Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Gustavus **Federal Tax ID:** 2700085777

Project Title: **Project Type:** New Construction and Land Acquisition

Gustavus - Good River Road Culvert Replacement and Road Safety Improvements

State Funding Requested: $118,000 **House District:** 5 / C

One-Time Need

Brief Project Description:

This project will install a new, longer culvert under Good River Road, guardrails to eliminate a serious traffic hazard over the stream, and will enable salmon fish passage.

Funding Plan:

Total Project Cost:	$144,760
Funding Already Secured:	($26,760)
FY2013 State Funding Request:	($118,000)
Project Deficit:	$0

Funding Details:

FY 2012 26760 from US Fish and Wildlife Service

Detailed Project Description and Justification:

Good River Road crosses the Mountain View Stream (AKA Harry Hall Creek) with a very narrow road embankment and a 14' drop on either side into the flowing creek. There is no guard rail and the culverts, installed many years ago when the road was pioneered, are failing and obstructing passage of salmonid fish to rearing habitat upstream. The City has been deeply concerned about the traffic hazard at this location since a roll-over accident into the stream in Summer of 2008. The young driver and her passenger escaped serious injury only because they were wearing seatbelts. The City Road Maintenance Committee immediately installed temporary barriers using logs along the sides of the high embankment, while it sought to eliminate the hazard permanently. The City partnered with the US Fish and Wildlife Service, Juneau Office, to evaluate fish passage problems along the stream and design a replacement for the failing culverts and a wider road embankmant with guardrails over the stream. The US FWS funded the engineering consultant's work through the design phase. The engineer's cost estimate for the project is $118,000. The City of Gustavus has agreed to seek funding to construct the safety and fish passage improvements.

The constructed project will replace the failed culverts with a single 12' wide, 50' long culvert buried 5' in the stream bed. The streambed will be reconstructed through the culvert to enhance fish passage. Headwalls will support a new, wider road embankment, and traffic safety will be further assured by the installation of steel guard rails. Utilities buried in the road embankment will be conserved in the construction process. This is a "shovel-ready" project we can build in summer 2012.

Contact Name: Kaci Schroeder Hotch
Contact Number: 465-3732

For use by Co-chair Staff Only:

$118,000 Approved

3:16 PM 5/2/2012

Project Timeline:

May 2011: Field investigations completed by consultant using funding from USFWS.
May 2011: Project Scoping document completed and approved by City Council
October 2011: Project design complete with construction estimate of $118,000.
July 2012 Receipt of CIP funds for project
Sept 2012: IFB out for construction
October 2012: Selection of contractor for project
May 2013: Complete construction during low water conditions and before visitor season begins and traffic on road increases.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Gustavus Road Maintenance budget

Grant Recipient Contact Information:

Name:	Kapryce Manchester
Title:	Gustavus City Clerk
Address:	PO Box 1
	Gustavus, Alaska 99826
Phone Number:	(907)697-2451
Email:	clerk@gustavus-ak.gov

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

Contact Name: Kaci Schroeder Hotch
Contact Number: 465-3732

For use by Co-chair Staff Only:

3:16 PM 5/2/2012

Policy on Project Planning
PROJECT SCOPING and DEVELOPMENT FORM
Good River Road Culvert Replacement
(December 2011 updates in red)

This form is to be used to document project planning and approval in order to assure that: project options are well-considered; the best option is put forward; initial and continuing costs and funding are addressed; and that Council approval has been given for implementation. Use this project scoping form with the Project Planning and Approval Process Flow Chart.

Answer the questions that pertain to your proposed project. Attach additional narrative pages if necessary. Type in the electronic form using as much space as you feel is necessary.

Part 1. Project Identification

Name of project: Good River Road Culvert Replacement (Portion of Gustavus Fish Passage Project)

Committee: Road Committee Committee Contact: Mike Taylor

E-mail: mikeandkaren@shizendou.net Phone: 907-697-2273

Part 2. Project Scope refers to a project's size, goals, and requirements. It identifies what the project is supposed to accomplish and the estimated budget (of time and money) necessary to achieve these goals. Changes in scope will need Council approval.

1. What is the project?
    - What are its goals and objectives?
    - Who/what will be aided by this project? Who are the targeted stakeholders/customers?
    - Is a preliminary survey necessary to identify the number of potential customers/users? How will you design and conduct the survey?
    - What is NOT covered by this project? What are its boundaries?

This project will replace the damaged and poorly installed culverts that carry the Mountain View Stream under Good River Road, and will widen the crossing road embankment there to improve traffic safety. No other fish passage or other road improvements are included in this project at this time.

2. Why is the project needed?
    - What community problem, need, or opportunity will it address?
    - What health, safety, environmental, compliance, infrastructure, or economic problems or opportunities does it address?

The project is needed for two reasons:

- The road is narrow over the existing culverts and there have been several accidents in which a vehicle has gone off the road into the flowing stream, which is 14 feet below road grade. The

improvement will widen the road here and reduce the probability of such accidents in the future.
- The existing culverts were poorly installed many years ago, before the City was formed and took responsibility for the road. They have been found by the US Fish and Wildlife Service (FWS) to impede fish passage. The project will remove the impediment to fish passage with a new, properly designed and installed culvert.

3. Where did the idea for this project originate? The idea originated with the Road Committee following an accident at the site about three years ago.

4. Is this project part of a larger plan? (For example, the Gustavus Community Strategic Plan, or committee Annual Work Plan?) This is part of the Committee annual work plan.

5. What is your timeline for project planning?
   - By when do you hope to implement the project?
     The consultant phase of the project began April 25, 2011 under FWS funding. A report with design specifications and construction documents is expected from the consultant by June 30, 2011. **12/2011 Update:** Received 9/2011
   - Will the planning or final project occur in phases or stages?
     Following receipt of the report and construction documents, the Road Committee will prepare an RFQ for release by Fall, 2011.
     Construction is planned for Spring of 2012. **12/2011 Update:** Construction now expected for Spring 2013 pending funding receipt.

6. What is your budget for the planning process? Will you be using a consultant? We are partnering with FWS in Juneau and have selected Dowl HKM as a consultant using FWS funding.

7. What is your rough estimate of the total cost of the planning and final product? At the least, please list cost categories. See Part 4. (Ques. 4-8) and Part 5 (Budget) for guidance. Note: The consultant's construction cost estimate is pending, but we expect the work to cost approximately $60,000.
12/2011 Update: The final construction cost estimate is $104,000 for the base project with an additive alternate for a possible detour road construction of $14,000. The total cost estimate is now $118,000.

Parts 3., 4., 5., 6. Project Investigation and Development
Parts 3.—6. refer to social, environmental, and financial impacts of various options. These questions will help you document your consideration of alternatives and your choice of the option providing the best value for the community. Your goal is to generate alternatives and make a recommendation from among them. Return to Part 3., "Summary" after applying Parts 4.—6.

Summary:

1. What alternative approaches or solutions were considered? Make a business case for your top two or three options by discussing how effectively each would fulfill the project goals, and by comparing the economic, social, and

environmental costs vs. benefits of each one.

The consultant is considering options and will present them with a recommended option at the preliminary design stage, by late May, 2011.

2. What solution was chosen as the best and why is it the best? We expect to adopt the configuration indicated by the consultant's design process, which is pending at the time of this submittal.

12/2011 Update: The final design package calls for installation of a single 12 ft diameter round culvert to replace the existing failed culverts, and installation of guard rails for traffic safety.

3. Identify your funding source(s).
   - How will the project be funded initially, and for its operating life?
   - Is there a matching fund requirement? Please provide details.

The consulting phase is funded by FWS. This funding includes the field work (completed the week of April 25) and construction oversight, expected in Spring 2012.

The Committee is considering at least two funding sources
1) A grant from the USFS Lynn Canal-Icy Strait Resource Advisory Committee, being requested in May, 2011, (preferred) and
2) Road maintenance funding provided annually by the USFS Forest Receipts program.

12/2011 Update: The grant request to the USFS LCISRAC was not successful. We intend now to seek CIP funding from the legislature in 2012.

Part 4. Environmental, Social, Financial Impacts

1. Project Impacts Checklist

Will this project affect:	No	Yes (+/-)	Maybe
Environmental quality? (+ = impact is beneficial; - = harmful)			
• Climate change	X		
• Streams/groundwater quality		X	
• Air quality	X		
• Soils/land quality	X		
• Fish/wildlife habitat, populations		X	
• Plant Resources (timber, firewood, berries, etc)	X		
• Invasive or pest species	X		
• Natural beauty of landscape or neighborhoods	X		
• Neighborhood character	X		
• Noise or other environmental impacts	X		
• Environmental sustainability		X	
• Hazardous substances use	X		

• Community waste stream	X		
• Light pollution at night	X		
Recreational opportunities?			
• Public land use and access	X		
• Trails/waterways	X		
• Parks	X		
• Public assembly/activities	X		
Education/training/knowledge & skill development?	X		
Public safety?	X		
Public health?	X		
Medical services?	X		
Emergency response?			X
Economic performance & sustainability?			
• Employment of residents		X	
o Short-term (i.e. construction)		X	
o Long-term (operating and maintenance)	X		
• Cost of living reduction	X		
• Return on investment	X		
• Visitor opportunities/impressions/stays/ purchases	X		
• Competitive business environment	X		
• Support for existing businesses	X		
• New business opportunities	X		
• Economic sustainability	X		
• Attractiveness of City to new residents/businesses	X		
City government performance?			
• Infrastructure quality/effectiveness/reach (more people)		X	
• Existing services		X	
• New services	X		
• Cost of City services	X		
• Tax income to City	X		
Transportation?			
• Air	X		
• Water	X		
• Roads		X	
Communications?			
• Internet	X		
• Phone	X		
• TV/radio	X		
Other? (type in)			

2. How does this project provide benefits or add value in multiple areas? (E.g., benefits both to the environment and to business performance.)

This project provides benefits in two areas: 1) road traffic safety, and 2) fish habitat and passage

3. Are other projects related to or dependent on this project?
- Is this project dependent on other activities or actions? No
- If yes, describe projects, action or activities specifying phases where appropriate.

- 4. Will the project require additional infrastructure, activity, or staffing outside the immediate department or activity? (E.g., will the construction of a new facility require additional roads or road maintenance or more internal City staffing?) No

5. What regulatory permits will be required and how will they be obtained?
This project will require regulatory permits from Coastal Zone Management, Corps of Engineers, and ADF&G. FWS will file the permit requests for us as an in kind donation on the project.

6. What are the estimated initial (e.g., construction or purchase) and continuing operational costs of the project?
The consulting phase of the project will cost approximately $23,260.
7. Is an engineering design or construction estimate necessary? Yes, being provided by FWS already with their funding. **12/2011 Update:** Done 9/11

8. Will operation of the project generate any revenue for the City such as sales, user fees, or new taxes? If so, how will the new revenue be collected?

Part 5. Project Budget
Proposed Budget Line Items

Construction project Budget estimate	Cost	Operational budget estimate (annual)	Cost
Administrative	$0	Personnel	$
Project management	$0	Benefits	$
Land, structures, ROW, easements	$0	Training	$
Engineering work	$23,260	Travel	$
Permitting, inspection	$0	Equipment	$
Site work	$	Contractual	$
Demolition and construction	$60,000	Supplies	$
Waste disposal	$	Utilities	$
Equipment	$	Insurance	$
Freight	$	Repair & maintenance	$
Contingencies	$	Other (list)	$
Other (list)	$	Other (list)	$
Other (list)		Total direct costs	$
		Indirect costs	$
		Income (fees, taxes)	$
		Balance: costs-income	$

Updated Latest Estimate Budget Line Items if Changed Date:_12/2011

Construction project Budget estimate	Cost	Operational budget estimate (annual)	Cost
Administrative	$	Personnel	$
Project management	$	Benefits	$
Land, structures, ROW, easements	$	Training	$
Engineering work	$	Travel	$
Permitting; inspection		Equipment	$
Site work	$	Contractual	$
Demolition and construction	$118,000	Supplies	$
Waste disposal	$	Utilities	$
Equipment	$	Insurance	$
Freight	$	Repair & maintenance	$
Contingencies	$	Other (list)	$
Other (list)	$	Total direct costs	
		Indirect costs	
		Income (fees, taxes))	$
		Balance: costs-income	$

Part 6. Jobs and Training (required by some granting agencies)

1. What service jobs will be needed for operation and maintenance? None

2. How many full-time, permanent jobs will this project create or retain?
____0_____Create/retain in 1-3 years
___0_____Create/retain in 3-5 years

3. What training is necessary to prepare local residents for jobs on this project?
None

4. How many local businesses will be affected by this project and how?
There will be a road closure for approximately 1-2 days for construction, which may affect two local lodges and neighborhood access. However, the plan is to construct in Spring 2013 before the lodges are open to summer visitors.

Part 7. Business Plan (Upon Council request)

Not required

Part 8. Record of Project Planning and Development Meetings

1. Please document the manner in which public input was received.
   - Public comment on agenda item at committee or Council meeting
   - Special public hearing
   - Dates and attendance for the above.
   - Written comment from the public (please attach)

The project has been discussed at Road Committee Meetings and Council meetings through the early months of 2011.

2. Please use the following chart to document committee meetings, Council reports, and so on. Did the committee make recommendations or requests? Did the Council make requests of the committee?

Meeting Record

Event (Meeting of committee, Council report, public hearing, etc.	Date	Agenda Posted (date)	Minutes or record Attached? (yes/no)	Outcome Rec to Council, requested action of Council, etc.	No. of atten-dees
Road Cmte Meeting	5/3/11	4/29/11	No	Requested grant approval	3
Road Meeting	12/7/11	12/2/11	No	Rec to Council to put on CIP list	3

Part 9. Feedback to the Council

With the understanding that this form must be adapted to a variety of projects, please provide feedback on how the form worked for your committee. Thank you for your suggestions.

CITY OF GUSTAVUS, ALASKA
RESOLUTION 2012-07

A Resolution Approving the Submission of a Capital Improvement Funding Request for the Good River Road Culvert Replacement Project

WHEREAS, Good River Road in Gustavus was constructed long ago as a narrow pioneer road and crosses Harry Hall Creek in a deep gully, and

WHEREAS, the road crossing has no guard rails and vehicles have on several occasions slid off the road into the stream below, fortunately without fatalities, and

WHEREAS, Harry Hall Creek, a designated salmon stream, passes under the road through two partially collapsed culverts, which obstruct fish passage, and

WHEREAS, the US Fish and Wildlife Service has funded the design phase in partnership with the City for a project to facilitate unobstructed salmonid fish passage to the nearby headwaters in Glacier Bay National Park, while providing for safe traffic flow on Good River Road over the stream, and

WHEREAS, design documents and a bid package are now complete for installation of a new 12 foot diameter culvert to allow fish passage at all stream flows, and a wider road embankment with guard rails for safe traffic flow, and

WHEREAS, the engineer's construction cost estimate is $118,000, and

WHEREAS, The City of wishes to construct the project as soon as funding is available.

NOW THEREFORE BE IT RESOLVED that the Gustavus City Council approves the CIP funding request to the 2012 Alaska Legislature in the amount of $118,000 for the Good River Road Culvert Replacement Project, and urges the Legislature and Governor to consider it favorably.

PASSED AND APPROVED by the Gustavus City Council this 12th day of January, 2012.

Karen Colligan-Taylor, Mayor

Lou Cacioppo, Vice Mayor

Jim Mackovjak, Council Member

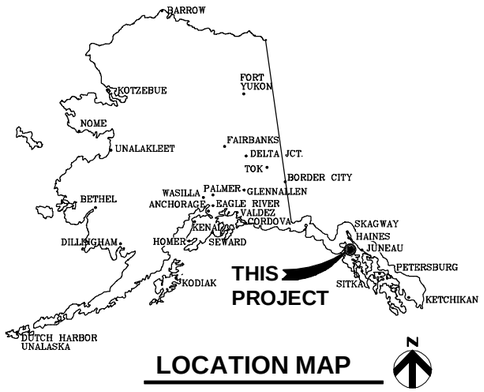
Tim Sunday, Council Member

Melanie Lesh, Council Member

Noël Farevaag, Council Member

Roger Buttram, Council Member

Attest: Kapryce Manchester, MMC
City Clerk



LOCATION MAP

Contract Drawings For

CITY OF GUSTAVUS

GUSTAVUS FISH PASSAGE IMPROVEMENTS PROJECT

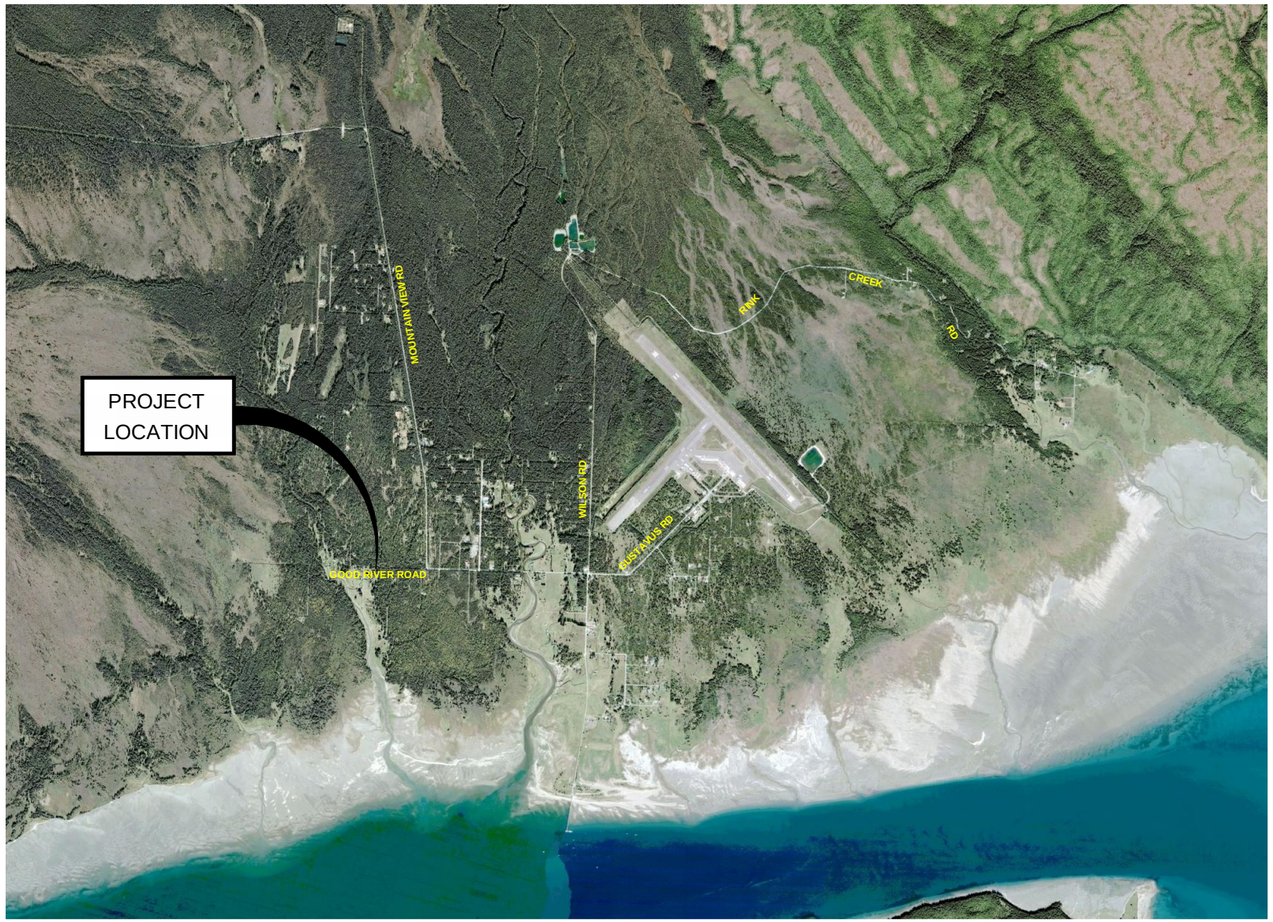
GOOD RIVER ROAD

SECTION 4, TOWNSHIP 40 SOUTH, RANGE 59 EAST, COPPER RIVER MERIDIAN, ALASKA
NOVEMBER, 2011

LEGEND

EXISTING	DESCRIPTION
	APPROXIMATE RIGHT-OF-WAY
	CONTROL POINT
	ORDINARY HIGH WATER
	CULVERT
	EDGE OF PAVEMENT
	EDGE OF GRAVEL/SHOULDER
	EDGE OF VEGETATION
	EXISTING THALWEG
	TOP OF BANK
	TOE OF SLOPE
UE	APPROXIMATE UNDERGROUND ELECTRICAL LINE
	ELECTRICAL TRANSFORMER
	TELEPHONE PEDESTAL

ABBREVIATIONS	
ALCAP	ALUMINUM CAP
AVASP	AS VERTICAL AS SAFELY POSSIBLE
BFW	BANKFULL WIDTH
CFS	CUBIC FEET PER SECOND
CSP	CORRUGATED STEEL PIPE
E	EASTING
ELEC	ELECTRIC
ELEV	ELEVATION
FT	FEET
GALV.	GALVANIZED
I.E.	INVERT ELEVATION
IN	INCH
ME	MATCH EXISTING
MIN	MINIMUM
ML	MILE
N	NORTHING
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
Q	FLOW
Q2D2	2-YEAR, 2-DAY FLOW
SQ MI	SQUARE MILE
STA	STATION
TYP	TYPICAL



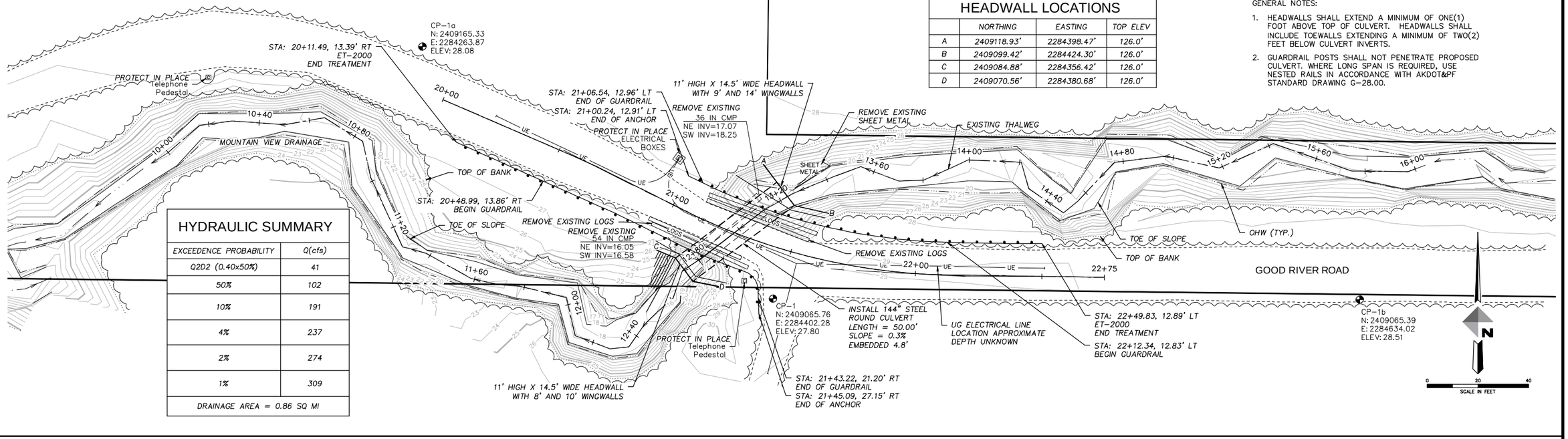
VICINITY MAP
NTS

GENERAL NOTES

1. SURVEY INFORMATION WAS PROVIDED BY DOWL HKM. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL SITE FEATURES. IF THE CONTRACTOR SHOULD ENCOUNTER CONDITIONS OTHER THAN THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE.
2. PLANS MAY NOT SHOW ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES AND SHALL EXERCISE CAUTION DURING CONSTRUCTION.
4. COORDINATE CONSTRUCTION STAGING AND MOBILIZATION AREAS AND ACTIVITIES WITH OWNER'S REPRESENTATIVE.
5. EXERCISE EXTREME CAUTION AND OBSERVE ALL APPLICABLE OSHA REQUIREMENTS FOR WORKING IN CONFINED AREAS.
6. STATIONING IS ALONG CENTERLINE OF PIPE OR ROADWAY. ELEVATIONS ARE TO PIPE INVERT UNLESS OTHERWISE NOTED.
7. VERIFY INVERTS OF ALL PROPOSED STRUCTURES PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES FROM PLANS IMMEDIATELY TO OWNER'S REPRESENTATIVE.
8. CULVERT DESIGN LOAD: AASHTO LOADING HS-25, MINIMUM SOIL BEARING CAPACITY: 4000PSF.
9. EXCAVATION AND BACKFILL:
   A. REMOVE ALL ORGANIC OR OVER SATURATED SOFT MATERIAL, WHICH CANNOT BE COMPACTED.
   B. BACKFILL SHALL BE PLACED AND COMPACTED WITH CARE AND SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY ON BOTH SIDES OF PIPE. COMPACT TO 95% MAXIMUM DENSITY.
10. CULVERT INSTALLATION:
    A. CULVERT JOINTS SHOULD NOT LEAK.
    B. CULVERT INFILL MATERIAL SHALL BE INSTALLED IN PIPE ACCORDING TO PLANS. MANUAL INSTALLATION IS REQUIRED.
11. ALL VEGETATION IN THE AREAS NOT AFFECTED BY WORK SHALL BE PRESERVED AND PROTECTED BY THE CONTRACTOR. RESEED ALL DISTURBED AREAS.

DRAWING INDEX

PREPARED BY: DOWL HKM



HYDRAULIC SUMMARY

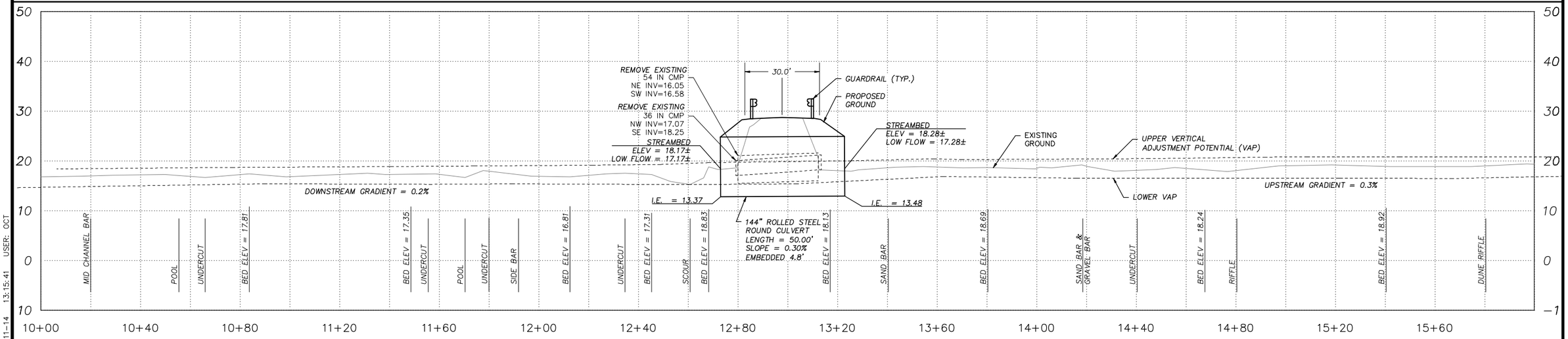
EXCEEDENCE PROBABILITY	Q(cfs)
Q2D2 (0.40x50%)	41
50%	102
10%	191
4%	237
2%	274
1%	309
DRAINAGE AREA = 0.86 SQ MI	

HEADWALL LOCATIONS

	NORTHING	EASTING	TOP ELEV
A	2409118.93'	2284398.47'	126.0'
B	2409099.42'	2284424.30'	126.0'
C	2409084.88'	2284356.42'	126.0'
D	2409070.56'	2284380.68'	126.0'

GENERAL NOTES:

1. HEADWALLS SHALL EXTEND A MINIMUM OF ONE(1) FOOT ABOVE TOP OF CULVERT. HEADWALLS SHALL INCLUDE TOEWALLS EXTENDING A MINIMUM OF TWO(2) FEET BELOW CULVERT INVERTS.
2. GUARDRAIL POSTS SHALL NOT PENETRATE PROPOSED CULVERT. WHERE LONG SPAN IS REQUIRED, USE NESTED RAILS IN ACCORDANCE WITH AKDOT&PF STANDARD DRAWING G–28.00.



CULVERT TABLE

DIAMETER	144"
LENGTH	50'–0"
SLOPE	0.30%
CORRUGATION	3" X 1"
MATERIAL	GALVANIZED STEEL
PLATE GAUGE	12 (0.11")

CULVERT COORDINATE TABLE

SIZE	POINT	NORTHING	EASTING	ELEVATION
144"	INLET I.E.	2409077.19'	2284367.25'	13.48
	OUTLET I.E.	2409107.11'	2284407.30'	13.37

PERMANENT FILL BELOW OHW

MATERIAL	VOL (CY)	AREA (SF)
STEEL CULVERT	0.5	600
CULVERT INFILL	80	600
PIPE BEDDING	215	1000

CALL BEFORE YOU DIG

The Contractor shall notify all area utility companies prior to commencement of excavation. The following is a partial list:

GUSTAVUS ELECTRIC COMPANY 697–2299

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Revision No.	Description	Date

Designed: RDP
Drawn: OCT
Checked: BMM
Date: NOVEMBER, 2011
Project Number: | File No: | Scale: AS SHOWN

STATE OF ALASKA 49TH
Bradley M. Melocik
CE 11098
REGISTERED PROFESSIONAL ENGINEER

DOWL HKM
4041 B STREET ANCHORAGE, ALASKA 99503
907–562–2000 www.dowlhkm.com

CITY OF GUSTAVUS
GUSTAVUS FISH PASSAGE IMPROVEMENTS PROJECT
GOOD RIVER ROAD

PLAN AND PROFILE

SECTION 4, TOWNSHIP 40 SOUTH, RANGE 59 EAST, COPPER RIVER MERIDIAN, ALASKA

Drawing Number:

Sheet C2 of C4

P:\Projects\D60811\Civil3D2009\HYDR–GOODRIVER.dwg 2011–11–14 13:15:41 USER: OCT

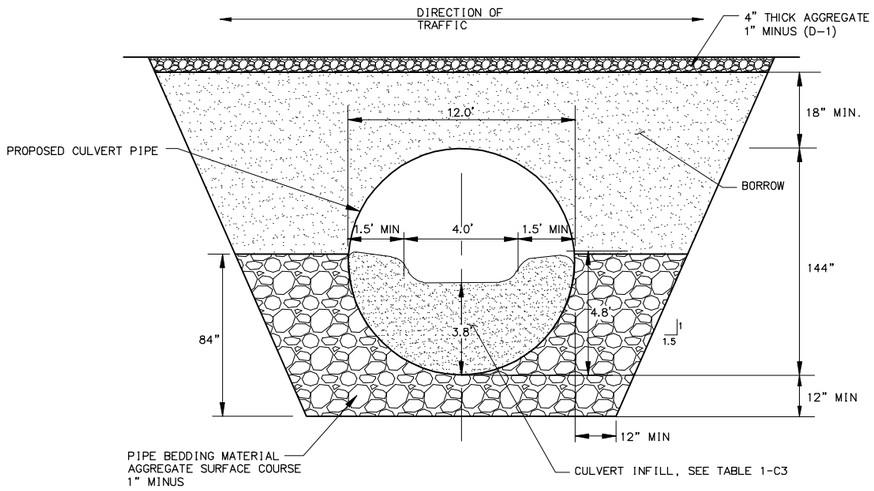


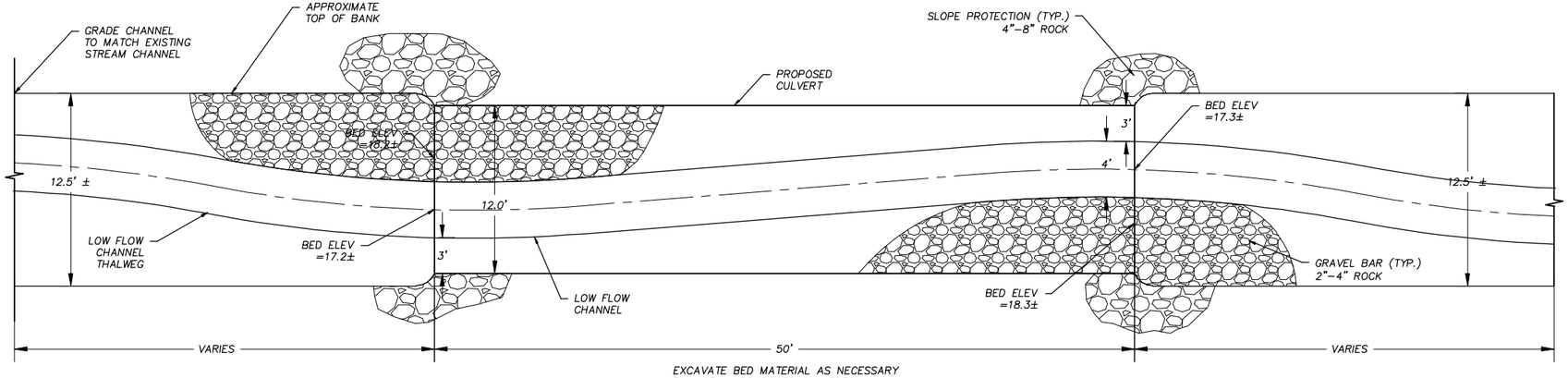
TABLE 1-C3	
CULVERT INFILL	MATERIAL SIZES
100% PASSING	4"
30% – 70% PASSING	1"
5% – 30% PASSING	#4

GENERAL NOTES:

1. CONSTRUCT CULVERT INFILL WITH MATERIAL MEETING GRADATION SHOWN IN TABLE 1-C3 OR AS APPROVED BY ENGINEER.
2. SALVAGE EXISTING STREAM BED MATERIAL EXCAVATED DURING CONSTRUCTION. MIX EXCAVATED MATERIAL WITH CULVERT INFILL SPECIFIED IN TABLE 1-C3.
3. OBTAIN CULVERT INFILL FROM CITY OF GUSTAVUS GRAVEL PIT. SIEVE REPRESENTATIVE SAMPLE TO ENSURE MATERIAL MEETS GRADATION LISTED IN TABLE 1-C3 OR FOR APPROVAL FROM ENGINEER.

1/C3 TYPICAL CULVERT CROSS-SECTION
NTS

ESTIMATE OF QUANTITIES - BASIC BID			
ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
201(3B)	CLEARING AND GRUBBING	LS	ALL REQUIRED
202(4A)	REMOVAL OF CULVERT PIPE	LF	68
203(3)	UNCLASSIFIED EXCAVATION	CY	640
203(5A)	BORROW, TYPE A (3" MINUS)	CY	565
203(19)	STREAM DIVERSION & DEWATERING	LS	ALL REQUIRED
204(2)	PIPE BEDDING MATERIAL, TYPE A (1" MINUS)	CY	220
301(4)	AGGREGATE SURFACE COURSE (D-1)	CY	30
603(1)	144" ROLLED STEEL ROUND CULVERT (12-FT DIAMETER)	LF	50
603(1)	SHIPPING, ASSEMBLY, & INSTALLATION OF CULVERTS	LS	ALL REQUIRED
603(22)	HEADWALL WITH WINGWALLS	EA	2
606(1)	W-BEAM GUARDRAIL	LF	200
606(11)	EXTRUDER TERMINAL (ET-2000)	EA	2
606(13)	DOWNSTREAM END ANCHOR	EA	2
618(1)	SEEDING	LS	ALL REQUIRED
640(1)	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQUIRED
641(1)	EROSION AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQUIRED
642(1)	CONSTRUCTION SURVEYING	LS	ALL REQUIRED
643(2)	TRAFFIC MAINTENANCE	LS	ALL REQUIRED
671(3A)	CULVERT INFILL	CY	78



2/C3 CONSTRUCTED CHANNEL DETAIL
NTS

DEWATERING NOTES:

1. TEMPORARY DIKES OR BERMS MAY BE CREATED TO ISOLATE THE WORK AREA FROM WATERS OF THE SURROUNDING AREA. THIS WORK MAY REQUIRE A DIVERSION OF STREAM WATER BY PUMPING FROM INLET SIDE TO OUTLET SIDE OF THE ROADWAY. MAKE AN OUTLET ENERGY DISSIPATER AT THE DISCHARGE END OF THE PUMP HOSE FOR EROSION CONTROL.
2. DEWATER WITH PUMP HOSE IF REQUIRED AND APPROVED BY THE ENGINEER.
3. ADDITIONAL ENERGY DISSIPATERS MAY BE REQUIRED FOR DEWATERING DISCHARGE AS NECESSARY AND APPROVED BY THE ENGINEER.
4. PUMPS SHOULD BE SIZED TO CARRY HIGHEST FLOW REASONABLY EXPECTED TO OCCUR DURING CONSTRUCTION INCLUDING SURFACE AND SUBSURFACE FLOWS. ANTICIPATED BASE FLOW IS 7.4 CFS (3300 GPM).
5. ALL DISCHARGE POINTS REQUIRE PERMANENT OR TEMPORARY VELOCITY CONTROLS.
6. PROVIDE FOR SEDIMENT REMOVAL FOR ALL DEWATERING ACTIVITY PRIOR TO DISCHARGE FROM THE PROJECT INTO ANY WATER OF THE U.S. THIS MAY REQUIRE TEMPORARY SETTLEMENT BASINS OR OTHER MEANS OF REMOVING TURBIDITY.
7. PERMANENT AND TEMPORARY SEDIMENT TRAPS AND BASINS (IF APPLICABLE) WILL BE CONSTRUCTED BEFORE ANY HYDRAULIC CONVEYANCE OR DEWATERING PROCEDURES OCCUR.

CALL BEFORE YOU DIG
The Contractor shall notify all area utility companies prior to commencement of excavation. The following is a partial list:
GUSTAVUS ELECTRIC COMPANY 697-2299

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Revision No.	Description	Date

Designed: RDP
Drawn: OCT
Checked: BMM
Date: NOVEMBER, 2011
Project Number: | File No: | Scale: AS SHOWN

STATE OF ALASKA 49TH
Bradley M. Melocik CE 11098
REGISTERED PROFESSIONAL ENGINEER

DOWL HKM
4041 B STREET ANCHORAGE, ALASKA 99503
907-562-2000 www.dowlhkm.com

CITY OF GUSTAVUS
GUSTAVUS FISH PASSAGE IMPROVEMENTS PROJECT
GOOD RIVER ROAD

DETAILS

SECTION 4, TOWNSHIP 40 SOUTH, RANGE 59 EAST, COPPER RIVER MERIDIAN, ALASKA

Drawing Number:

Sheet C3 of C4

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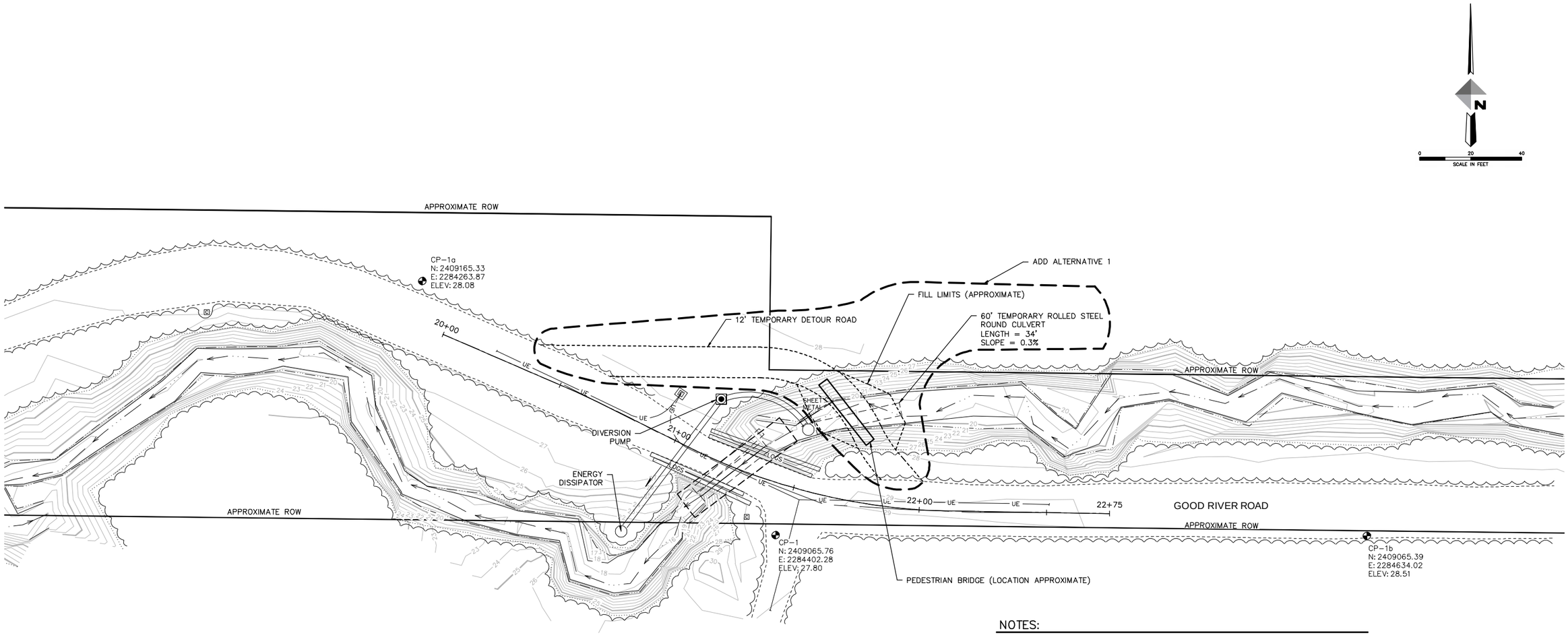

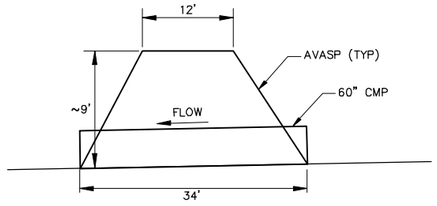

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C4

DETOUR ROAD CROSS-SECTION

NTS

TEMPORARY FILL BELOW OHW

MATERIAL	VOL (CY)	AREA (SF)
STEEL CULVERT	0.1	230
BORROW	35	740

ESTIMATE OF QUANTITIES - ADD ALTERNATIVE 1

ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
201(38)	CLEARING AND GRUBBIING	LS	ALL REQUIRED
203 (5A)	BORROW	CY	220
603 (1)	60" ROLLED STEEL ROUND CULVERT	LF	34
643(2)	TRAFFIC MAINTENANCE	LS	ALL REQUIRED

NOTES:

1. CONTRACTOR SHALL PROVIDE PEDESTRIAN ACCESS AROUND WORK SITE AND BRIDGING STREAM FOR DURATION OF CLOSURE OF GOOD RIVER ROAD.
2. PEDESTRIAN ACCESS IS INCLUDED IN BASIC BID WORK.
3. DETOUR ROAD OR TEMPORARY BRIDGE CONSTRUCTED UNDER ADD ALTERNATIVE 1 SATISFIES THE REQUIREMENT OF PROVIDING PEDESTRIAN ACCESS.
4. ROW LIMITS ARE APPROXIMATE AND SHOWN SOLELY FOR INFORMATIONAL PURPOSES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ROW LIMITS. DOWL HKM ASSUMES NO LIABILITY FOR WORK PERFORMED OFF OF APPROXIMATE ROW LIMITS AS SHOWN.

ADD ALTERNATIVE 1 NOTES:

1. LOCATION OF DETOUR ROAD AND DIVERSION PUMP IS APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONSTRUCTING DETOUR ROAD AS NECESSARY TO INSTALL 144" CULVERT.
2. DETOUR ROAD MAY REQUIRE WORK OUTSIDE OF ROW LIMITS. CONTRACTOR SHALL COORDINATE WORK ON PRIVATE PROPERTY WITH CITY OF GUSTAVUS BEFORE DISTURBANCE.
3. USE OF A TEMPORARY BRIDGE IN SUBSTITUTION FOR THE SHOWN DETOUR ROAD IS PERMISSIBLE AT CONTRACTOR'S RISK AND DISCRETION.
4. MINIMIZE EXTENT OF FILL IN STREAM CHANNEL AT DETOUR ROAD.
5. STABILIZE EMBANKMENT OF DETOUR ROAD WITH ROLLED EROSION CONTROL PRODUCT OR ROCK TO PREVENT EROSION OF SEDIMENT INTO STREAM CHANNEL. ALL COSTS ASSOCIATED WITH STABILIZING DETOUR ROAD ARE INCIDENTAL TO ITEM 643(2).

CALL BEFORE YOU DIG

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CITY OF GUSTAVUS

GUSTAVUS FISH PASSAGE IMPROVEMENTS PROJECT
GOOD RIVER ROAD

STREAM DIVERSION &
ADD ALTERNATIVE 1 DETOUR ROAD

SECTION 4, TOWNSHIP 40 SOUTH, RANGE 59 EAST, COPPER RIVER MERIDIAN, ALASKA

Drawing Number:

Sheet C4 of C4

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