

Traffic Management Plan

Project: Satik^w Crossing, Contract No. 1009-021
Client: Penticton Indian Band Development Corporation



January 19, 2015, 2014
Revision: 1

Revision History

Revision	Date	Comments
P0	Dec 22, 2014	Initial submission.
0	Jan 5, 2015	Revised Appendix B. Correct of small typo.
1	Jan 19, 2015	Updated Appendix A



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1. Introduction

1.1. Background

OXT Energy Corporation (OXT) has entered into a contract with the Penticton Indian Band Development Corporation (PIDBC) for the construction of the Satik^w Crossing project. OXT has in turn subcontracted the construction scope to Emil Anderson Construction Inc (EAC). PIDBC's Contract Administrator is TRUE Consulting Ltd.

In accordance with the Satik^w Crossing Supplementary Specifications Section 01 10 01S, Item 2 (Traffic Control, Vehicle Access and Parking) the Contractor is required to provide a Traffic Control Plan for each stage of construction as described in the Ministry of Transportation and Infrastructure (MoTI) Traffic Control Manual for Work on Roadways.

However, per the December 17, 2014 meeting between MoTI, TRUE and EAC it is understood that although a MoTI specific special provision has not been provided for the work, MoTI requires a Category 3 Traffic Management Plan (TMP), developed in accordance with the MoTI Traffic Management Guidelines for Work on Roadways. For the purpose of the TMP, the project is classified as a "Non-Ministry Project".

As such the enclosed Category 3 TMP, developed in accordance with the MoTI Traffic Management Guidelines for Work on Roadways and the operation criteria reviewed in the aforementioned December 17, 2014 meeting, is prepared by EAC for submittal to the Contract Administrator, who in turn will submit the plan to MoTI.

1.2. Project Description

The project is located at the intersection of Highway 97 & Green Ave, in Penticton, British Columbia.

The affected roadways will be Highway 97 (Channel Parkway) between Skaha Lake Road and Warren Ave. W, and Green Ave. between Coleman St. and Highway 97 in Penticton, BC.

1.3. Traffic Management Plan Requirements

In accordance with MoTI Traffic Management Guidelines for Work on Roadways (Item 6.3) a Category 3 TMP shall contain the following sub-plans:

- Traffic Control Plan (TCP)
- Public Information Plan
- Incident Management Plan
- Implementation Plan



1.4. Standards

In accordance with MoTI Traffic Management Guidelines for Work on Roadways (Item 6.3), a Category 3 TMP shall be developed in accordance with the following standards:

- Ministry of Transportation Traffic Control Manual,
- Ministry of Transportation Standard General Specifications Section 194,
- Ministry of Transportation Electrical and Traffic Engineering Manual,
- TAC Geometric Design Guide for Canadian Roads, and
- BC Supplement to the TAC Geometric Design Guide

1.5. Revisions & Updates

The TMP is an evolving document. Updates and revisions will be continuous throughout the project. All changes and revisions to the TMP will be submitted by EAC Project Manager to the Contract Administrator for approval. No work affecting road users shall commence until approval of the TMP by the Contract Administrator.

2. Traffic Control Plan

2.1. Work Zone Information

2.1.1. Work Hours and Shift Schedule

Construction will commence January 5, 2015. Substantial Performance is scheduled for October 2, 2015, and Total Performance is schedule for November 27, 2015.

General work days and hours will be Monday through Friday, 0700h to 1600h. As necessary Saturdays and/or Sundays, and/or extend work hours will be required for specific work activities. Unless otherwise approved by the Contract Administrator, in accordance with Supplementary Specification Section 01 10 01S, Item 2.22, work will be limited to between 0700h and 2200h. A detailed work schedule will be maintained and reviewed regularly with the Contract Administrator.

2.1.2. Roadway Configuration

Highway 97 through the work zone currently consists of 2 through lanes south bound, a divided south bound left turning lane to east bound Green Ave, a divided south bound acceleration lane from west bound Green Ave, 2 through lanes north bound, and an undivided north bound right turning lane to east bound Green Ave.

Green Ave through the work zone currently consists of a two lane roadway, with access to/from Highway 97 north bound and south bound.

2.1.3. Work Zone Location & Length

Work zone locations and length are as defined in the Traffic Control Plan Drawings included in Appendix B.

2.1.4. Lanes Affected & Direction of Travel

The work will be broken into the three distinct stages with the following lane impacts:

- **Detour Stage 1**
 - Highway 97 South Bound: 1 through lane. Left turn to Green Ave east bound closed.
 - Highway 97 North Bound: 1 through lane. Right turn to Green Ave east bound open.
 - Green Ave Egress: Left turn access to Highway 97 south bound closed. Right turn access to Highway 97 north bound open.
- **Detour Stage 2**
 - Highway 97 South Bound: 1 through lane. Left turn to Green Ave east bound closed.
 - Highway 97 North Bound: 1 through lane. Right turn to Green Ave east bound closed.

- Green Ave Egress: Left turn access to Highway 97 south bound closed. Right turn access to Highway 97 north bound closed.
- Detour Stage 3
 - Highway 97 South Bound: 2 through lanes. Left turn to Green Ave east bound closed.
 - Highway 97 North Bound: 2 through lanes. Right turn to Green Ave east bound closed.
 - Green Ave Egress: Left turn access to Highway 97 south bound closed. Right turn access to Highway 97 north bound closed.

2.2. Closure Information

2.2.1. Lane Closures

The tentative scheduling for the major detour stages is as follows:

Detour Stage 1: January 7, 2015 to June 9, 2015
 Detour Stage 2: June 10, 2015 to June 26, 2015
 Detour Stage 3: June 27, 2015 to September 6, 2015
 Detour Stage 2: September 7, 2015 to October 1, 2015
 Ultimate Alignment: October 2, 2015

The detours will be in effect 24 hours per day during the specified work period.

2.2.2. Single Lane Alternating Traffic (SLAT)

The use of SLAT will not be utilized for the work.

2.2.3. Random Minor Traffic Interruptions

Random Minor Traffic Interruptions, brief stoppages of no more than 2 minutes in one or both directions for construction activities such as allowing construction equipment to cross the highway, may be utilized for the work, between the hours of 0900h to 1500h, and 1900h to 0600h, Monday to Saturday. Traffic stoppages will not be initiated unless delays resulting from any previous stoppages have been completely dissipated and traffic is moving freely through the site.

2.2.4. Statutory Holiday, Long Weekends and Special Events

Statutory holidays, long weekends and special events that historically result in increased traffic in the area are defined in the following table. No work that affects traffic will take place starting from noon of the weekday prior to the “event” until noon of the weekday following the “event”. For clarity, for the purpose of these restrictions, approved detours implemented and operating prior to the “event” are not classified as “work that affects traffic”.

Statutory Holidays, Long Weekends, and Special Events (Events)	Dates
Victoria Day Weekend	Saturday May 16, 2015 to Monday May 18, 2015
Canada Day	Wednesday July 1, 2015
Granfondo Penticton	Saturday July 11, 2015 to Sunday July 12, 2015
BC Day Weekend	Saturday August 1, 2015 to Monday August 3, 2015
Challenge Penticton	Saturday August 29, 2015 to Sunday August 30, 2015
Labour Day	Saturday September 5, 2015 to Monday September 7, 2015
Thanksgiving	Saturday October 10, 2015 to Monday October 12, 2015

2.3. Detour Operation Requirements

2.3.1. Traffic Control Plan Drawings

Traffic Control Plan drawings are included in Appendix B.

2.3.2. Minimum Operation Requirements for Detour

Highway 97*

- Class of Roadway: Urban Arterial Divided Four Lane
- Design Speed: 70 km/h.
- Minimum Post Speed: 50 km/h
- Design Vehicle: WB-20
- Lanes: Minimum one paved through lane and paved shoulder in each direction
- Geometric Details: Lane width 3.6m, paved shoulder width 1.0m (1.3m adjacent to concrete roadside barrier), curve radii, taper ratio, and vertical K values as per design speed requirements

** As provided by MoTI in the aforementioned December 17, 2014 meeting.*

2.3.3. Speed Limit

The Construction Zone Speed limit will be posted to 50km/h in the work zone 24 hours per a day for the duration of the work.

2.3.4. Traffic Management for Oversize Vehicles

Minimum clearance widths of 5.0m will be maintained at all times on Highway 97. No clearance envelope restrictions are anticipated.

3. Public Information Plan

EAC will notify and update the major user groups affected by the Project of the anticipated schedule and traffic impacts in advance of implementation. Contact details for the user groups are found in Appendix A.

Major user groups may include any or all of the following:

- Emergency response services
- Local MoTI Road, Bridge and/ or Electrical Maintenance Contractors
- Regional Transportation Management Centre (RTMC)
- Commercial Vehicle Safety and Enforcement (CVSE)
- Drive BC (through MoTI district office)
- City of Penticton
- Penticton Indian Band (through TRUE Consulting Ltd)

Public information guide signage will be erected at locations in advance of the work zone to advise motorists of road closures and traffic changes. Guide signage is included in the Appendix B Traffic Control Plan Drawings.

Unscheduled delays due to an incident or accident will be communicated to all relevant stakeholders by the TCS or designate one or all of the following:

- Telephone
- Email
- Radio/local media

4. Incident Management Plan

4.1. Introduction

The purpose of the Incident Management Plan is to have an action plan prepared in the event of an incident, which affects traffic within the work zone.

An Incident is defined as an accident, vehicle breakdown, or any other event, which impedes the flow of traffic. The incident may result in a full or partial roadway blockage.

4.2. Potential Incident Types

Potential incidents within the work zone would include any array of single or multi motor vehicle accidents, medical emergencies, and/or mechanical stalls or breakdown.

4.3. Incident Detection

As for the majority of the project, semi-permanent detours will be in operation, with no active work within the roadway, most incidents would be isolated from work activity. Work crews on site will be trained to notify their supervisor if they observe an incident during work hours, who will in turn notify the TCS. Should a serious incident occur outside of work hours, the Contractor will rely on the MoTI representative and/or local RCMP contacting the Contractor.

4.4. Incident Response

When notified of an incident, the TCS will direct and coordinate the movement of traffic safely and expeditiously around the incident and will assist in providing access to and from the incident for emergency vehicles. The accident area will be secured to ensure public and worker safety. The following steps will be carried out to assist and minimize the impacts to the travelling public.

For a mechanical or other unforeseen obstruction the following measures will be taken by the TCS:

1. If possible coordinate's EAC equipment and crews to assist with moving the vehicle off and away from the traveled roadway if possible;
2. Arrange for the vehicle(s) to be towed if necessary; and/or
3. Manage traffic movements so as to minimize impact to traffic (this may involve stopping work as required and removal of traffic devices until the incident is alleviated);

In case of an accident the following measures will be taken:

1. Pull the vehicle off the road if possible – depending on the seriousness of the accident (serious accidents require the vehicles to remain untouched until RCMP indicate they can be removed)
2. Arrange for first aid or an ambulance for any injured persons, place flashers or reflectors on the roadway as necessary, to secure site from further injuries

3. Assist any injured persons until emergency personnel arrive
4. Report the accident to the Project Superintendent immediately
5. Report the accident to the Contract Administrator, as soon as possible
6. The TCS updates DriveBC and the relevant stakeholders of the incident (Appendix A)
7. Refrain from entering into a dispute with any occupant(s) of vehicles or bystanders
8. Make no admission of liability or offer any settlement of claims
9. Report the accident to all necessary authorities
10. Gather as much information as possible about the accident (i.e. time, date, pictures, etc.
11. Complete, properly and thoroughly, an incident report applicable to the circumstance (See Appendix C)
12. If required (due to full closure), the TCS will implement a traffic notification and detour to accommodate the continuing traffic.

4.5. Notification

Emergency Services will be contacted if the incident warrants them attending the scene. The Project Superintendent will inform any crews working within the incident area of the incident and the possibility of emergency crews entering the work zone. The Contract Administrator will be notified of any incident on the site by the Project Superintendent. In an event of significance (fatality, serious injury, highway closure) the MoTI Area Manager will also be notified. The public will be notified of the incident / potential delays; if pertinent; through radio broadcasts via the RCMP detachment and phone notifications through EAC staff. DriveBC will also be updated as conditions change.

5. Implementation Plan

5.1. Traffic Control Supervisor (TCS)

The Traffic Control Supervisor for this project will be assigned. The designated TCS will be on site during most regular working hours and will be on call otherwise. Under TCS guidance and direction, Traffic Control Personnel will be responsible for all the traffic control required by this project. It is the responsibility of the TCS to ensure compliance with all traffic control procedures and also ensure that the daily documentation is completed properly. The responsibilities include all the procedures outlined in the MoTI Traffic Control Manual for Work on Roadways and the Workers' Compensation Board of British Columbia's Occupational Health and Safety Regulation.

The TCS, or designate, will respond to calls from the RCMP, Contract Administrator, or key stakeholders concerning traffic control and shall remedy any deficiencies that exist in a timely manner. All Traffic Control personnel will respond (and notify the TCS) to inquiries from the public and any affected stakeholders.

The TCS (or designate) will also be responsible to ensure that:

1. The required traffic control devices are in place and these devices are properly maintained and checked constantly throughout the construction period and after hours.
2. Inspection of the site has been done to ensure there are no potentially dangerous issues, which may affect the safety to drivers or personnel involved in this operation.
3. All personnel involved in the traffic control setups / removals have been adequately trained as per requirements outlined in this document.
4. Each member of the traffic control operation wears the required personal protective clothing and equipment as per WorkSafeBC regulations.
5. All TCP are positioned in a safe location clear of all potential hazards.
6. All TCP are performing their duties competently and safely.
7. If an incident occurs, the TCS will respond immediately in a safe and proper manner.



Appendix A: Project Contact List

Emergency – Police, Fire, Ambulance

Non-Emergency Police (RCMP-Penticton BC)

Non-Emergency Fire (Fire & Rescue-Penticton BC)

Non-Emergency Ambulance (Penticton BC)

911

250-492-4300

250-490-2300

250-490-8337

Stakeholders			
Contact		Phone	Alternate
WorkSafeBC		Business Hours: 888-967-5377	After Hours: 888-922-4357
Provincial Emergency Program (PEP)		800-663-3456	
Fortis Emergency		866-436-7847	
Telus		611	
BC Gas		800-663-9911	
Drive BC		800-550-4997	
City of Penticton		City Hall: 250-490-2400	After Hours: 250-490-2324
Commercial Vehicle Safety & Enf. (CVSE) – District Manager Perry Therrien	s.17	Mobile:	Office: 250-861-7381
Argo Road Maintenance – Area Superintendent Mark Stahl	s.22	Mobile:	Office / Call Centre: 800-663-7623
Westcana Electric – Supervisor Jamie Hill	s.22	Mobile:	Office: 250-491-9080
Emil Anderson Construction Inc.			
Contact	Title	Phone	Alternate
Brian Atwell	Senior Project Manager	Office: 250-762-9999	Mobile: s.22
Collin Blonarowitz	General Superintendent	Office: 250-762-9999	Mobile: s.22
Kyle Jones	Project Superintendent	Office: 250-762-9999	Mobile: s.22
Charles Finch	Manager Loss and Prevention	Office: 604-794-7414	Mobile: s.22



Penticton Indian Band			
Contact	Title	Phone	Email
TRUE Consulting – Dave Pritchard	Contract Administrator	Office 250-801-8783	Mobile: s.22
Good Relations – Bill Eisenhauer	Communications	Office 250-383-5605	Mobile: s.22
Ministry of Transportation & Infrastructure			
Contact	Title	Phone	Email
Jeff Wiseman	Area Manager	250-490-5785	jeff.wiseman@gov.bc.ca
Rob Bitte	District Development Technician	250-809-6886	rob.bitte@gov.bc.ca



Appendix B: Traffic Control Plan Drawings

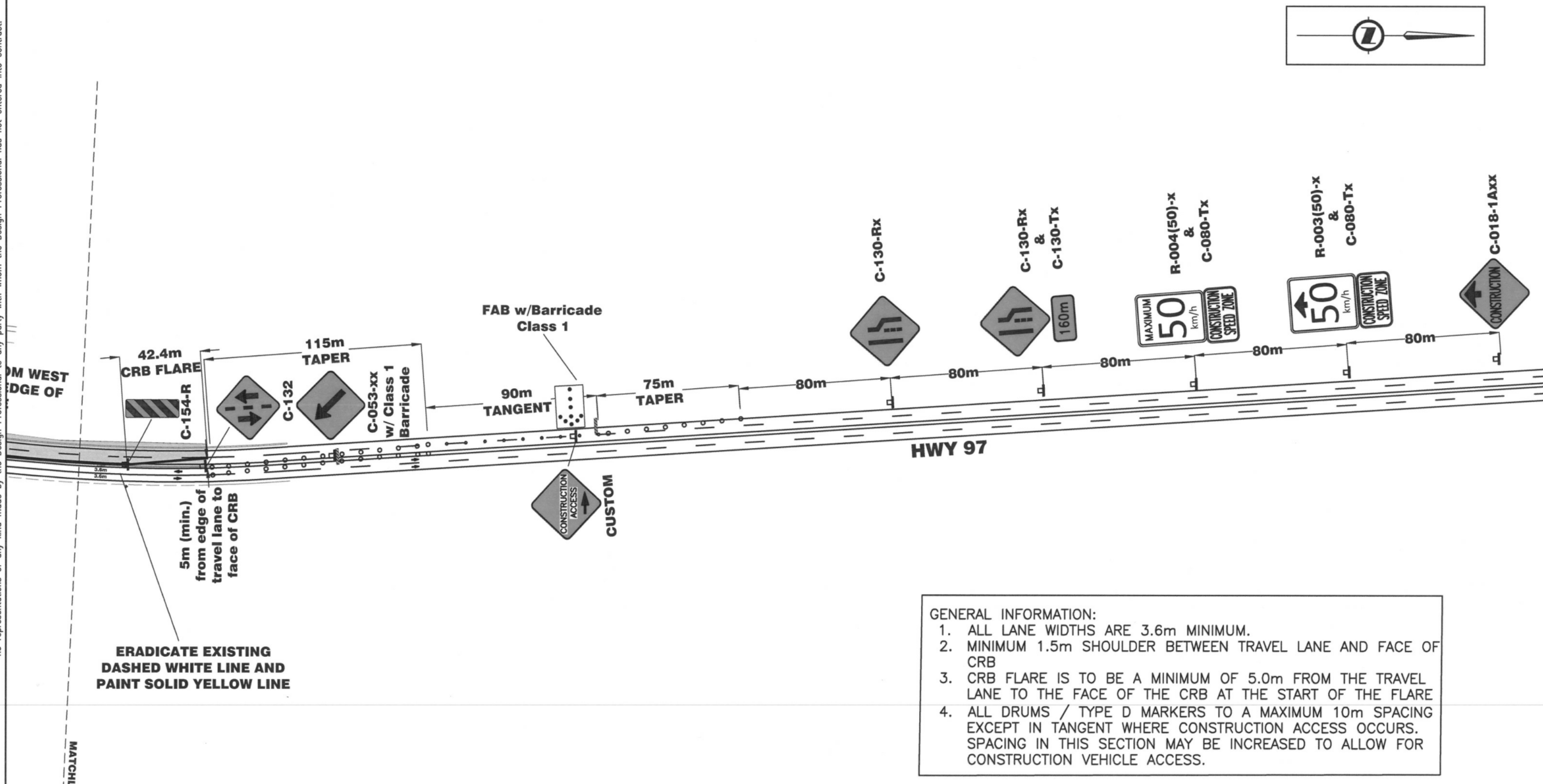
1. Advisory Signage
2. Engineered Traffic Control Plan Drawings Stage 1
3. Engineered Traffic Control Plan Drawings Stage 2 (TBD)
4. Engineered Traffic Control Plan Drawings Stage 3 (TBD)



Appendix B: Advisory Signage



PROJECT: V:\Project Files\1788 - Satik Bridge & Hwy 97 & Green Ave Intersection TMP\Drawings\Hwy 97-Satik Bridge TMP-Detail Stage 1_Rev1-Jan 2-2015.dwg
PLOT DATE: 1/2/2015 2:27 PM
PLOTED BY: Boulevard Transportation



ERADICATE EXISTING
DASHED WHITE LINE AND
PAINT SOLID YELLOW LINE

- GENERAL INFORMATION:
1. ALL LANE WIDTHS ARE 3.6m MINIMUM.
 2. MINIMUM 1.5m SHOULDER BETWEEN TRAVEL LANE AND FACE OF CRB
 3. CRB FLARE IS TO BE A MINIMUM OF 5.0m FROM THE TRAVEL LANE TO THE FACE OF THE CRB AT THE START OF THE FLARE
 4. ALL DRUMS / TYPE D MARKERS TO A MAXIMUM 10m SPACING EXCEPT IN TANGENT WHERE CONSTRUCTION ACCESS OCCURS. SPACING IN THIS SECTION MAY BE INCREASED TO ALLOW FOR CONSTRUCTION VEHICLE ACCESS.

LEGEND:

○	FLEXIBLE DRUM
●	TYPE D TUBULAR MARKER
□	SIGN MARKER
▨	BARRICADE
⚠	TRAFFIC CONTROL PERSON

SEAL:

N. A. KING
29782
BRITISH COLUMBIA
ENGINEER
Jan 2, 2015

REVISIONS		0 25m 50m 100m			
1	ADDED CRB	JAN 2-2015	DESIGNED: NK	DRAWN: mjo	CHECKED: NK
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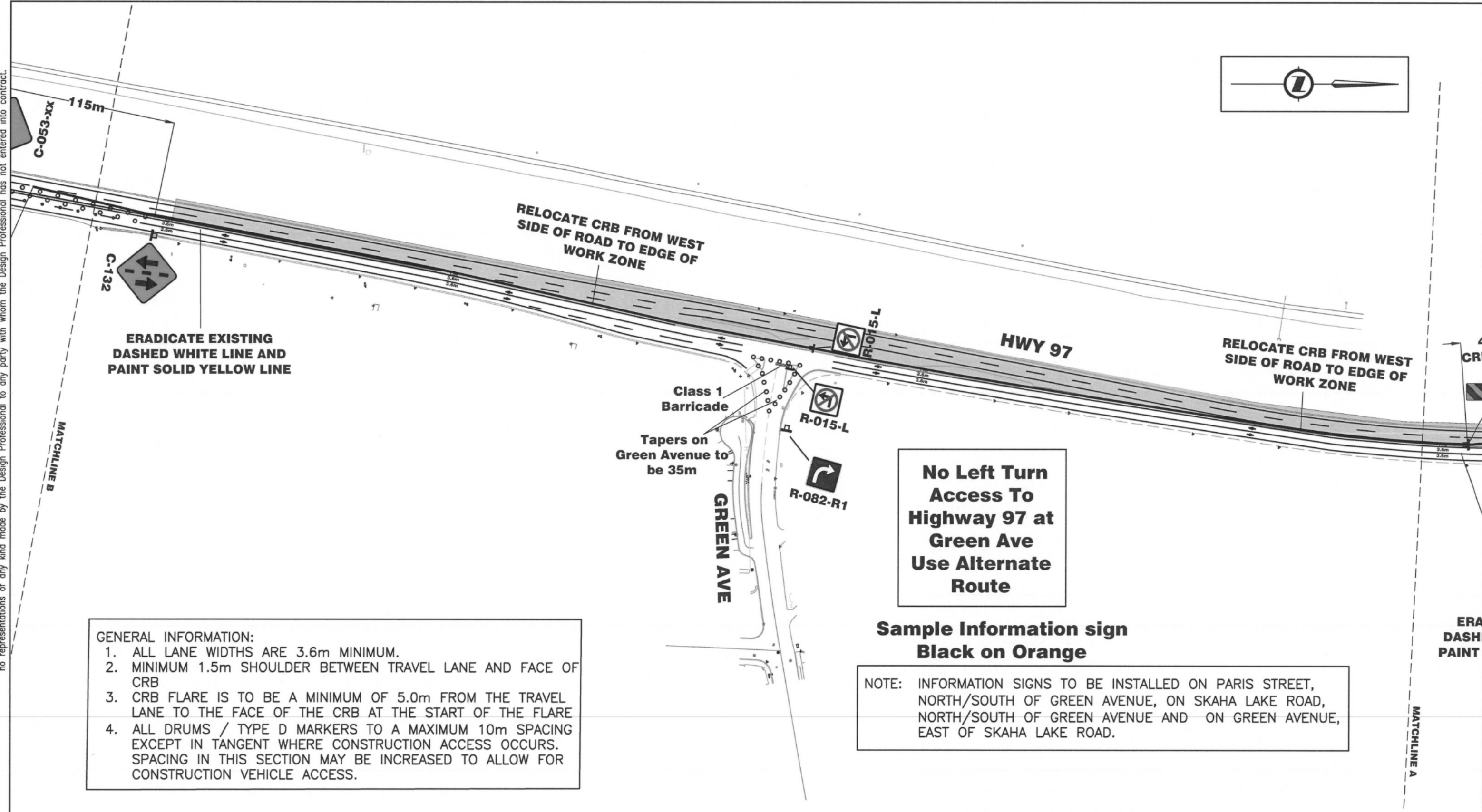
PROJECT NO:	1788	DRAWING NO:	1788_LC-1
DATE:	DEC 24-2014	REVISION:	1

TITLE: STAGE 1
HWY 97 SB MEDIAN CROSS OVER
SATIK BRIDGE/HIGHWAY 97 TMP

Boulevard
TRANSPORTATION

WATT
Consulting Group
Since 1983

PROJECT: V:\Project Files\1788 - Satik Bridge & Hwy 97 & Green Ave Intersection TMP\Draw\Hwy 97 - Satik Bridge TMP - Detour Stage 1_Rev1.dwg
PLOT DATE: 1/2/2015 2:27 PM
PLOTTED BY: Boulevard Transportation



- GENERAL INFORMATION:
1. ALL LANE WIDTHS ARE 3.6m MINIMUM.
 2. MINIMUM 1.5m SHOULDER BETWEEN TRAVEL LANE AND FACE OF CRB
 3. CRB FLARE IS TO BE A MINIMUM OF 5.0m FROM THE TRAVEL LANE TO THE FACE OF THE CRB AT THE START OF THE FLARE
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- LEGEND:
- FLEXIBLE DRUM
 - TYPE D TUBULAR MARKER
 - SIGN MARKER
 - ▨ BARRICADE
 - ⚠ TRAFFIC CONTROL PERSON

**No Left Turn
Access To
Highway 97 at
Green Ave
Use Alternate
Route**

**Sample Information sign
Black on Orange**

NOTE: INFORMATION SIGNS TO BE INSTALLED ON PARIS STREET, NORTH/SOUTH OF GREEN AVENUE, ON SKAHA LAKE ROAD, NORTH/SOUTH OF GREEN AVENUE AND ON GREEN AVENUE, EAST OF SKAHA LAKE ROAD.

SEAL: PROFESSIONAL
N. A. KING
29782
BRITISH COLUMBIA
ENGINEER
Jan 2, 2015

REVISIONS	
1	JAN 2-2015
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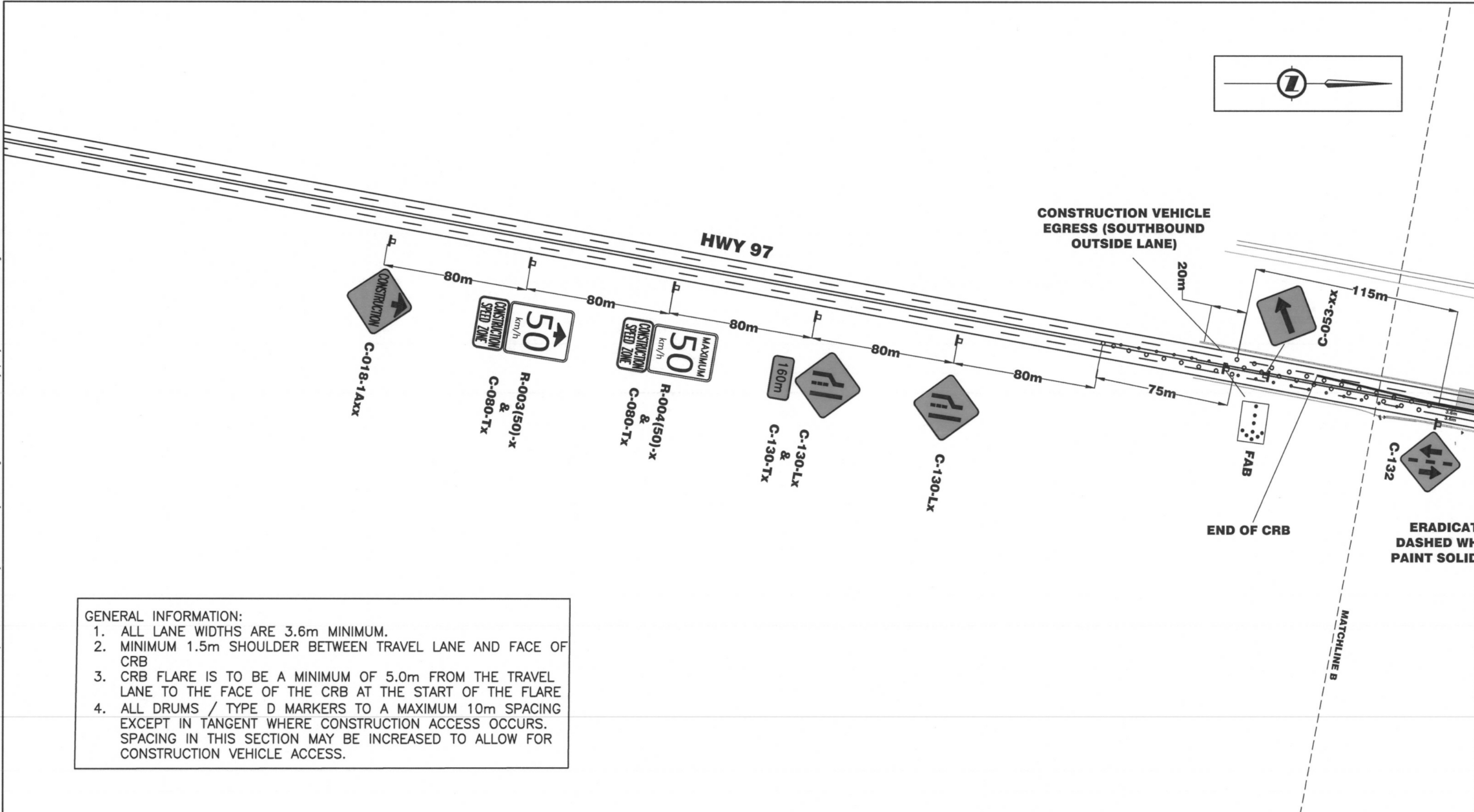
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DRAWN: mjo			
CHECKED: NK			
APRVD: ADDED CRB			
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DATE: DEC 24-2014		REVISION: 1	

TITLE: STAGE 1
HWY 97 SB MEDIAN CROSS OVER
SATIK BRIDGE/HIGHWAY 97 TMP

Boulevard TRANSPORTATION

WATT Consulting Group Since 1983

PROJECT: V:\Project Files\1788 - Satik Bridge & Hwy 97 & Green Ave Intersection TMP\Draw\Hwy 97-Satik Bridge TMP-Debut Stage 1_Rev1.dwg
PLOT DATE: 1/2/2015 2:28 PM
PLOTTER: B:\Boulevard Transportation



GENERAL INFORMATION:

1. ALL LANE WIDTHS ARE 3.6m MINIMUM.
2. MINIMUM 1.5m SHOULDER BETWEEN TRAVEL LANE AND FACE OF CRB
3. CRB FLARE IS TO BE A MINIMUM OF 5.0m FROM THE TRAVEL LANE TO THE FACE OF THE CRB AT THE START OF THE FLARE
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- LEGEND:**
- FLEXIBLE DRUM
 - TYPE D TUBULAR MARKER
 - ⏏ SIGN MARKER
 - ▬ BARRICADE
 - ⤴ TRAFFIC CONTROL PERSON

SEAL: PROFESSIONAL ENGINEER
N. A. KING
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Jan 2, 2015

REVISIONS		0 25m 50m 100m			
1	ADDED CRB	JAN 2-2015	DESIGNED: NK	DRAWN: mjo	CHECKED: NK
2			APRVD: NK		
3			DESIGN VEHICLE:	DESIGN SPEED:	
4				70 km/h	
5			PROJECT NO:	DRAWING NO:	
6			1788	1788_LC-3	
7			DATE:	REVISION:	
8			DEC 24-2014	1	
9					

TITLE: STAGE 1
HWY 97 SB MEDIAN CROSS OVER
SATIK BRIDGE/HIGHWAY 97 TMP

Boulevard TRANSPORTATION

WATT Consulting Group
Since 1983

Appendix B: Engineered Traffic Control Plan Drawings Stage 1

1. Boulevard Transportation Drawing No. 1788_LC-1 Rev_1
2. Boulevard Transportation Drawing No. 1788_LC-2 Rev_1
3. Boulevard Transportation Drawing No. 1788_LC-3 Rev_1



Emil Anderson Construction (EAC) Inc.
Traffic Management Plan
PIBDC Contract No. 1009 – 021 – Satikw Crossing Project