

LARIMER COUNTY, COLORADO

DIVISION OF PUBLIC WORKS

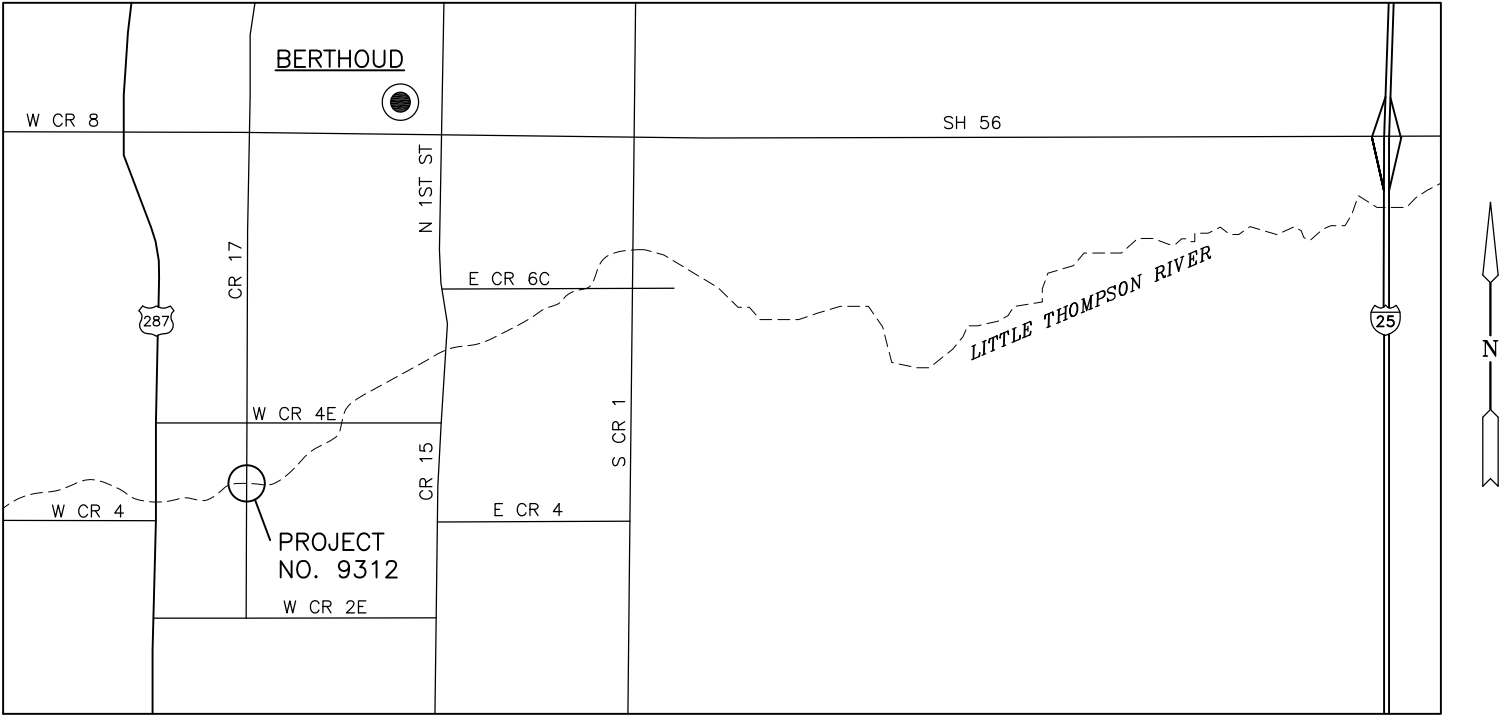
PUBLIC WORKS PROJECT NO. 9312

REPAIR OF BRIDGE NO. 17-0.7-2E-A

OVER LITTLE THOMPSON RIVER

INDEX OF SHEETS



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CR 17 VICINITY MAP

VERTICAL DATUM = NAVD 88
ORIGINAL 1986 DESIGN DATUM = NGVD 29. DATUM SHIFT APPLIED FOR THIS PROJECT (WHEN NEEDED): NAVD 88 MINUS NGVD 29 = 2.96 FEET



COMPUTER INFORMATION		REVISIONS			ENGINEERING DEPARTMENT 200 WEST OAK, SUITE 3000 POST OFFICE BOX 1190 FORT COLLINS, COLORADO 80522-1190 (970)498-5700 (970)498-7986 FAX	AS CONSTRUCTED	CONTRACT INFORMATION		BRIDGE NO. 17-0.7-2E-A PROJECT NO. 9312	
CREATION DATE:	11/03/2013	(R-1)				NO REVISIONS:	CONTRACTOR:	CONST. MANAGER:		SHEET NO. 01
MODIFICATION DATE:	2/27/2014	(R-2)					PROJ. START: ___/___/___	PROJ. COMPLETE: ___/___/___		
FILE LOCATION:	Y:\00150796.00\ENG_DOCS\DWGS	(R-3)				REVISED:	PROJECT ENGINEER:	___/___/___		
FILE NAME:	TITLESHT.dwg	(R-4)				VOID:	COUNTY ENGINEER:	___/___/___		
		(R-5)								

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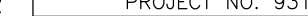
COLORADO
DEPARTMENT OF TRANSPORTATION
M&S STANDARDS PLANS LIST
July 04, 2012

Revised on September 16, 2013

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

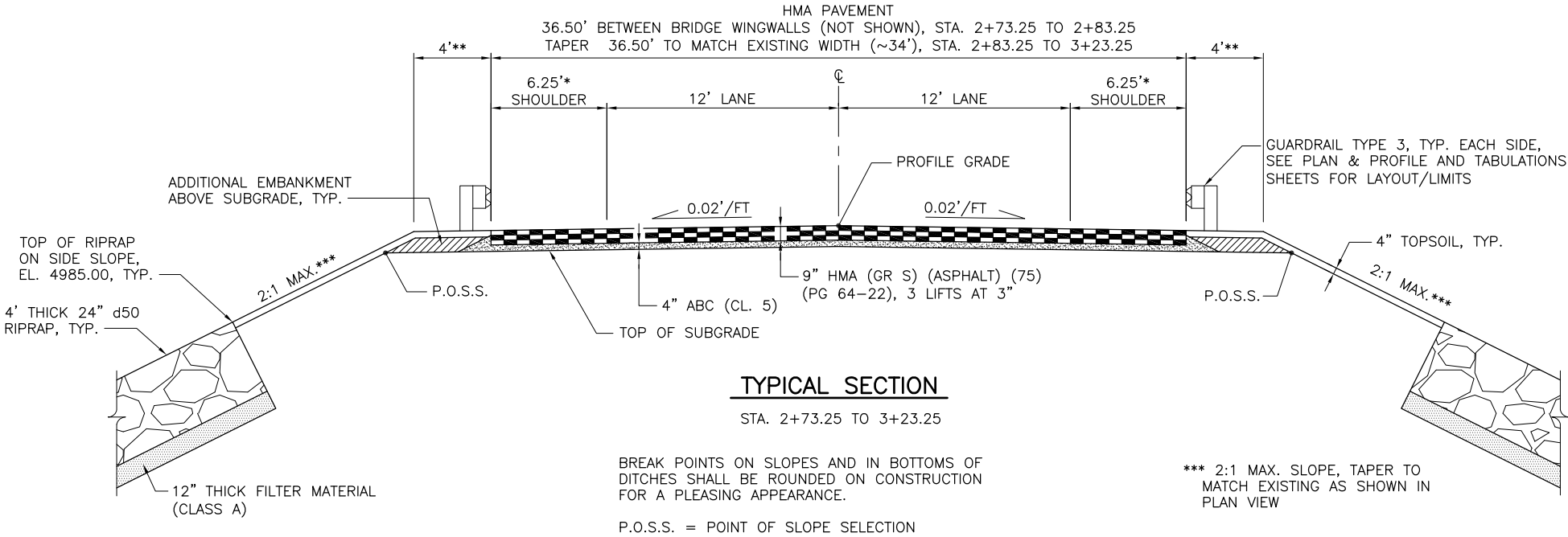
NEW OR REVISED STANDARD PLAN SHEETS APPLICABLE TO THIS PROJECT, INDICATED BY A MARKED BOX ■, WILL BE ATTACHED TO THE PLANS.

PLAN NUMBER	NEW OR REVISED	S STANDARD TITLE	PAGE NUMBER
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S-614-50	<input type="checkbox"/>	STATIC SIGN MONOTUBE STRUCTURES (12 SHEETS) (REVISED ON NOVEMBER 28, 2012)	208-219
S-614-60	<input type="checkbox"/>	DYNAMIC SIGN MONOTUBE STRUCTURES (14 SHEETS) (REVISED ON NOVEMBER 28, 2012)	220-233
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CREATION DATE:	11/3/13	<div><div>R-1</div></div>							NO REVISIONS:		STANDARD PLANS LIST				SHEET NO.	02		
MODIFICATION DATE:	2/27/14	<div><div>R-2</div></div>																
FILE LOCATION:	Y:\00150796.00\ENG_DOCS\DWGS	<div><div>R-3</div></div>							REVISED:		Designer: MJM		Structure				BR. NO. 17-0.7-2E-A	
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* TAPER SHOULDER WIDTH FROM 6.25' BETWEEN WINGWALLS TO MATCH EXISTING AT END OF PROJECT.
** 4' TYPICAL, EXCEPT TAPER TO MATCH EXISTING WIDTH AS SHOWN IN PLAN VIEW.



TYPICAL SECTION

STA. 2+73.25 TO 3+23.25

BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE.

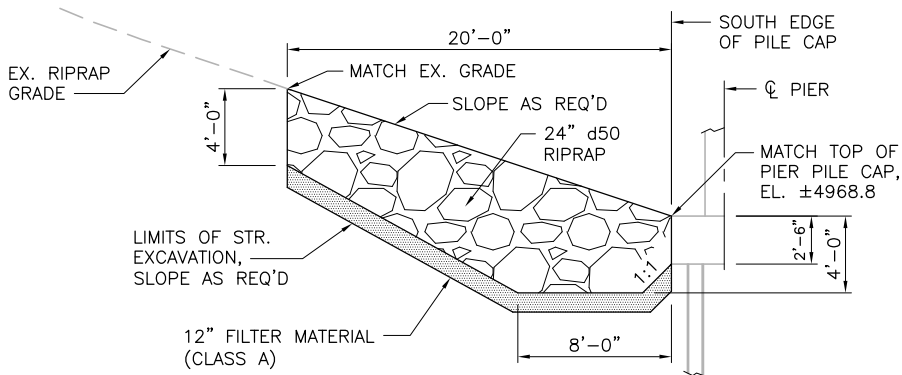
P.O.S.S. = POINT OF SLOPE SELECTION

UTILITY CONTACTS

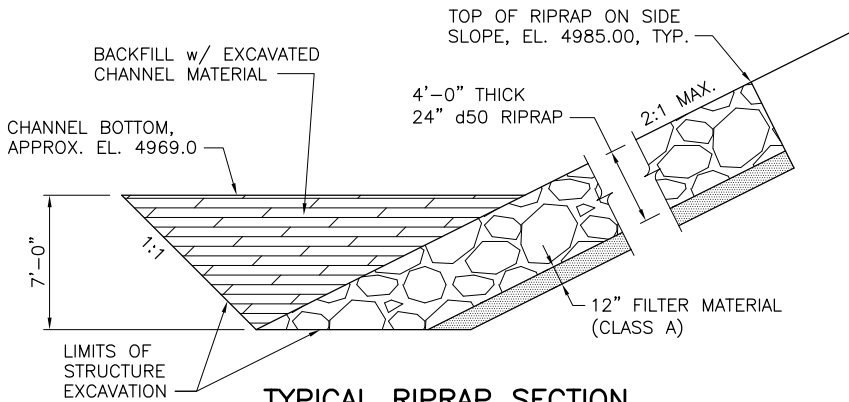
UTILITY COMPANY	SERVICE	CONTACT	PHONE
CENTURY LINK	TELEPHONE	JASON GARCIA	970-392-4838
XCEL ENERGY	GAS	HOWARD KENNEY	970-225-7865
POUDRE VALLEY REA	OVERHEAD ELECTRIC	MATT ORGAN	970-282-6434
LITTLE THOMPSON WATER DISTRICT	WATER	MIKE COOK	970-532-2096

CONSTRUCTION STAGING AREA / CHANNEL ACCESS

STAGING AREA AND ACCESS IS WITHIN RIGHT OF WAY AND TEMPORARY EASEMENTS AS SHOWN ON SHEET 6. REMOVAL OF GUARDRAIL WILL BE REQUIRED FOR ACCESS.

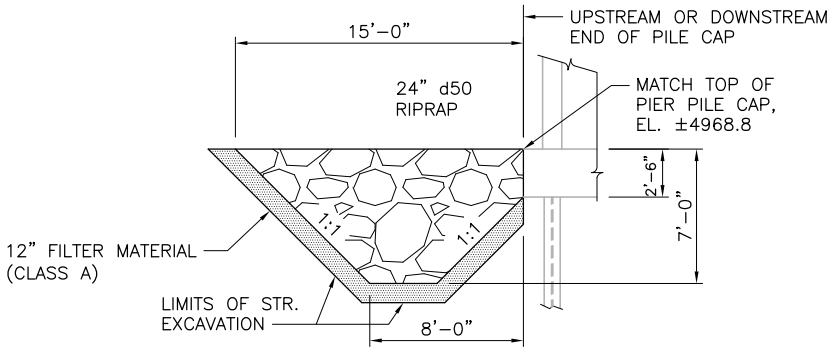


RIPRAP ON SOUTH SIDE OF PIER



TYPICAL RIPRAP SECTION

REFER TO PROFILE, GRADING PLAN, AND GABION DETAILS ON SHEETS 5, 6 AND 7, RESPECTIVELY, FOR ADDITIONAL RIPRAP DETAILS.



RIPRAP AT ENDS OF PIER

TYPICAL AT UPSTREAM AND DOWNSTREAM ENDS OF PIER.

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2011 EDITION AND THE PROJECT SPECIAL PROVISIONS.

FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT STRUCTURE MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:

HOT MIX ASPHALT PAVEMENT (GRADING S) @ 112 LBS PER SQ. YD./INCH
AGGREGATE BASE COURSE @ 138 LBS PER CU. FT.

A TACK COAT OF DILUTED EMULSIFIED ASPHALT (SLOW SETTING) IS REQUIRED PRIOR TO THE PLACEMENT OF SUBSEQUENT LIFTS OF HOT MIX ASPHALT PAVEMENT. PRIOR TO PLACEMENT OF THE TACK COAT, THE CONTRACTOR SHALL CLEAN THE SURFACE THAT WILL RECEIVE TACK COAT AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT AND CLEANING SHALL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF HOT MIX ASPHALT PAVEMENT.

EMULSIFIED ASPHALT (SLOW SETTING) SHALL BE DILUTED USING 1 PART EMULSIFIED ASPHALT (SLOW SETTING) AND 1 PART WATER. RATE OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

THE FOLLOWING SHALL BE FURNISHED WITH EACH HOT MIX ASPHALT PAVER:

1. A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH
2. SHORT SKI OR MATCHING SHOE
3. LOW LIFT LOAD/TRANSFER DEVICE (TO TRANSFER ASPHALT MIX FROM WINDROW TO PAVING HOPPER - TOP LAYER ONLY)

ANY LAYER OF HOT MIX ASPHALT PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE THE SUCCEEDING LAYER IS PLACED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

HOT MIX ASPHALT PAVEMENT FOR ROAD AND DRIVEWAY APPROACHES DESIGNATED BY THE ENGINEER SHALL BE HMA (GRADING S)(ASPHALT)(75)(PG64-22).

ROAD APPROACHES SHALL BE PAVED TO THE THICKNESS AND LIMITS SHOWN ON THE PLANS. AT DRIVEWAY, FIELD AND DITCH ROAD APPROACHES THE TYPICAL SECTION PAVEMENT THICKNESS SHALL BE EXTENDED 4 FEET OUT FROM THE EDGE OF SHOULDER. APPROACH RADII SHALL BE 20' OR AS SHOWN ON THE PLANS. ABC SHALL BE PLACED FROM THE HOT MIX ASPHALT TO THE LIMITS SHOWN ON THE PLANS OR AS DIRECTED.

CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS TRAFFIC AT ALL APPROACHES AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:

FULL DEPTH OF ALL EMBANKMENTS.
BASES OF CUTS AND FILLS: 0.5 FOOT.

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.

TYPE OF COMPACTION FOR EMBANKMENT ON THIS PROJECT WILL BE AASHTO T99 OR T180 AS DIRECTED BY THE ENGINEER.

WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED TO REDUCE MIGRATION OF AIR BORNE SOIL PARTICLES. CONTRACTOR SHALL PROVIDE WATER AS DUST PALLIATIVE AS DIRECTED BY THE ENGINEER. WATER AS DUST PALLIATIVE WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

CONSTRUCTION SURVEYING, SEEDING, MULCHING/SOIL RETENTION COVERING, PAVEMENT MARKING, REMOVAL OF DELINEATORS, REMOVAL OF SIGNS AND PERMANENT SIGN INSTALLATION WILL BE DONE BY COUNTY FORCES IN COORDINATION WITH THE CONTRACT WORK.

ALL LANDSCAPING WITHIN THE PROJECT AREA THAT IS DAMAGED, NOT SPECIFIED FOR REMOVAL, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

UTILITY INFORMATION AS SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR'S ATTENTION IS DIRECTED TO PARAGRAPH 105.06 OF THE STANDARD SPECIFICATIONS CONCERNING UTILITIES. THE CONTRACTOR SHALL CALL 1-800-922-1987 FOR UTILITY LOCATIONS AT LEAST 3 WORKING DAYS PRIOR TO ANY DIGGING, NOT INCLUDING THE DAY OF ACTUAL CONTACT.

THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION PROJECT. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY CALLED TO THE EXISTING GAS, TELECOMMUNICATION, AND WATER LINES THAT ARE WITHIN THE LIMITS OF THE EXCAVATION, BACKFILLING, AND OTHER CONSTRUCTION ACTIVITIES.

REQUIRED UTILITY RELOCATIONS ARE NOT SHOWN ON THESE PLANS. ALL UTILITY RELOCATION WORK SHALL BE PERFORMED BY EACH RESPECTIVE UTILITY COMPANY AND/OR ITS CONTRACTOR IN COORDINATION WITH THE CONTRACT WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, AT HIS EXPENSE, ANY PROPERTY PINS OR SURVEY MONUMENTS REMOVED OR DESTROYED DURING CONSTRUCTION, AS PER SECTION 629 OF THE SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND STABILITY OF THE EXISTING BRIDGE DURING CONSTRUCTION.

COMPUTER INFORMATION		REVISIONS			
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FILE NAME:	TYPSECT.DWG	(R-4)			
		(R-5)			



ENGINEERING DEPARTMENT

200 WEST OAK, SUITE 3000
POST OFFICE BOX 1190
FORT COLLINS, COLORADO 80522-1190
(970)498-5700
(970)498-7986 FAX

AS CONSTRUCTED
NO REVISIONS:
REVISED:
VOID:

CR 17 OVER LITTLE THOMPSON RIVER

TYPICAL SECTION AND GENERAL NOTES

Designer:	MJM	Structure	BR. NO. 17-0.7-2E-A
Detailer:	RJG	Numbers	

PROJECT NO. 9312



SHEET NO. 03

SUMMARY OF APPROXIMATE QUANTITIES

[illegible]



SUMMARY OF EARTHWORK

PAY ITEMS		PROJECT TOTALS	
		PLAN	
		<u>CU. YD.</u>	
BORROW (CIP) (R<40)	(SEE NOTES 3 & 4)	114	
BORROW (CIP) (R>=40)	(SEE NOTES 3 & 4)	693	
STRUCTURE EXCAVATION (CIP)	(SEE NOTE 2)	1689	
STRUCTURE BACKFILL (SPECIAL)	(SEE NOTE 3)	216	
TOPSOIL	(SEE NOTE 3)	20	

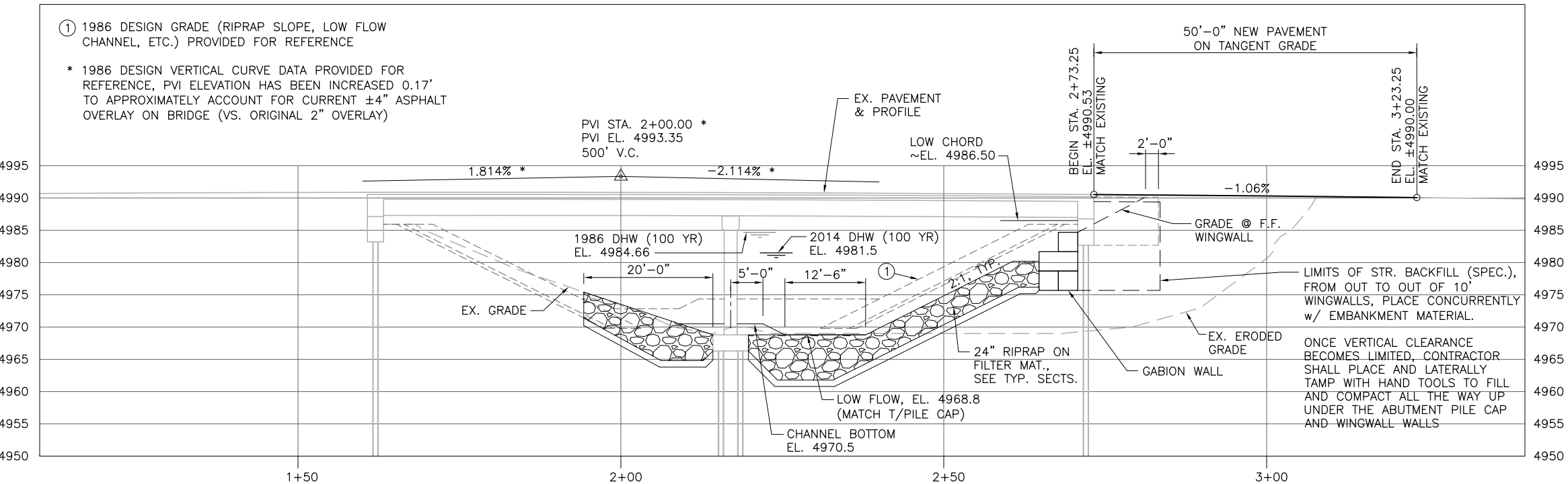
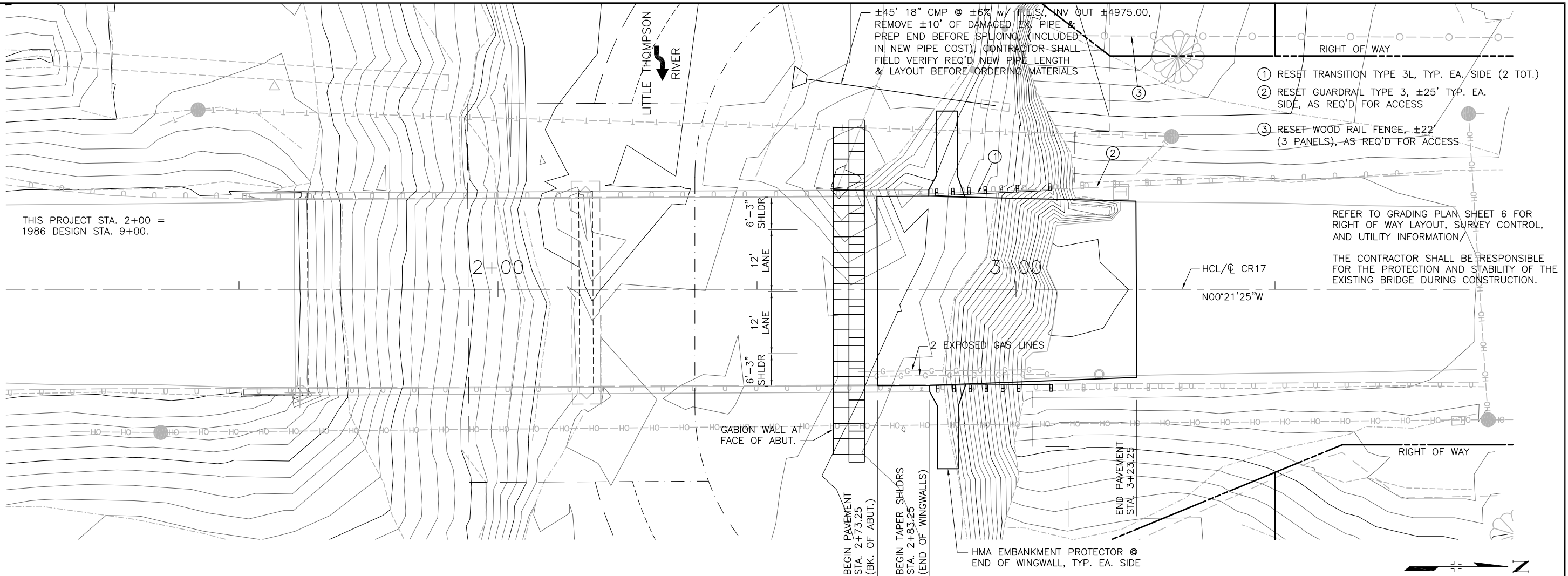
FOR INFORMATION ONLY		
<u>EMBANKMENT</u> R>=40 MATERIAL: ROADWAY R<40 MATERIAL: ROADWAY RIPRAP TOE COVER N.W. BANK OVER END OF RIPRAP N.E. BANK OVER END OF RIPRAP TOTAL:	<u>CU. YD.</u> 693 961 439 90 <u>78</u> 1568	
<u>UNCLASSIFIED EXCAVATION</u>	<u>CU. YD.</u> 0	
<u>EARTHWORK BALANCE</u> EMBANKMENT (R<40) x FACTOR (1.15) STRUCTURE EXCAVATION (CIP) TOTAL EMBANKMENT (R<40) FROM CONTRACTOR'S SOURCE:	<u>CU. YD.</u> 1803 <u>(1689)</u> 114	

EARTHWORK NOTES:

1. THE VOLUME OF EXISTING ASPHALT MAT TO BE REMOVED IS SEPARATE AND NOT INCLUDED IN THE UNCLASSIFIED EXCAVATION QUANTITY. REMOVED ASPHALT MAT MATERIAL SHALL BE BROKEN UP AND PLACED IN THE ROADWAY EMBANKMENT IN ACCORDANCE WITH SECTION 203.
2. EXCESS EXCAVATED CHANNEL MATERIAL, (STRUCTURE EXCAVATION), FROM THE INSTALLATION OF THE RIPRAP MAY BE PREPARED, PLACED, AND COMPACTED INTO THE EMBANKMENT FILL EITHER UPSTREAM OR DOWNSTREAM ALONG THE CHANNEL BANKS AS DIRECTED BY THE ENGINEER.
3. EMBANKMENT MATERIAL ($R \geq 40$ AND $R < 40$), STRUCTURE BACKFILL (SPECIAL), AND TOPSOIL SHALL BE PROVIDED FROM CONTRACTOR'S SOURCE.
4. EMBANKMENT MATERIAL PLACED 20' EACH SIDE OF CENTERLINE BRIDGE SHALL HAVE AN R-VALUE EQUAL TO OR GREATER THAN 40. MATERIAL OUTSIDE OF 20' FROM CENTERLINE BRIDGE SHALL BE EXCAVATED CHANNEL MATERIAL, (STRUCTURE EXCAVATION), ALONG WITH IMPORTED MATERIAL AS NEEDED TO COMPLETE THE WORK.

COMPUTER INFORMATION		REVISIONS				 <div>LARIMER COUNTY</div> <div>ENGINEERING DEPARTMENT</div> <div>200 WEST OAK, SUITE 3000 POST OFFICE BOX 1190 FORT COLLINS, COLORADO 80522-1190 (970)498-5700 (970)498-7986 FAX</div>	AS CONSTRUCTED		CR 17 OVER LITTLE THOMPSON RIVER		PROJECT NO. 9312	
CREATION DATE:	11/3/13	<div>R-1</div>					NO REVISIONS:	SUMMARY OF APPROXIMATE QUANTITIES		 <div>benesch</div> <div>engineers · scientists · planners</div>	SHEET NO.	04
MODIFICATION DATE:	2/27/14	<div>R-2</div>										
FILE LOCATION:	Y:\00150796.00\ENG_DOCS\DWGS	<div>R-3</div>										
FILE NAME:	SOQ.DWG	<div>R-4</div>										
		<div>R-5</div>				REVISED:	Designer:	MJM	Structure	BR. NO. 17-0.7-2E-A		
						VOID:	Detailer:	RJG	Numbers			

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(R-3)				
(R-4)				
(R-5)				



ENGINEERING DEPARTMENT
200 WEST OAK, SUITE 3000
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CR 17 OVER LITTLE THOMPSON RIVER			
PLAN AND PROFILE			
Designer:	MJM	Structure	BR. NO. 17-0.7-2E-A
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PROJECT NO. 9312

SHEET NO. 05

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EXISTING UTILITIES

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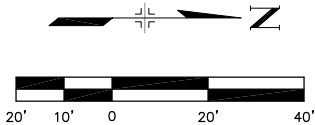
GAS LINE
- W--W--

WATER LINE
- OH--

OVERHEAD ELECTRIC LINE
- T--T--

TELECOMMUNICATIONS LINE
(BURIED OR OVERHEAD)

THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION PROJECT. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY CALLED TO THE EXISTING GAS, TELECOMMUNICATION, AND WATER LINES THAT ARE WITHIN THE LIMITS OF THE EXCAVATION, BACKFILLING, AND OTHER CONSTRUCTION ACTIVITIES.



RIVER GLEN
HOMEOWNERS
ASSOCIATION

FLOYD & PATRICIA BRETT

LAWRENCE & KENNETH LEMPKA

HELEN HANDLEY

THIS PROJECT STA. 2+00 = 1986 DESIGN STA. 9+00.

SURVEY CONTROL POINTS					
CP	STA./OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
536871073	1+61.78, 19.98' RT	1344548.26	3113528.52	4991.09	BENCHMARK MONUMENT ON BRIDGE CURB
536871017	3+16.07, 16.39' RT	1344702.52	3113523.97	4989.88	NAIL IN ASPHALT PAVEMENT
96	1+56.85, 39.05' LT	1344542.95	3113469.52	4986.40	TRAVERSE MARKER
536870912	3+08.75, 122.79' LT	1344694.33	3113384.84	4979.49	TRAVERSE MARKER
536871041	1+76.01, 104.66' RT	1344563.01	3113613.11	4978.46	TRAVERSE MARKER
99	2+81.64, 208.28' RT	1344670.14	3113716.06	4981.23	TRAVERSE MARKER

COMPUTER INFORMATION	
CREATION DATE:	11/3/13
MODIFICATION DATE:	2/27/14
FILE LOCATION:	Y:\00150796.00\ENG_DOCS\DWGS
FILE NAME:	PLANPROF.DWG


REVISIONS				
(R-1)				
(R-2)				
(R-3)				
(R-4)				
(R-5)				

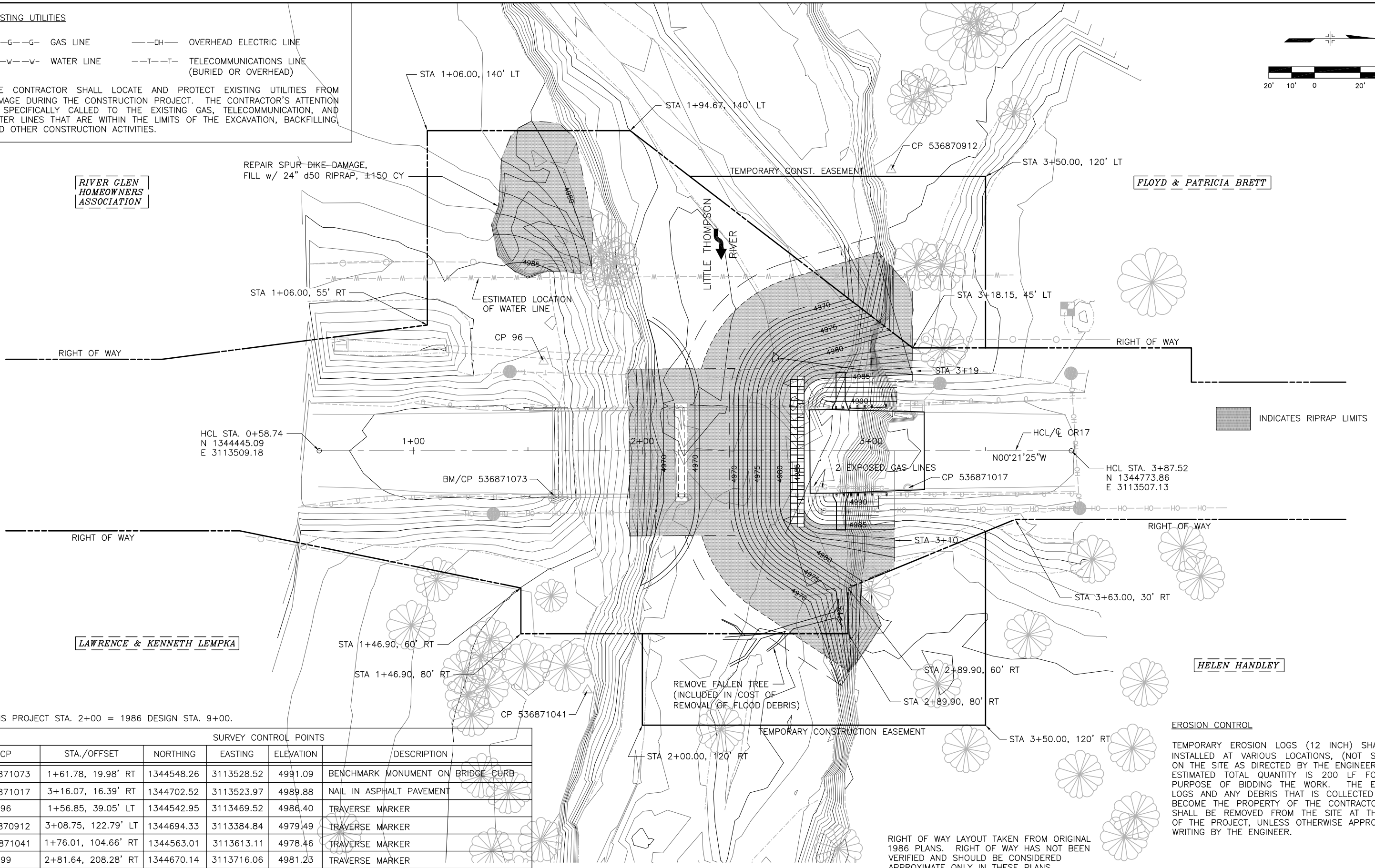


ENGINEERING DEPARTMENT
200 WEST OAK, SUITE 3000
POST OFFICE BOX 1190
FORT COLLINS, COLORADO 80522-1190
(970)498-5700
(970)498-7986 FAX

AS CONSTRUCTED
NO REVISIONS:
REVISED:
VOID:

CR 17 OVER LITTLE THOMPSON RIVER			
GRADING PLAN			
Designer:	MJM	Structure	BR. NO. 17-0.7-2E-A
Detailer:	RJG	Numbers	

PROJECT NO. 9312

SHEET NO. 06

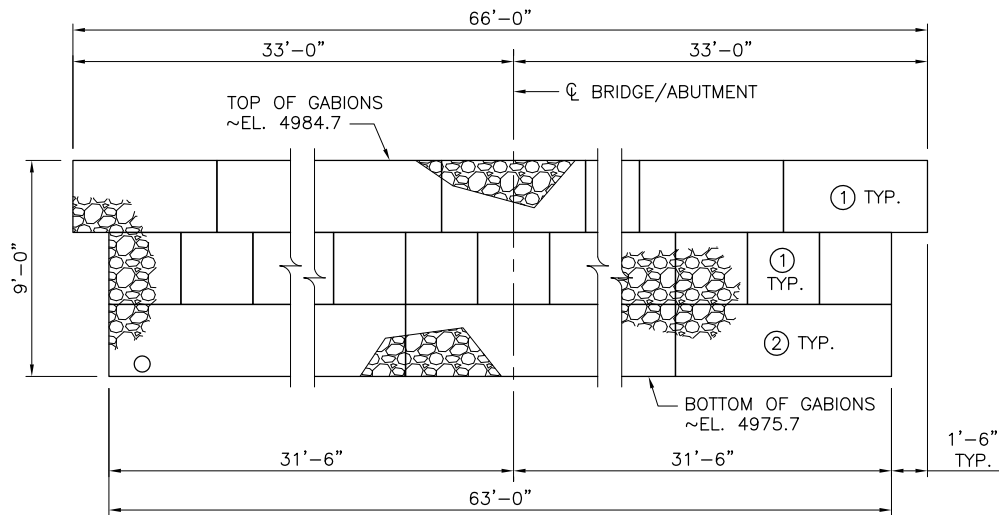


RIGHT OF WAY LAYOUT TAKEN FROM ORIGINAL 1986 PLANS. RIGHT OF WAY HAS NOT BEEN VERIFIED AND SHOULD BE CONSIDERED APPROXIMATE ONLY IN THESE PLANS.

EROSION CONTROL

TEMPORARY EROSION LOGS (12 INCH) SHALL BE INSTALLED AT VARIOUS LOCATIONS, (NOT SHOWN), ON THE SITE AS DIRECTED BY THE ENGINEER. THE ESTIMATED TOTAL QUANTITY IS 200 LF FOR THE PURPOSE OF BIDDING THE WORK. THE EROSION LOGS AND ANY DEBRIS THAT IS COLLECTED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AT THE END OF THE PROJECT, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER.

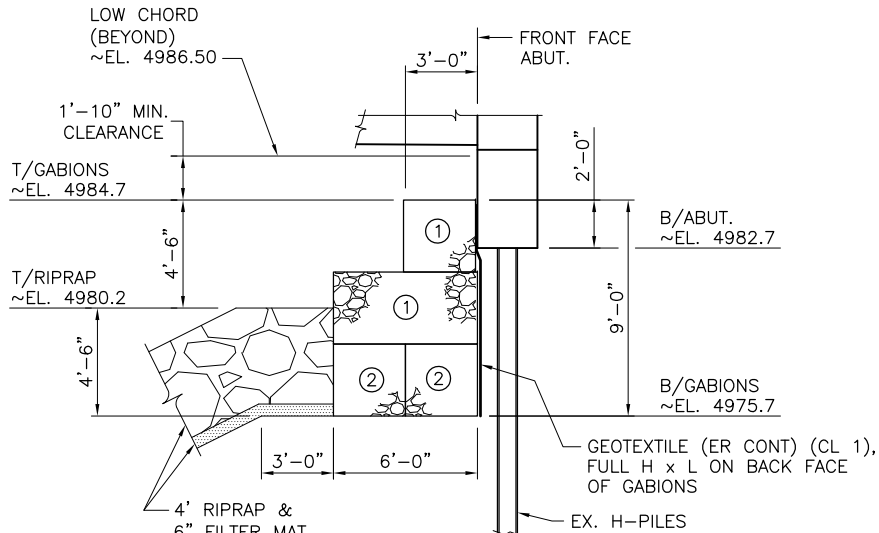
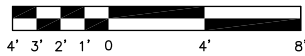
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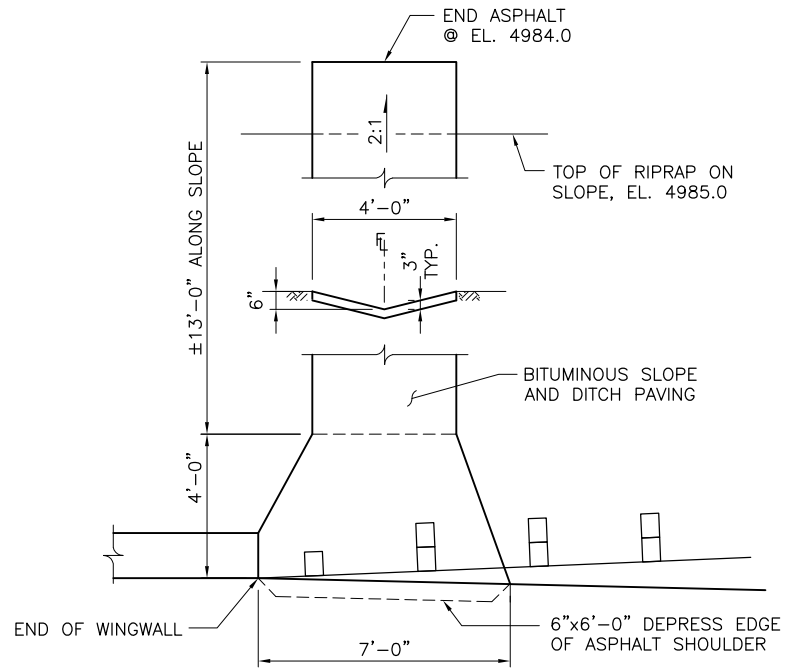
ELEVATION

- ① 3'x3'x6' BASKETS
② 3'x3'x9' BASKETS

GABION DETAILS



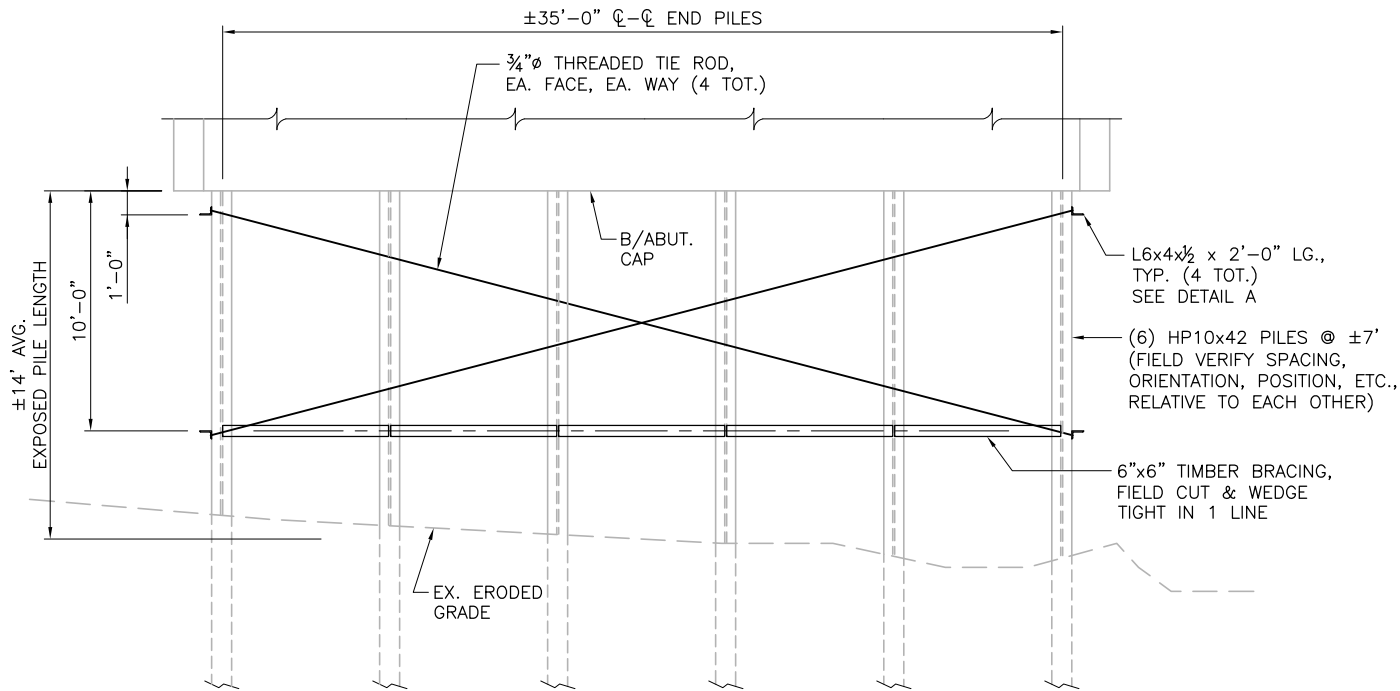
TYPICAL SECTION



HMA EMBANKMENT PROTECTOR



ALL WORK NECESSARY TO CONSTRUCT HMA EMBANKMENT PROTECTOR WILL BE PAID FOR UNDER ITEM 507, BITUMINOUS SLOPE AND DITCH PAVING.

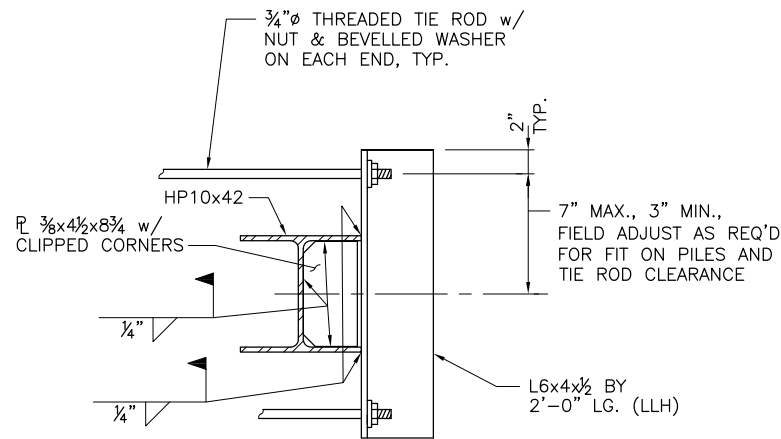


ABUTMENT PILE BRACING DETAILS

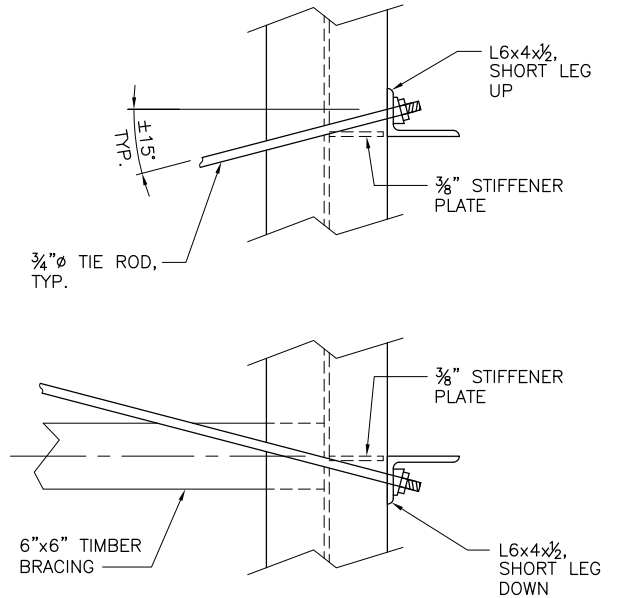


PILE BRACING SYSTEM MUST BE FULLY ERECTED AND COMPLETE BEFORE ANY EARTH WORK OR HEAVY EQUIPMENT OPERATION, (SUCH AS EXCAVATORS, SKID LOADERS, ETC.), WILL BE ALLOWED WITHIN 15' OF THE EXISTING EXPOSED BRIDGE ABUTMENT H-PILES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND STABILITY OF THE EXISTING BRIDGE DURING CONSTRUCTION.



PLAN



ELEVATION


DETAIL A

COMPUTER INFORMATION		REVISIONS	
CREATION DATE:	11/3/13	(R-1)	
MODIFICATION DATE:	2/27/14	(R-2)	
FILE LOCATION:	Y:\00150796.00\ENG_DOCS\DWGS	(R-3)	
FILE NAME:	MISCDETS.DWG	(R-4)	
		(R-5)	



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AS CONSTRUCTED		CR 17 OVER LITTLE THOMPSON RIVER	
NO REVISIONS:		MISCELLANEOUS DETAILS	
REVISED:		Designer:	MJM
VOID:		Detailer:	RJG

PROJECT NO. 9312	
	
SHEET NO. 07	