜ MAILBOX
- ⊙ MANHOLE
- Ⓜ MARSH
- Ⓜ OIL WELL
- Ⓜ PHOTO CODE POINT
- Ⓜ POWER BOX
- Ⓜ POWER POLE
- Ⓜ POWER PULL BOX
- Ⓜ PROPANE TANK
- Ⓜ R.O.W. MARKER
- Ⓜ ADVANCED R.R. WARNING SIGN
- Ⓜ RAILROAD WARNING
- Ⓜ RAILROAD TRACKS
- Ⓜ RETAINING WALL
- Ⓜ SATELLITE DISH
- Ⓜ SIGN
- Ⓜ TRAFFIC SIGNAL
- Ⓜ TRAFFIC SIGNAL/ST. LIGHT
- Ⓜ TELEPHONE BOX
- Ⓜ TELE. FIBER OPTICS BOX
- Ⓜ TELEPHONE PULL BOX
- Ⓜ TELEPHONE POLE
- Ⓜ TELEVISION BOX
- Ⓜ TREE - CONIFEROUS
- Ⓜ TREE - DECIDUOUS
- Ⓜ TREE STUMP
- Ⓜ WATER HYDRANT
- Ⓜ WATER VALVE
- Ⓜ WATER METER
- Ⓜ WELL
- Ⓜ WINDMILL



THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR. NO EXCAVATION WILL BE PERMITTED IN THE AREA OF THE UNDERGROUND UTILITY FACILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES. THE EXCAVATION MUST BE ACCOMPLISHED WITH EXTREME CARE IN ORDER TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY.

UPON COMPLETION OF THE GRADING OPERATIONS PERMANENT SEEDING OF THE DISTURBED AREAS CREATED BY THE GRADING OPERATIONS AND PERMANENT SEEDING OF A 50' WIDE BUFFER STRIP ALONG EACH SIDE OF THE NEW CHANNEL WILL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE PROJECT MANAGER.

ALL SIGNING AND PAVEMENT MARKING WILL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

THE CONTRACTOR MAY CLOSE THE ROAD TO ALL BUT LOCAL TRAFFIC SUBJECT TO THE CONDITIONS PRESCRIBED IN THE 2017 STANDARD SPECIFICATIONS.

THE COUNTY SHALL PROVIDE ROUTING THROUGH TRAFFIC AROUND THE PROJECT IF DEEMED NECESSARY.

UNSUITABLE MATERIAL ENCOUNTERED DURING CONSTRUCTION SHALL BE EXCAVATED AND REPLACED WITH CRUSHED ROCK OR CRUSHED CONCRETE AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL BE REQUIRED TO FURNISH BORROW ON THIS PROJECT.

DATUM INFORMATION	
HORIZONTAL	VERTICAL
NAD 83 (1995)	NAVD 88
D.A.F. = 1.0000627	

COMPACTION REQUIREMENTS		
ROADWAY EMBANKMENT	CLASS II	
EMBANKMENT FOR INTERSECTING PUBLIC ROADS	CLASS II	
PRIVATE DRIVES	CLASS I	
(SEE SEC. 205 IN THE 2017 SPECIFICATIONS)		

CULVERT PIPE LEGEND		
TYPE	DESCRIPTION	
1	RCSP	Reinforced Concrete Sewer Pipe
2	RCP	Reinforced Concrete Pipe
3	GCCMP	Galvanized (zinc) Coated Corrugated Metal Pipe
4	ACCMP	Aluminum Coated Corrugated Metal Pipe
5	PCCMP	Polymer Coated Corrugated Metal Pipe
6	HDPE-CI	High Density Polyethylene (corrugated Interior)
7	HDPE-SI	High Density Polyethylene (smooth Interior)
8	PVC	Polyvinyl Chloride Pipe

BUILD SILT CHECK, TYPE WATTLE, SPECIAL PLAN 1C							
STATION TO	STATION	SIDE	TYPE	SPACING	LIN. FT. EACH	TOTAL LIN. FT.	
1+36	2+11	LT.	2-HIGH	*	*	90	
1+36	2+11	RT.	2-HIGH	*	*	90	

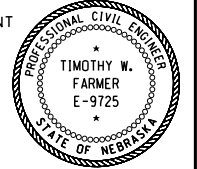
BUILD EROSION CONTROL, CLASS 1D, PLAN 501-R7						
STATION TO	STATION	SIDE	DESCRIPTION	WIDTH	SO. YDS.	
1+36	2+11	LT.	ALL DISTURBED AREA	VARIES	160	
1+36	2+11	RT.	ALL DISTURBED AREA	VARIES	140	

CONTROL POINTS				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	103518.02	2864112.54	898.21	P.O.T. 5/8" REBAR
101	103787.41	2864090.61	891.33	P.O.T. 5/8" REBAR

GENERAL INFORMATION

RICHARDSON C007404105P

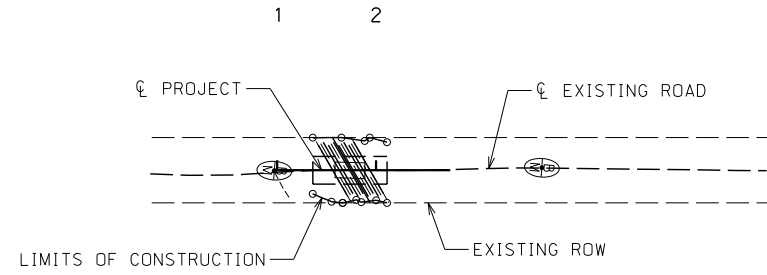
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SEC. 21-T1N-R16E



STA. 1+75  
EXISTING SINGLE SPAN (1-28') STEEL  
MULTIBEAM BRIDGE W/ TIMBER DECK.  
16'-0" CLEAR ROADWAY. REMOVE.



STA. 1+75  
DA = 2.15 SQ.MI.,  $Q_{100} = 4,800 \text{ cfs.}$ ,  $HW_{100} = 2.84'$   
BUILD QUAD 60" x 60" ROUND EQUIVALENT  
CULVERT PIPE TYPE 5 ON 30° SKEW (LHB).  
PLAN NO. 411-R2. FILL = 1.9'.

TIES:  
P.O.T.  
CP 100, 5/8" REBAR  
N 77.60'  $\phi$  BRIDGE  
W 25.40' NAIL IN 18" TREE  
E 2.00'  $\phi$  NORTH/SOUTH ROAD  
  
P.O.T.  
CP 101, 5/8" REBAR  
 $\phi$  NORTH/SOUTH ROAD  
S 193.00'  $\phi$  BRIDGE

ALL BANDS FOR CULVERT PIPE SHALL BE 2'-0" WIDE (MINIMUM) UNLESS APPROVED BY THE ENGINEER.

SEC. 21-T1N-R16E

ELEV.	B.M. #1 P.O.T. 5/8" REBAR										B.M. #2 P.O.T. 5/8" REBAR										ELEV.
	ELEV. = 898.21										ELEV. = 891.33										
930																					930
920	STA. 1+36 BEGIN CONSTRUCTION										STA. 2+11 END CONSTRUCTION										920
	BEGIN 2" X 25' CRUSHED ROCK SURFACE COURSE										END 2" X 25' CRUSHED ROCK SURFACE COURSE										
910																					910
900	STA: 1+36.00 ELEV: 897.29										STA: 2+11.00 ELEV: 894.12										900
890																					890
880																					880
870																					870
860																					860
Datum Elev. = 860.00 ft. Above Sea Level U.S.C. & G.S.																					

PLAN	SURVEYED	BY	DATE
NOTEBOOK	ALIGNED		
NO.	RIGHT OF WAY CHECKED		

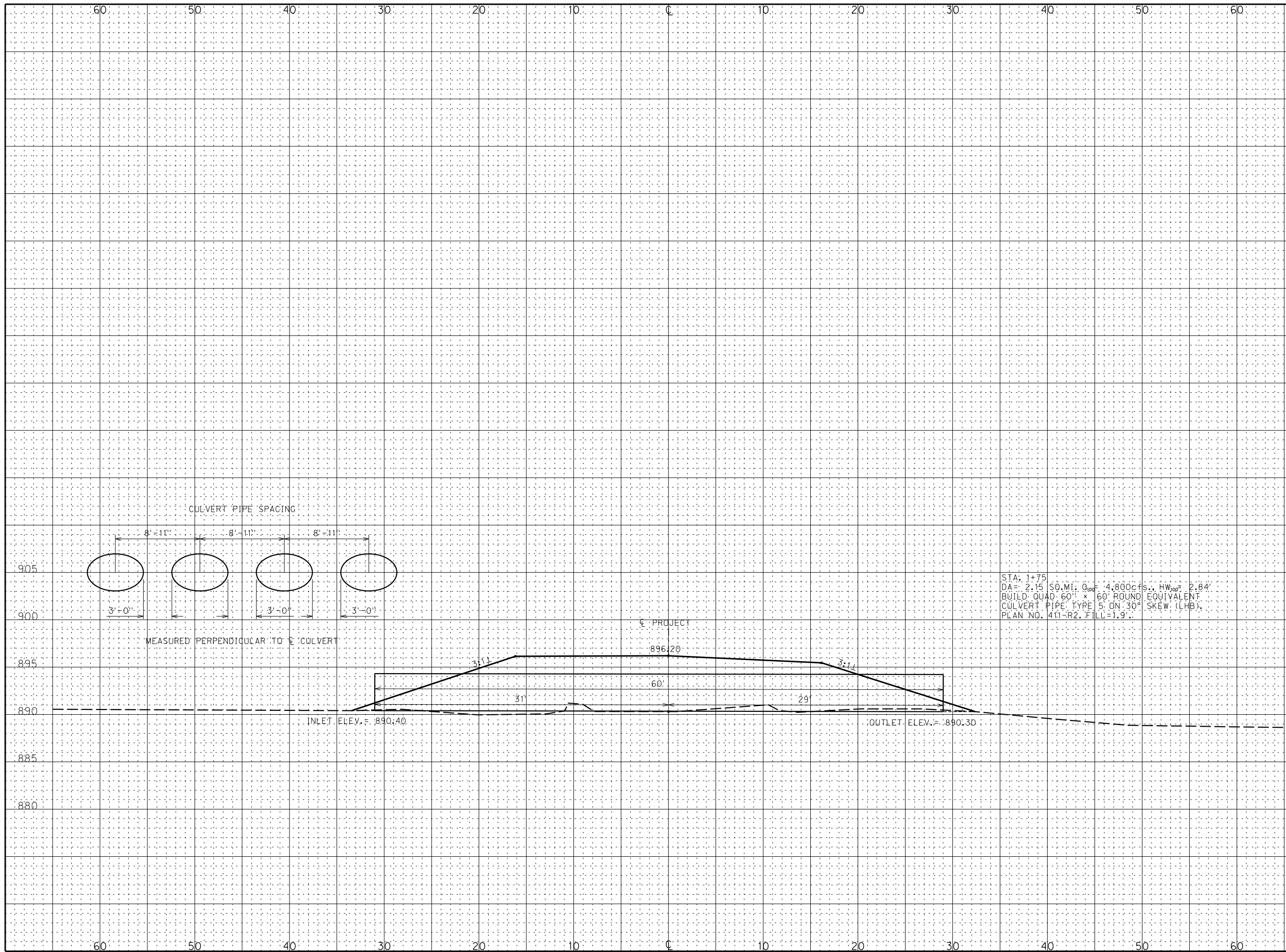
PROFILE	SURVEYED	BY	DATE
NOTEBOOK	GRADES CHECKED		
NO.	B.M.'S NOTED		
	STRUCTURE NOTATIONS OK'D		

PLAN AND PROFILE

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PROJECT NO. C007404105P	SHEET NO. <b>4</b>
C.N.	
HORIZONTAL SCALE: 1"=5'	
VERTICAL SCALE: 1"=5'	

DRAINAGE STRUCTURE  
CROSS SECTIONS

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