

# ЗВЕЗДНЫЙ РЕЙТИНГ ДЛЯ АБДД

## ЗРАБДД

## ДЕНЬ 2

DECADE OF ACTION FOR  
**ROAD SAFETY**  
2021 - 2030

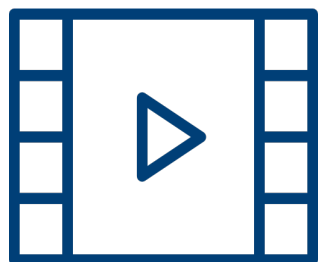
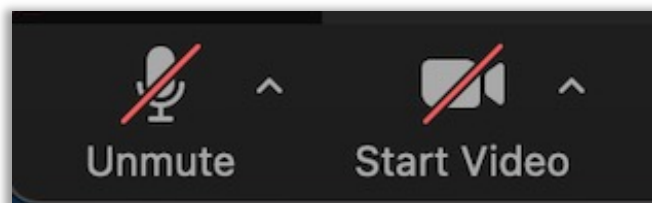
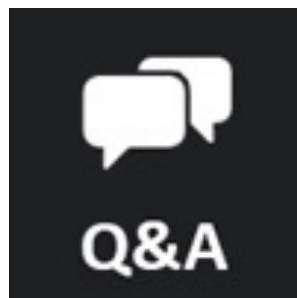
SUSTAINABLE  
DEVELOPMENT  
**GOALS**



# ПРОГРАММА



Вебинар **90 минут**  
Вопросы **15 минут**



## КООРДИНАТОР СЕМИНАРА



**Алессандра Франсойя**

Координатор по обучению и аккредитации

МЕЖДУНАРОДНАЯ ПРОГРАММА ОЦЕНКИ ДОРОГ

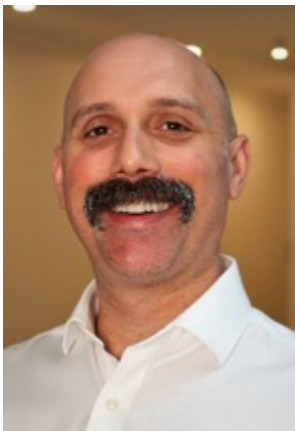
[alessandra.francoia@irap.org](mailto:alessandra.francoia@irap.org)

[www.irap.org](http://www.irap.org)





# ВЕДУЩИЕ СЕМИНАРА



КЕНН БИР

ГЛАВНЫЙ ИНЖЕНЕР  
SAFE SYSTEM SOLUTIONS PTY LTD  
+61 401 345 461

[Kenn.Beer@SafeSystemSolutions.com.au](mailto:Kenn.Beer@SafeSystemSolutions.com.au)  
[www.SafeSystemSolutions.com.au](http://www.SafeSystemSolutions.com.au)



ГРЕГ СМИТ

ГЛОБАЛЬНЫЙ ДИРЕКТОР ПРОГРАММЫ  
INTERNATIONAL ROAD ASSESSMENT PROGRAMME  
+63 995 144 9627

[greg.smith@irap.org](mailto:greg.smith@irap.org)  
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ЛЮК РОДЖЕРС

МЕНЕДЖЕР ПО ГЛОБАЛЬНЫМ ОПЕРАЦИЯМ  
INTERNATIONAL ROAD ASSESSMENT PROGRAMME  
+61 406 675 416

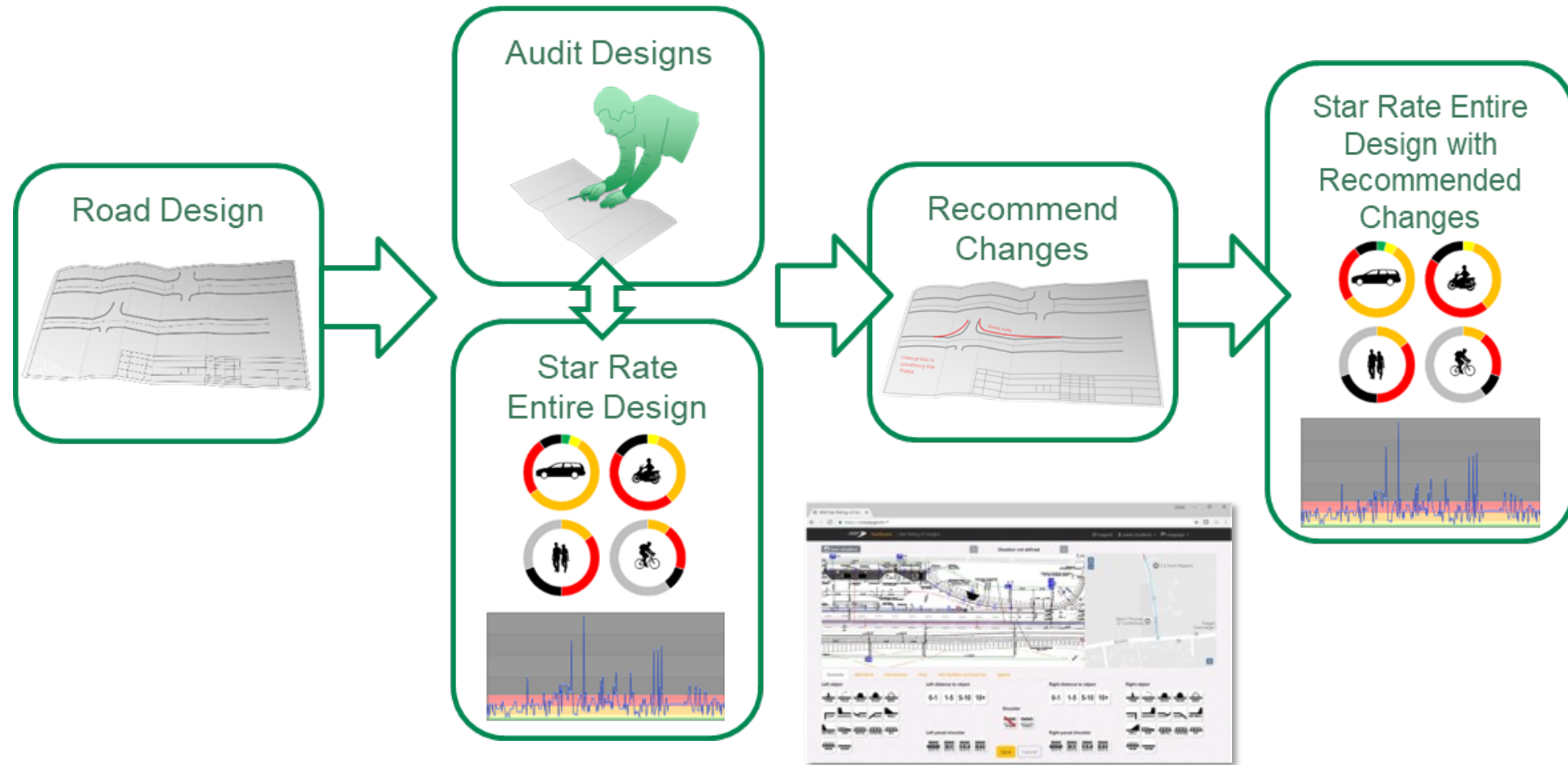
[luke.rogers@irap.org](mailto:luke.rogers@irap.org)  
[www.irap.org](http://www.irap.org)



# НА ПОВЕСТКЕ ДНЯ

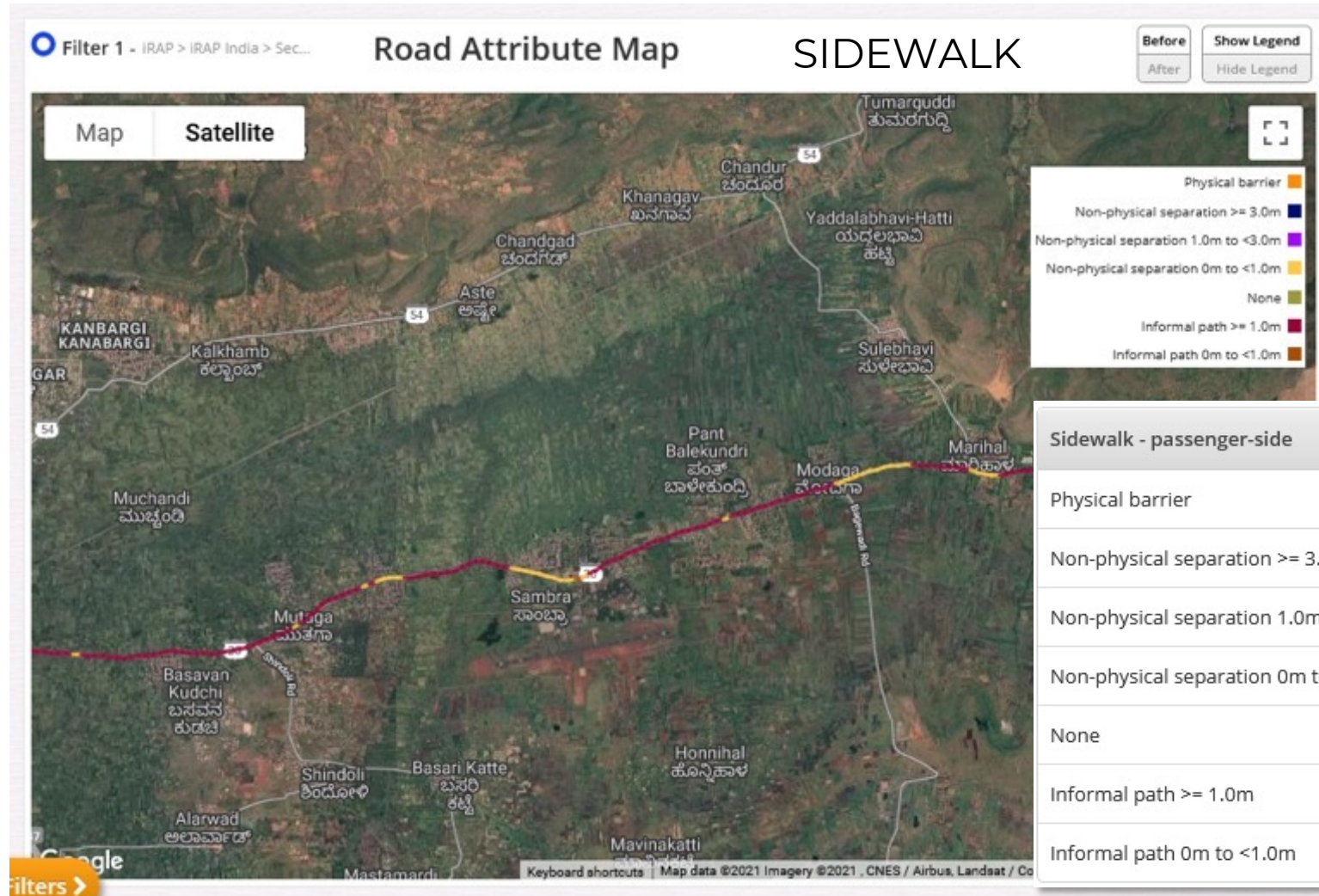
- Краткий обзор дня 1
- Обзор Задания 1
- Акцент на подходе Уровень 2
- Акцент на подходе Уровень 3
- Вопросы
- Изучение ситуации
- Требования к возможностям
- Стандартное техническое задание
- Вопросы
- Введение в упражнение 2

# КАК? ПОДХОД УРОВНЯ 2



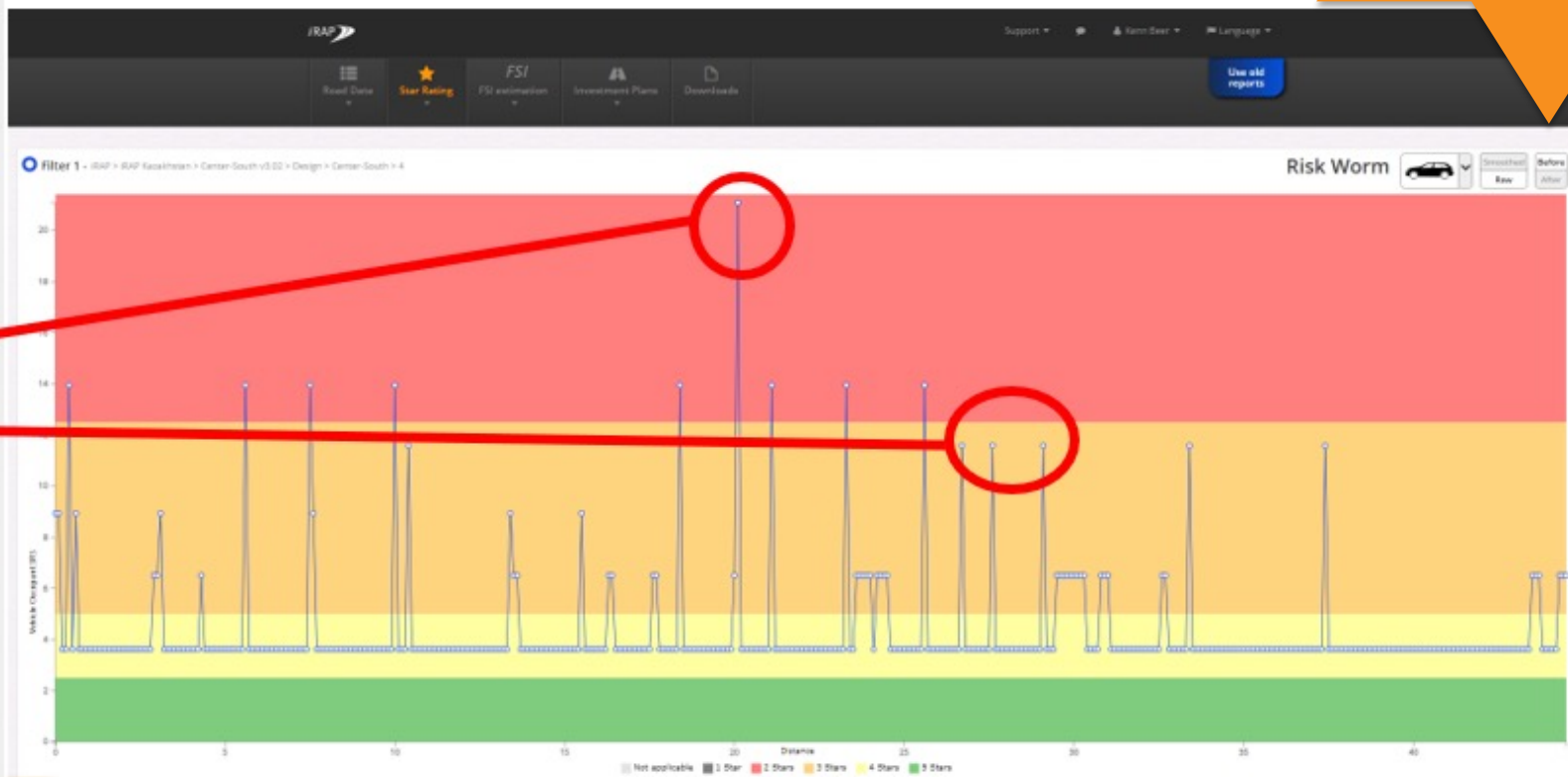
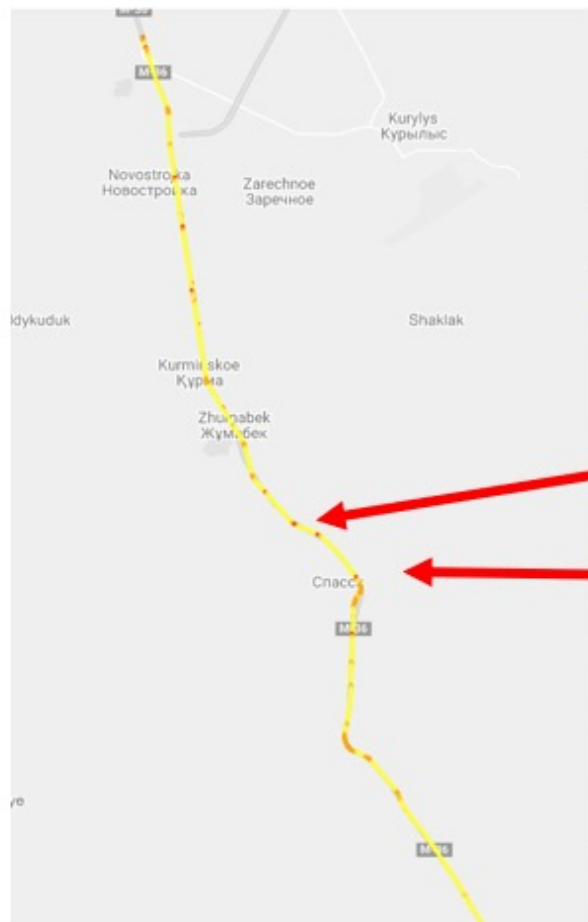
# КАК? ПОДХОД УРОВНЯ 2

Цель:  
%  
тротуара



# КАК? ПОДХОД УРОВНЯ 2

Цель:  
3 звезды  
или  
выше





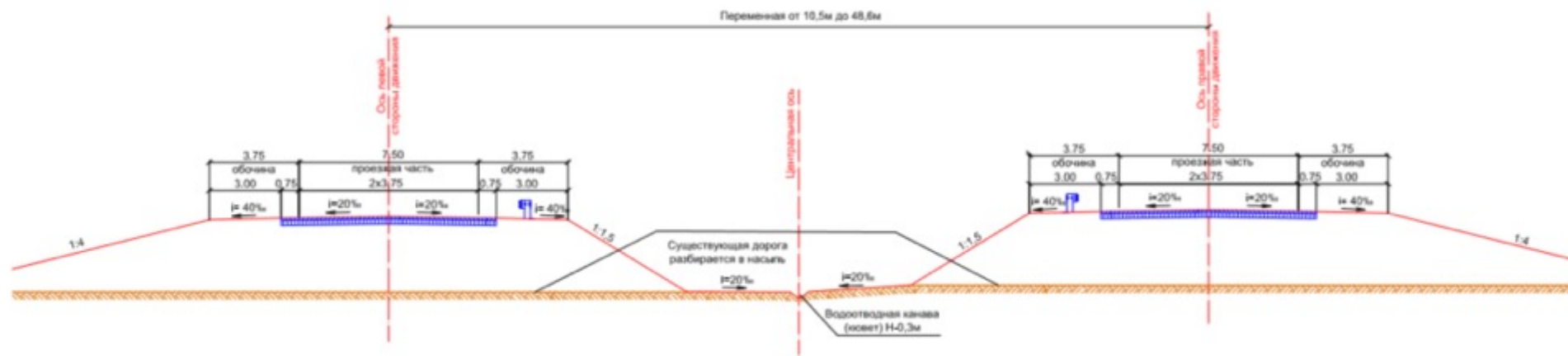
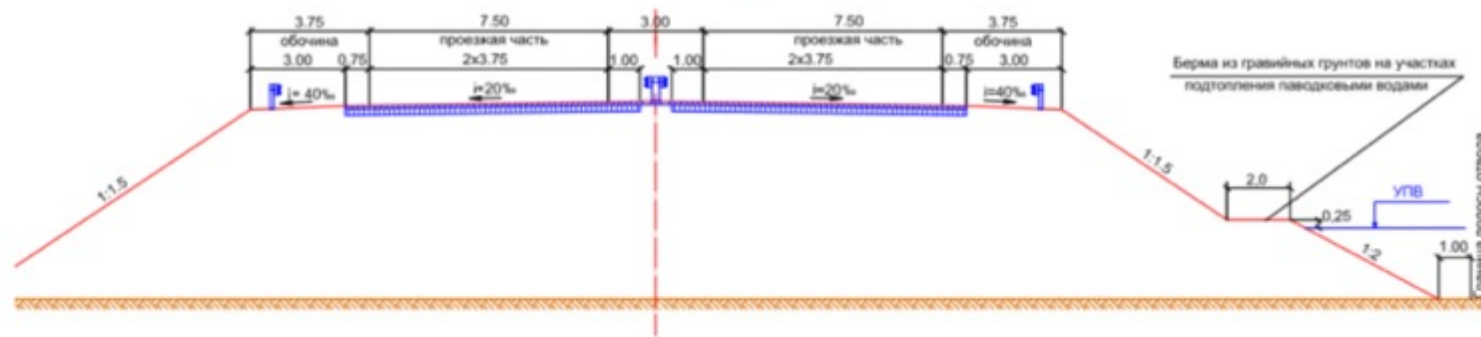
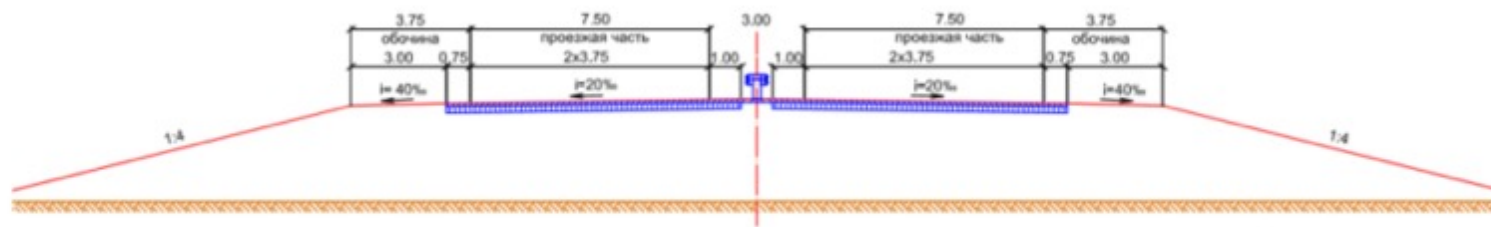
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Цель:  
3 звезды  
или выше

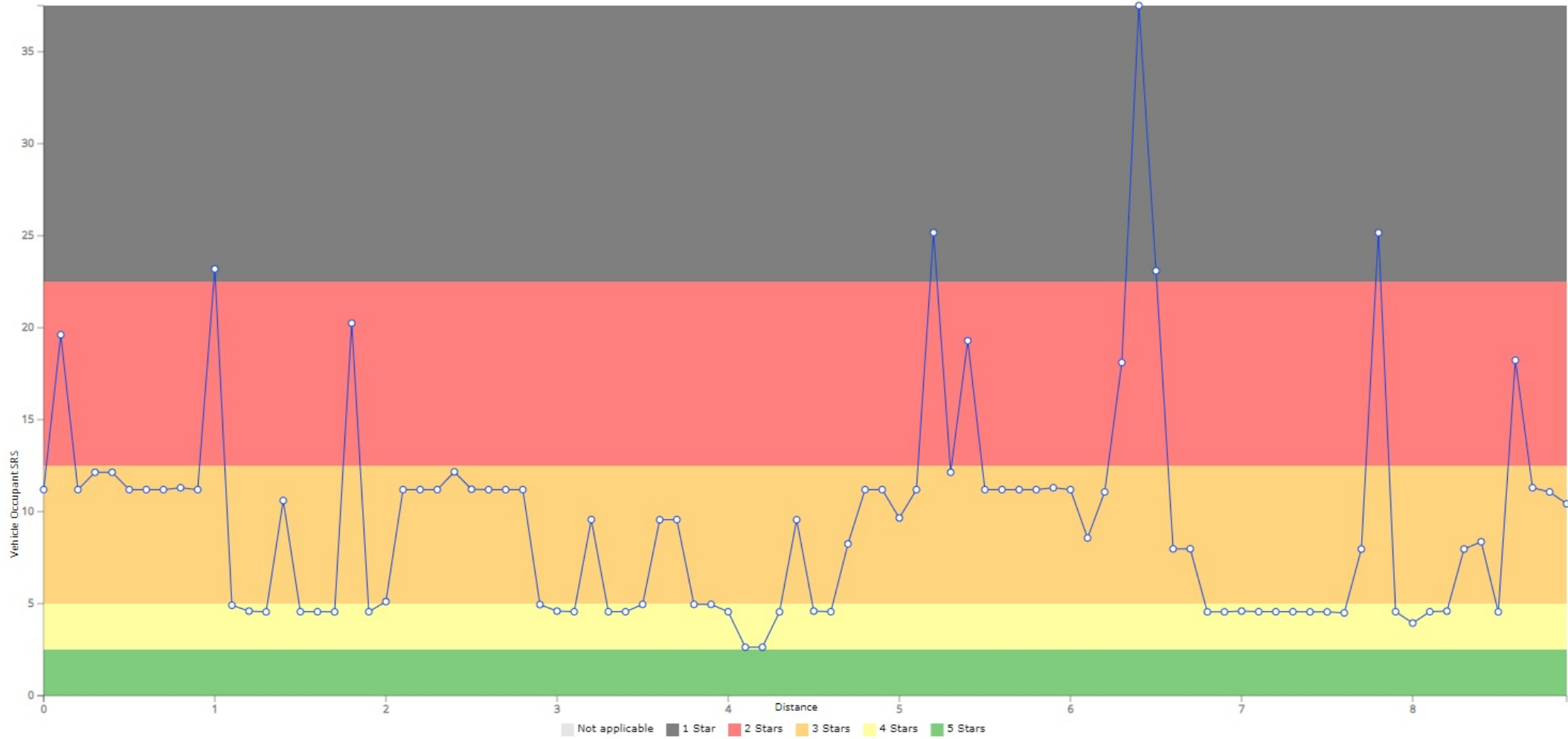


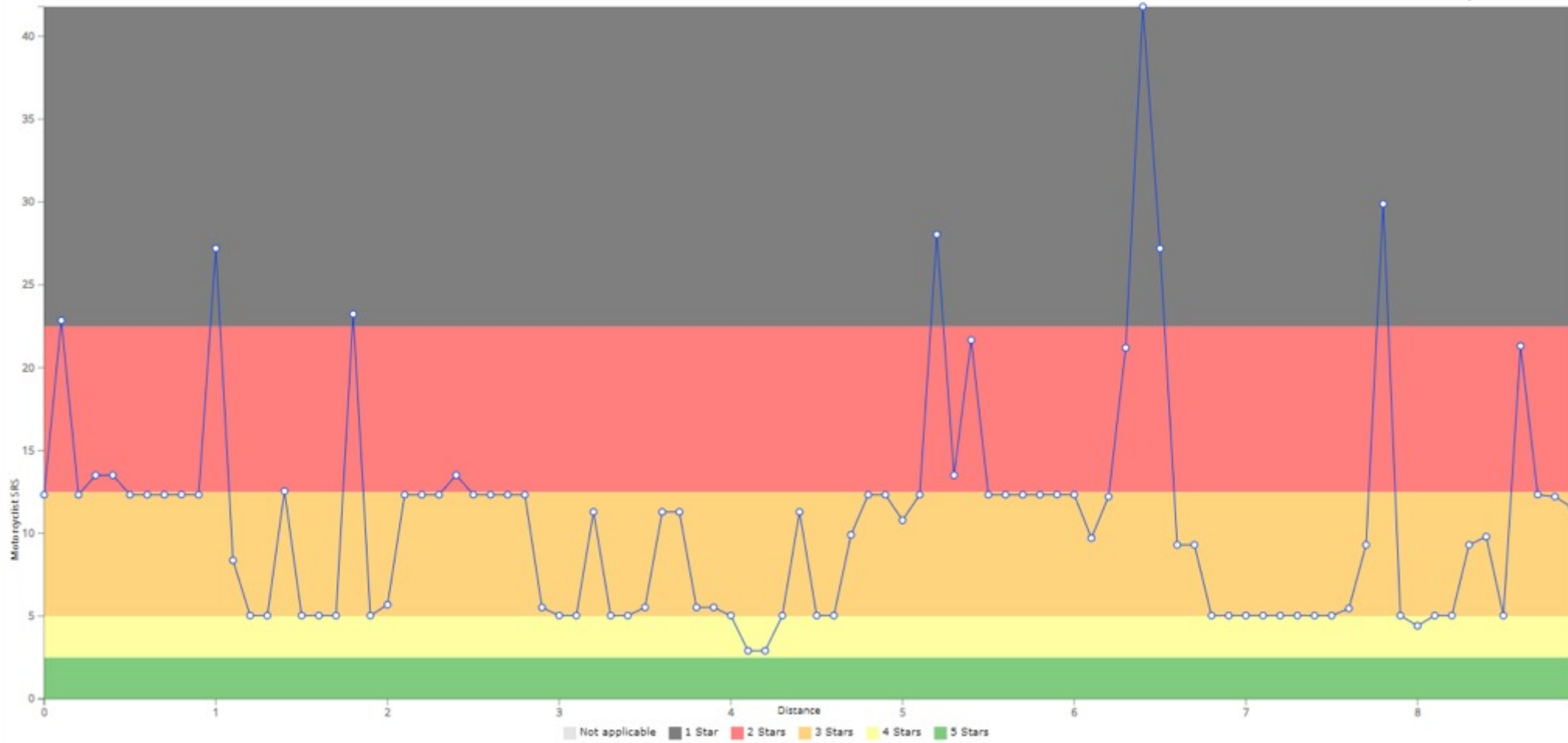
Not applicable 1 Star 2 Stars 3 Stars 4 Stars 5 Stars



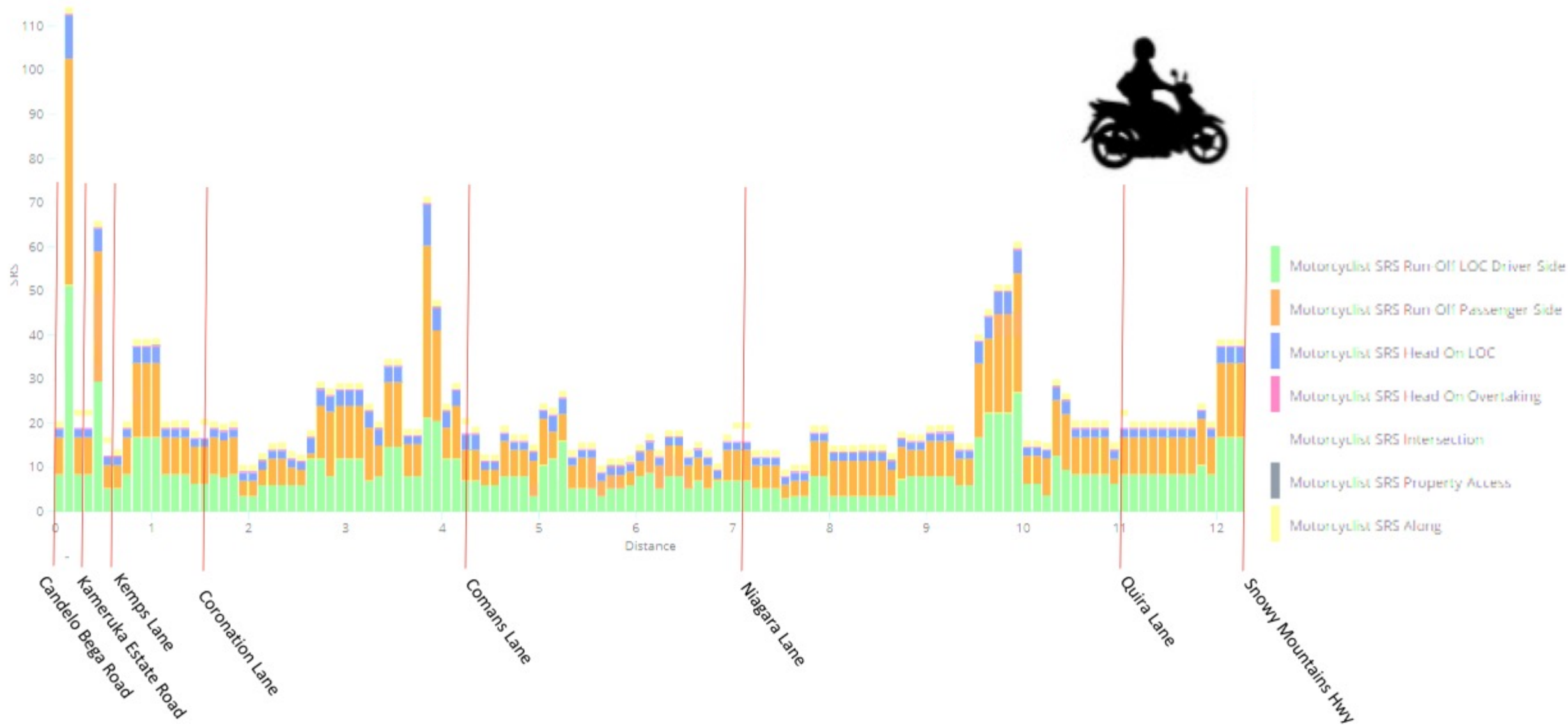


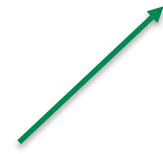
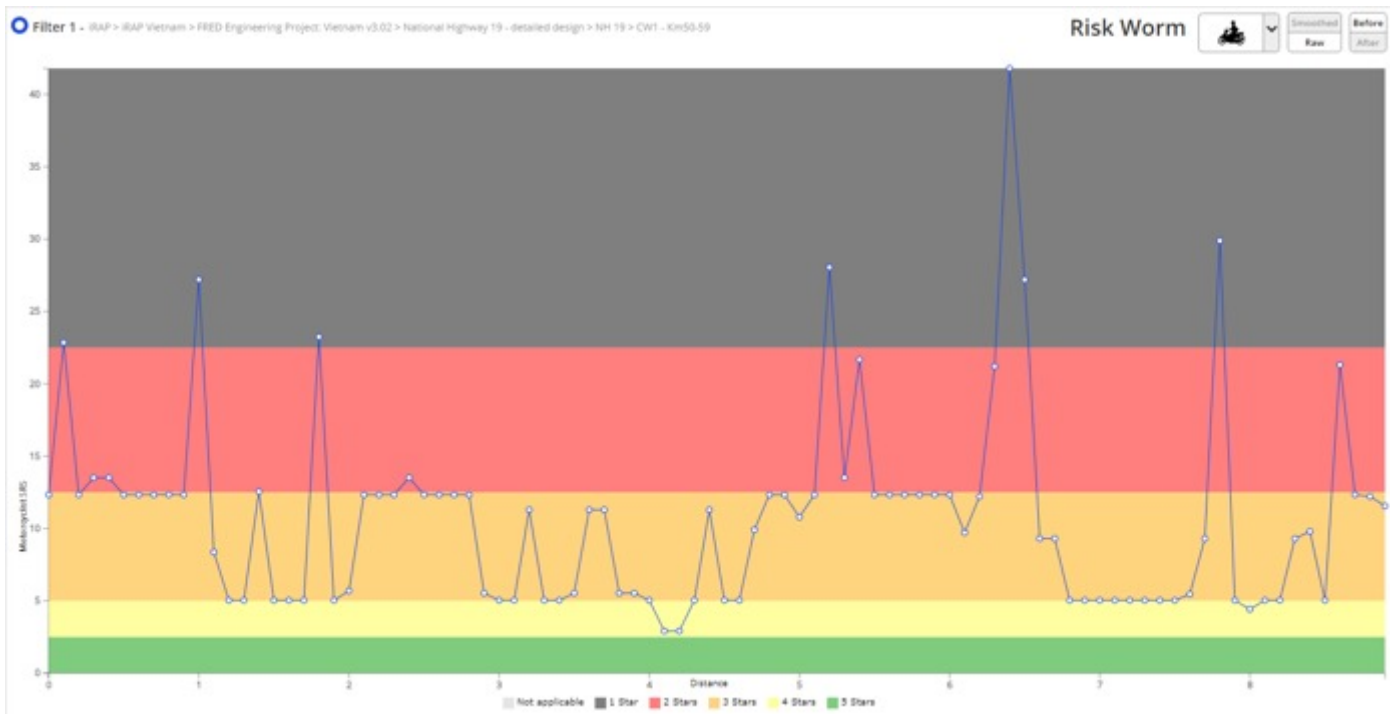
Smoothed Raw Before After











# КАК? ПОДХОД УРОВНЯ 2

Цель:  
3 звезды  
или выше



Not applicable 1 Star 2 Stars 3 Stars 4 Stars 5 Stars



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Filter by last name

All

Name/Organisation (Alphabetically)	Country	Survey	Coding	Analysis and Reporting	SR4S Quality Review
<b>Gabriel Locatte Agostin</b> Dynatest	Brazil			Status = I Since date: 09/03/21 Expiry date: 08/03/22	
<b>Aizaz Ahmed</b> Traffic Engineering and Road Safety Consultants	Pakistan		Status = I Since date: 20/04/21 Expiry date: 19/04/22		
<b>Ayomide Akinpelu</b> Kwapda's Road Safety Demand (KRSD) Trust Fund	Nigeria				Status = I Since date: 05/11/21 Expiry date: 04/11/22
<b>Jefrey S Alcantara</b> RoadKorea	Philippines		Status = F Since date: 19/03/19 Expiry date: 19/10/22		
<b>Jonas S Alcantara</b> RoadKorea	Philippines		Status = F Since date: 19/03/19 Expiry date: 19/10/22		

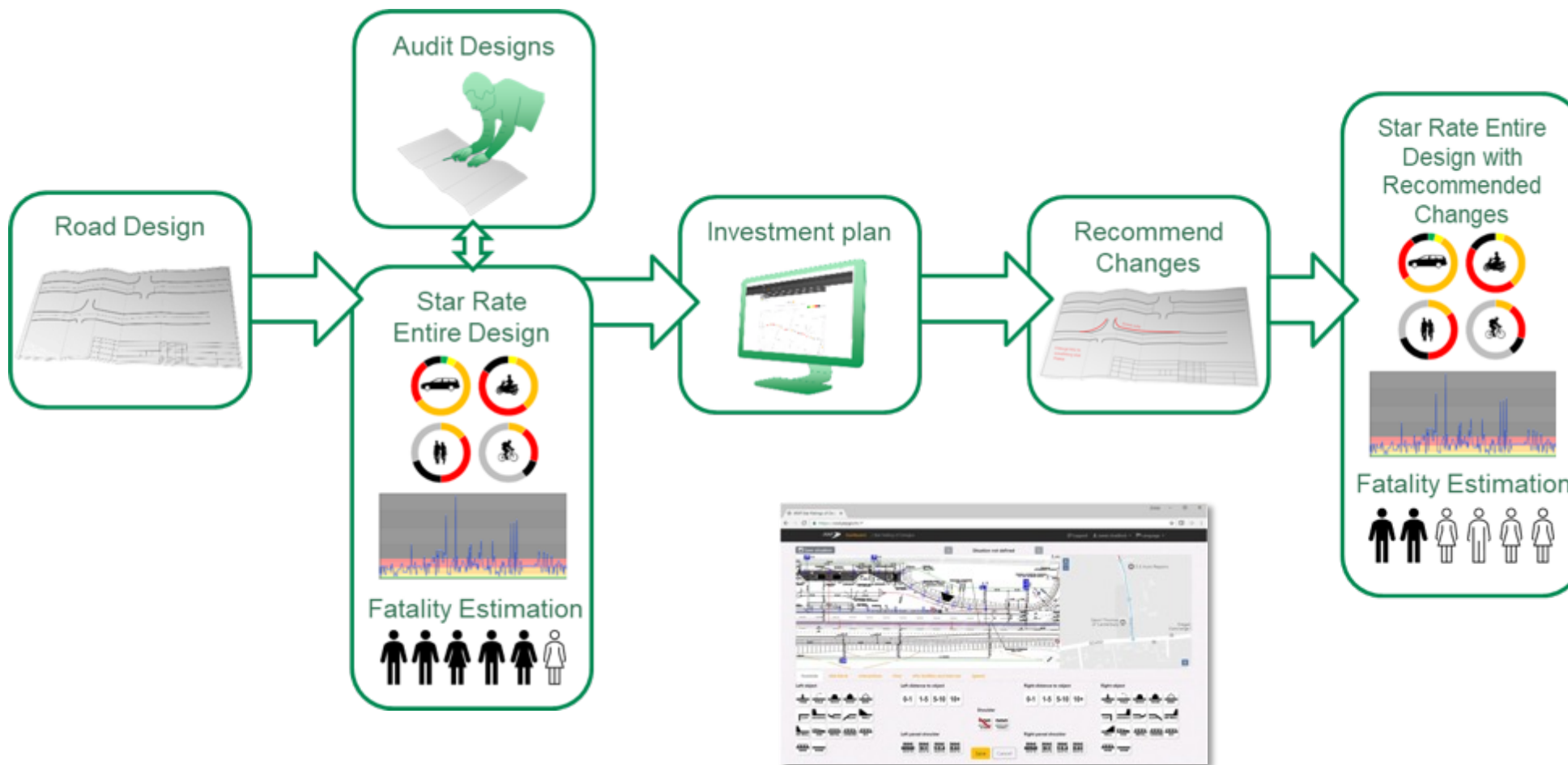


# ТРИ ФУНДАМЕНТАЛЬНЫХ ПОДХОДА

Результаты	Уровень 1	Уровень 2	Уровень 3
Звезды для конкретных проблем безопасности и рекомендаций	✓	✓	✓
Звезды за протяженность конструкции		✓	✓
Расчет смертности			✓
Инвестиционный план			✓
Можно использовать для оценки достижения целей	Частично	✓	✓

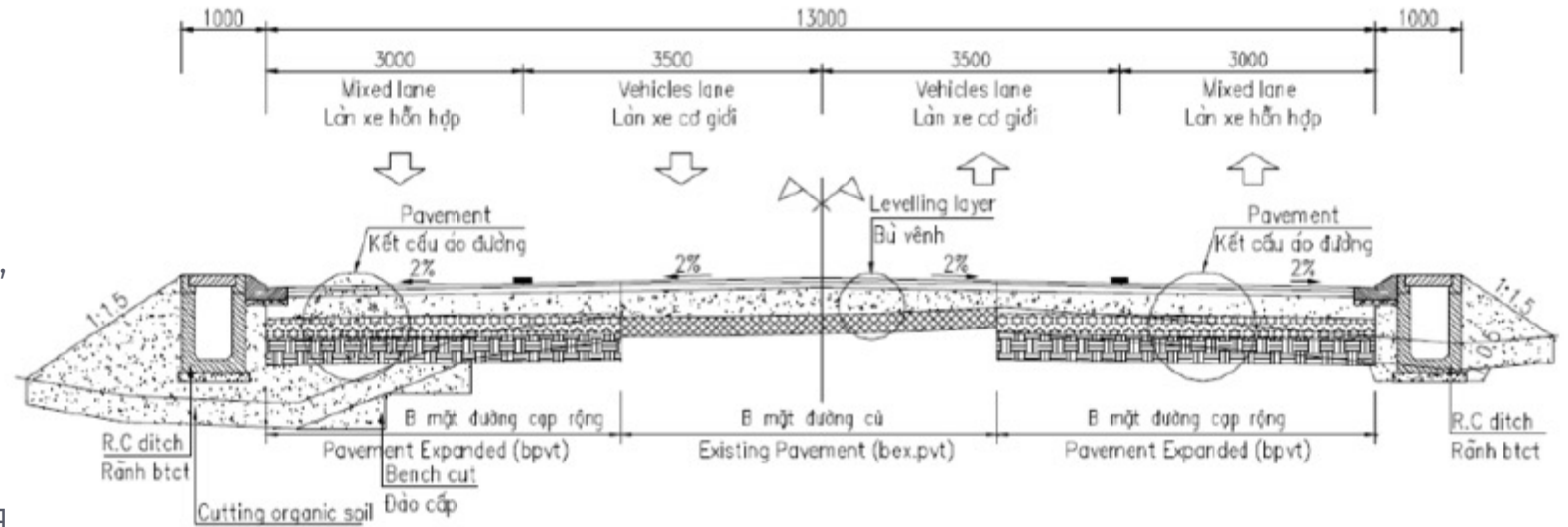


# КАК? ПОДХОД УРОВНЯ 3



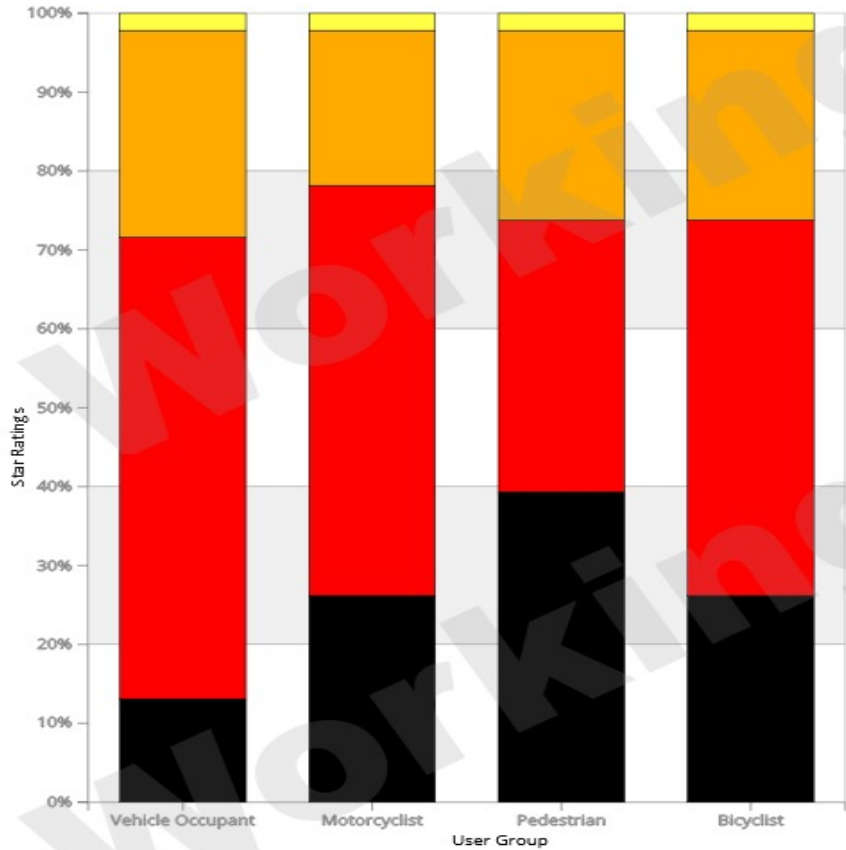
# ПРОЕКТ

- 23-километровый участок национальной автомагистрали, соединяющий два крупных города
- Модернизация, включающая новую "смешанную полосу" для мотоциклистов и велосипедистов с обеих сторон
- Пешеходные дорожки и пешеходные переходы на автобусных остановках и в деревнях
- Устройство узких обочин и разделительной полосы
- Расчетные скорости: 40 км/ч, 50 км/ч и 70 км/ч
- Цель безопасности 3 звезды или выше для всех участников дорожного движения

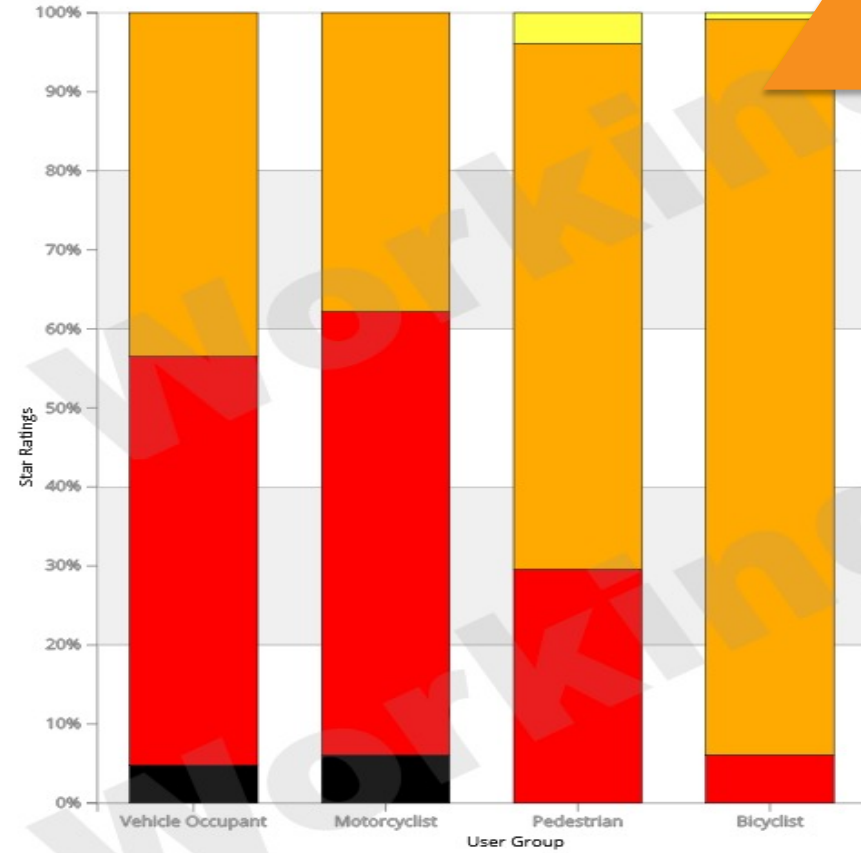


# ЗВЕЗДНЫЙ РЕЙТИНГ

## СУЩЕСТВУЮЩАЯ ДОРОГА



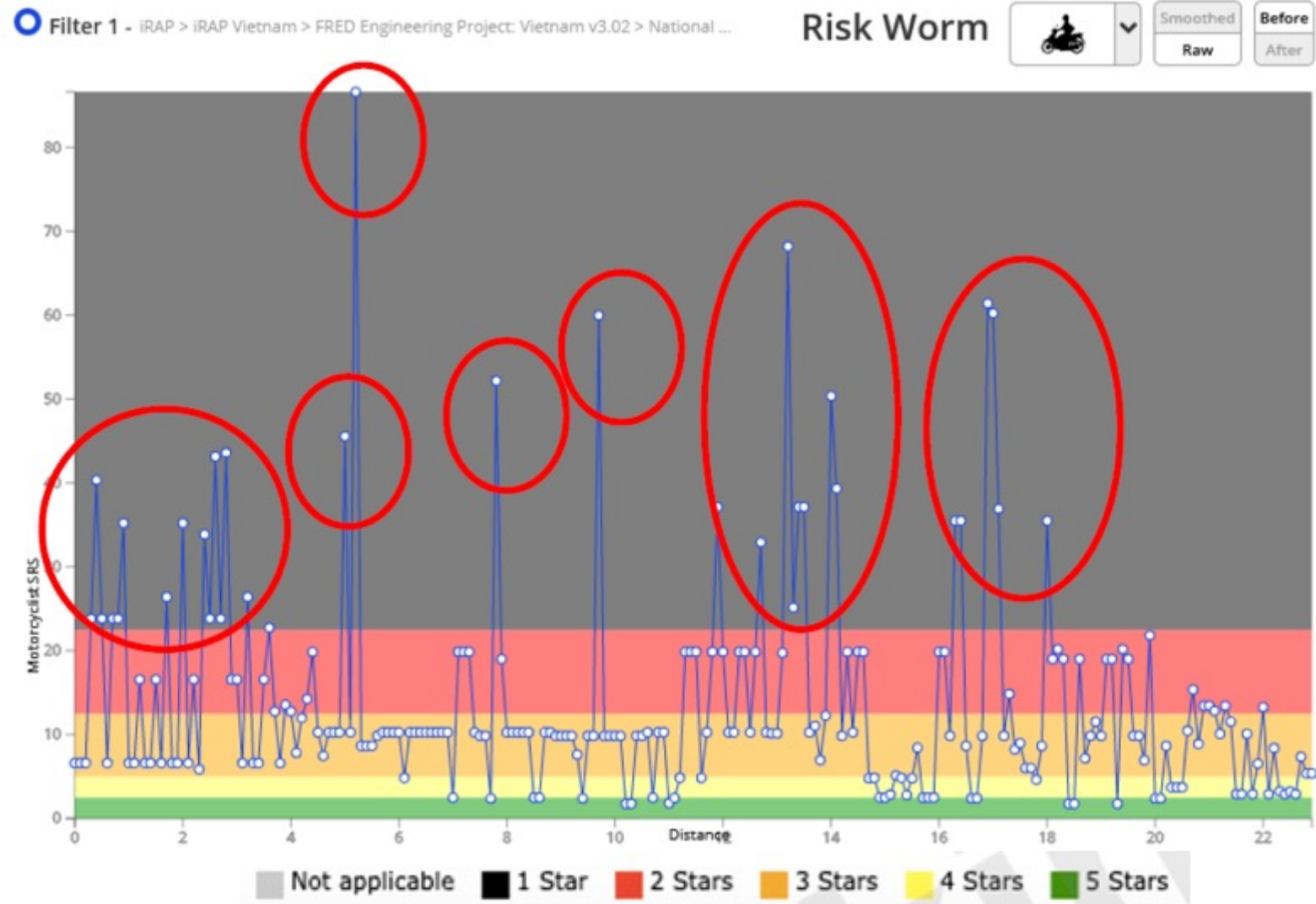
## ПРОЕКТ



Цель:  
3 звезды  
или  
выше

Not applicable 1 Star 2 Stars 3 Stars 4 Stars 5 Stars

# ДЕТАЛИЗИРОВАННЫЙ ЗР – ГРАФИК РИСКА

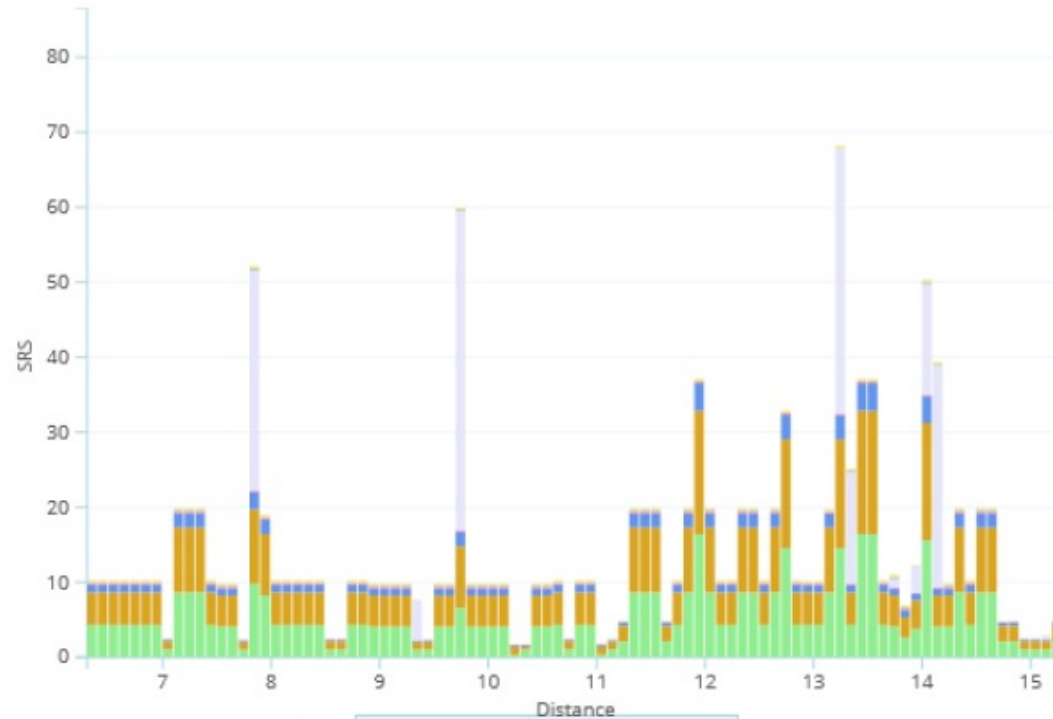


# ГРАФИК РИСКА ПО ТИПАМ ДТП

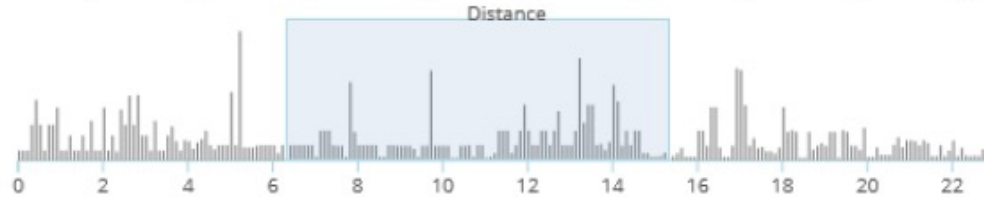
Filter 1 - iRAP > iRAP Vietnam > FRED E...

## Risk Worm By Crash Type


Smoothed Default Before  
Raw Contrast After

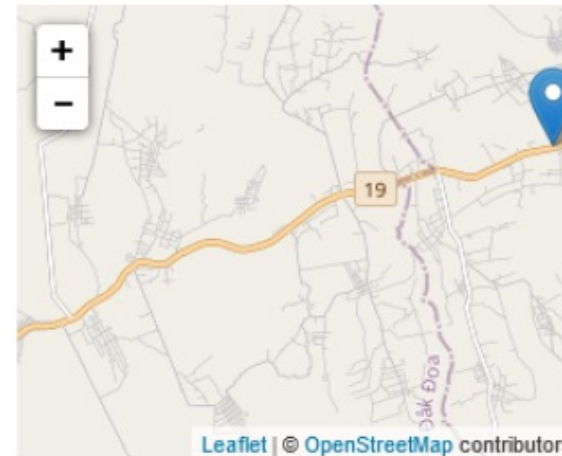


Distance	5.6
Motorcyclist Star Rating	3
Motorcyclist SRS	9.839492
Motorcyclist SRS Run-Off LOC Driver-Side	4.106736
Motorcyclist SRS Run-Off Passenger-Side	4.106736
Motorcyclist SRS Head-On LOC	0.94848
Motorcyclist SRS Head-On Overtaking	0.1824
Motorcyclist SRS Intersection	0
Motorcyclist SRS Property-Access	0.11514
Motorcyclist SRS Along	0.38



Click and drag to zoom and pan

Pan and Zoom Control







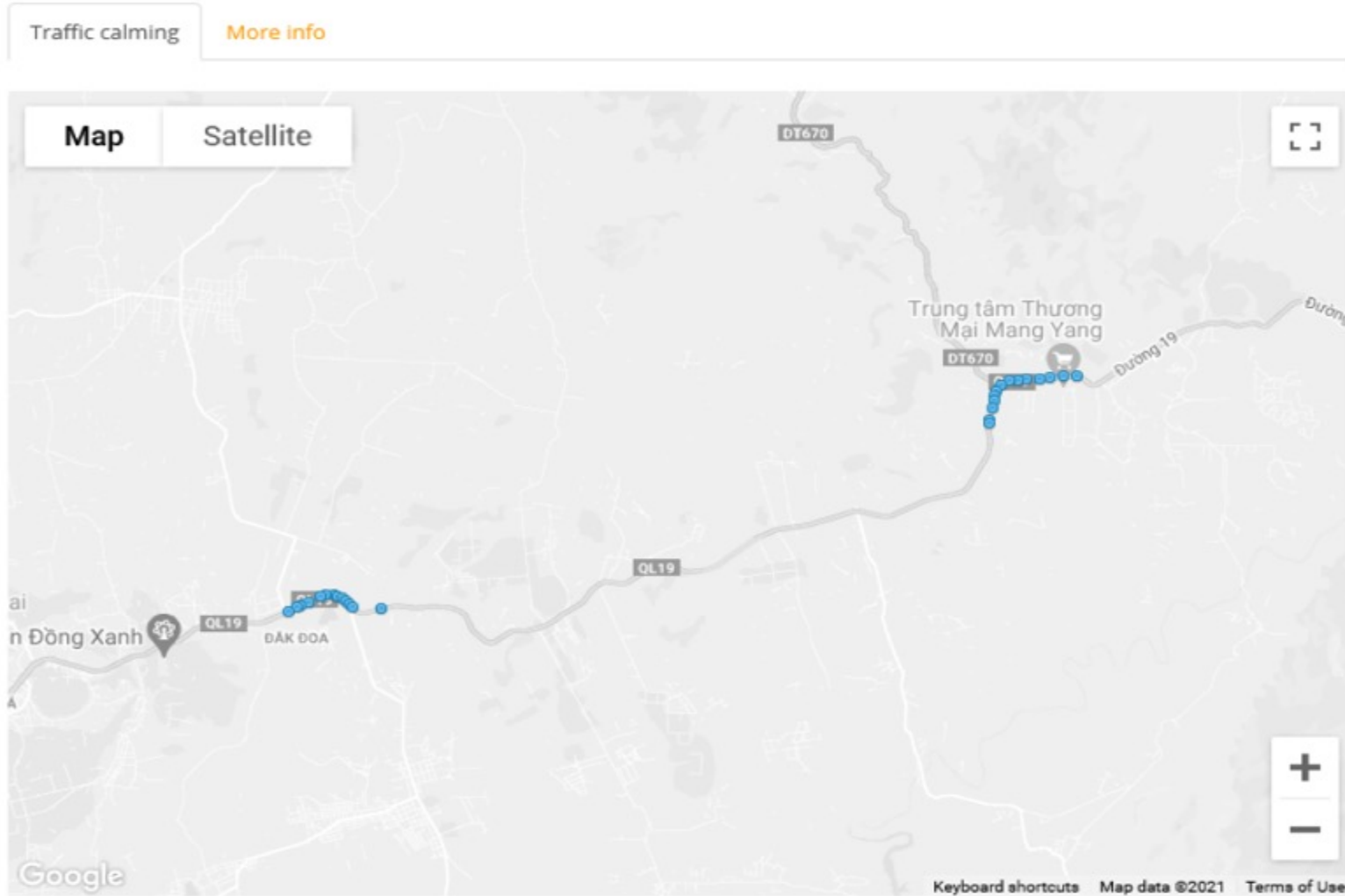
# ИНВЕСТИЦИОННЫЙ ПЛАН ПО ПОВЫШЕНИЮ БЕЗОПАСНОСТИ ДОРОГ – ПЛАН-СХЕМА

Filter 1 - iRAP > iRAP Vietnam > FRED Engineering Project: Vietnam > National Highway 19 - detailed design > NH 19 > CW4A - Km 131 130-155

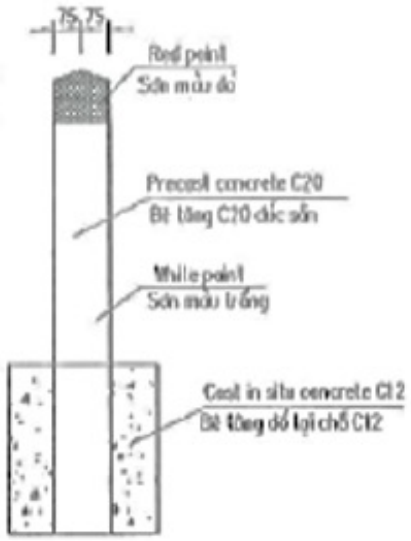








Strip Plan

Distance	0.000	0.100	0.200	0.300	0.400	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700
Improve Delineation																		
Bicycle Lane (off-road)																		
Improve curve delineation																		
Delineation and signing (intersection)																		
Central hatching																		
Upgrade pedestrian facility quality																		
Clear roadside hazards - passenger side	📍	📍	📍				📍			📍	📍	📍	📍	📍	📍	📍	📍	📍
Clear roadside hazards - driver side	📍	📍	📍				📍			📍	📍	📍	📍	📍	📍	📍	📍	📍
Roadside barriers - passenger side				📍	📍	📍		📍	📍									
Roadside barriers - driver side				📍	📍	📍		📍	📍									
Shoulder sealing passenger side (<1m)																		
Footpath provision passenger side (adjacent to road)																		
Traffic calming										📍			📍			📍		📍
Street lighting (mid-block)													📍			📍		
Street lighting (intersection)										📍								📍
Pedestrian fencing																		
Side road unsignalised pedestrian crossing										📍								📍
Footpath provision passenger side (informal path >1m)																		
Shoulder sealing driver side (<1m)																		
Shoulder sealing driver side (>1m)																		

# ИНВЕСТИЦИОННЫЙ ПЛАН ПО ПОВЫШЕНИЮ БЕЗОПАСНОСТИ ДОРОГ - КОНТРАМЕРЫ



# ЗАМЕЧАНИЯ И РЕКОМЕНДАЦИИ ПО РЕЗУЛЬТАТАМ АУДИТА БЕЗОПАСНОСТИ ДОРОЖНОГО ДВИЖЕНИЯ

Ref	Safety Concern	Risk	Star Rating (Initial Design)	Recommendation	Star Rating (with recommendations)	Client Response
3.3	<p>A feature throughout the design (particularly in the 80km/h speed zone environments) and as part of the standard layout is the use of concrete guideposts. While the auditors support the addition of delineation features, the solid concrete posts present a run-off-road hazard to an errant vehicle or motorcyclist.</p> <p>It is noted that the current Design Standards specific this post and foundation, however the auditors strongly recommend the client view this as a roadside hazard.</p> 	Medium	   	<ul style="list-style-type: none"> <li>Provide breakable guideposts throughout the route.</li> </ul>	   	

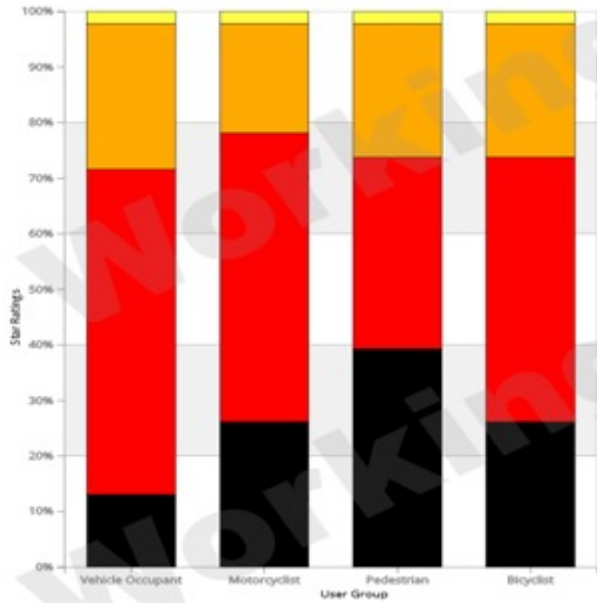
# ЗАМЕЧАНИЯ И РЕКОМЕНДАЦИИ ПО РЕЗУЛЬТАТАМ АУДИТА БЕЗОПАСНОСТИ ДОРОЖНОГО ДВИЖЕНИЯ

Ref	Safety Concern	Risk	Star Rating (Initial Design)	Recommendation	Star Rating (with recommendations)	Client Response
1.7	<p>Through densely populated areas, the flow of pedestrians is very high due to the presence of commercial activities, schools, residences, etc.</p> <p>Even if there is a covered ditch, the width of 1m is not enough to ensure the passage of pedestrians.</p> <p>If there is no sidewalk or if it is too narrow, pedestrians are forced to walk on the carriageway with the risk of being run over. The risk is higher during the rainy seasons, when possible informal footpaths may be muddy, discouraging pedestrians from using them.</p>	High	   	<ul style="list-style-type: none"> <li>Provide a sidewalk along all built-up areas. In particular, the sidewalk must be separated from the roadway (with a reasonable kerb or barrier system) and should be offset by at least 3m with a path width of at least 2m wide.</li> </ul>	   	

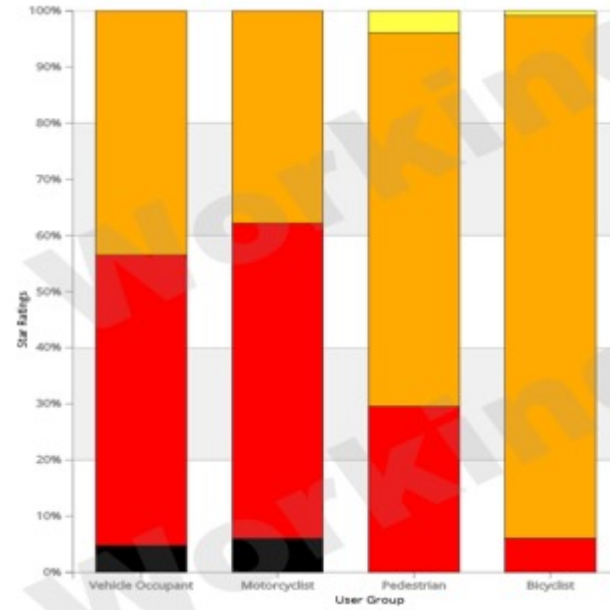


# РЕЗУЛЬТАТЫ ЗВЕЗДНОГО РЕЙТИНГА

СУЩЕСТВУЮЩАЯ ДОРОГА



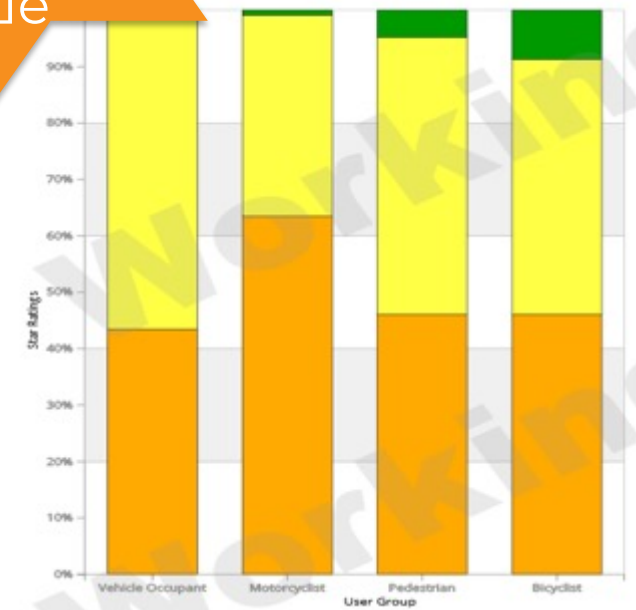
ПРОЕКТ



Цель:  
3 звезды  
или  
выше

ФИНАЛЬНЫЙ  
ПРОЕКТ

ЗРАБДД  
УРОВЕН  
Ь 3  
(ЗВЕЗДЫ  
+ СССТ+  
ИПБД)



Not applicable 1 Star 2 Stars 3 Stars 4 Stars 5 Stars

# ПРЕДПОЛАГАЕМОЕ СОКРАЩЕНИЕ КОЛИЧЕСТВА СМЕРТЕЛЬНЫХ И СЕРЬЕЗНЫХ ТРАВМ

Initial Highway Upgrade Design (Before SR4RSA)



Predicted Fatality and Serious Injuries:

Vehicle Occupants: 3.6    Motorcyclists: 22.8    Pedestrians: 2.7    Bicyclists: 6.2

**TOTAL: 35.3**



Altered Highway Upgrade Design (After SR4RSA)



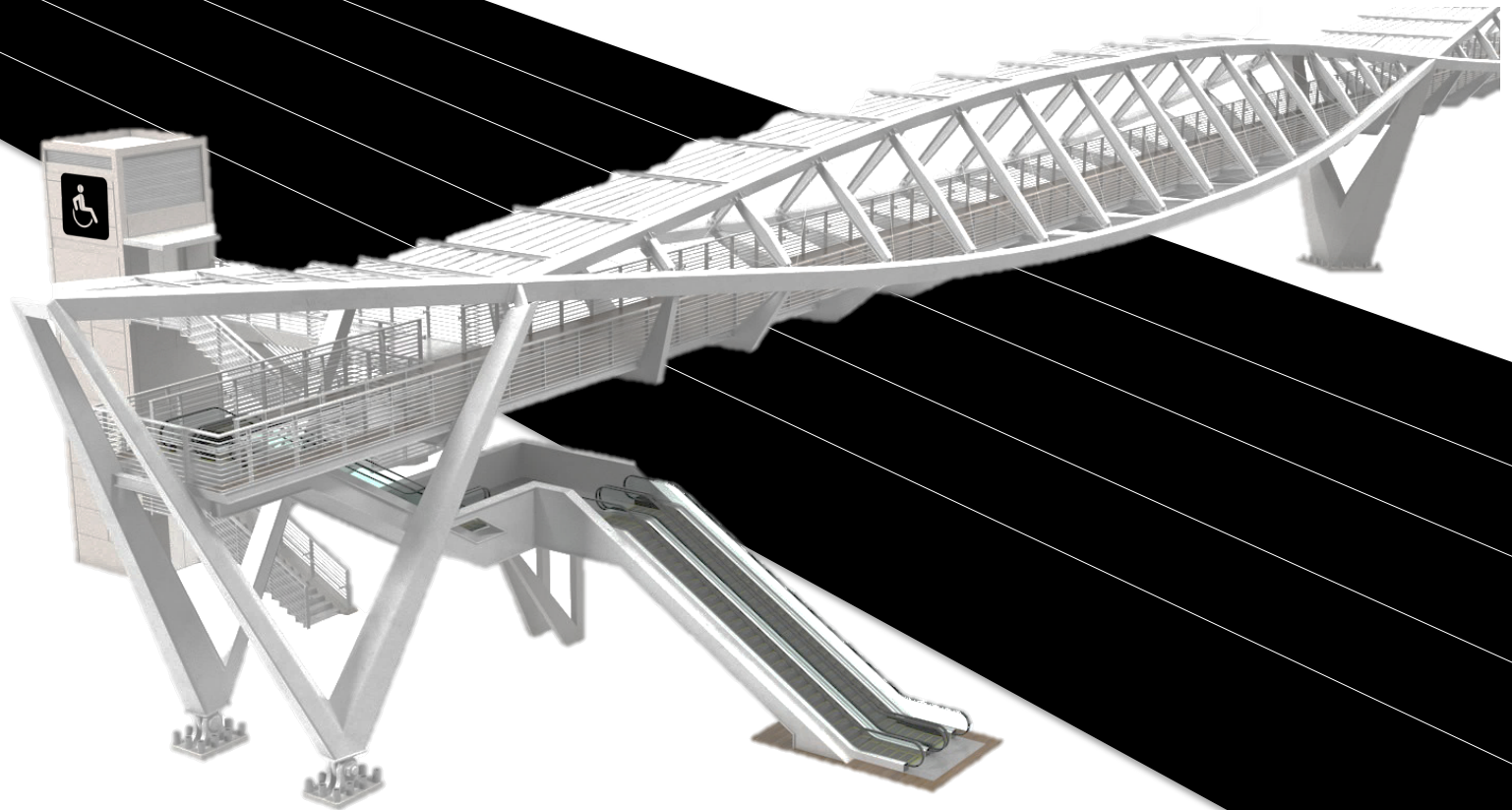
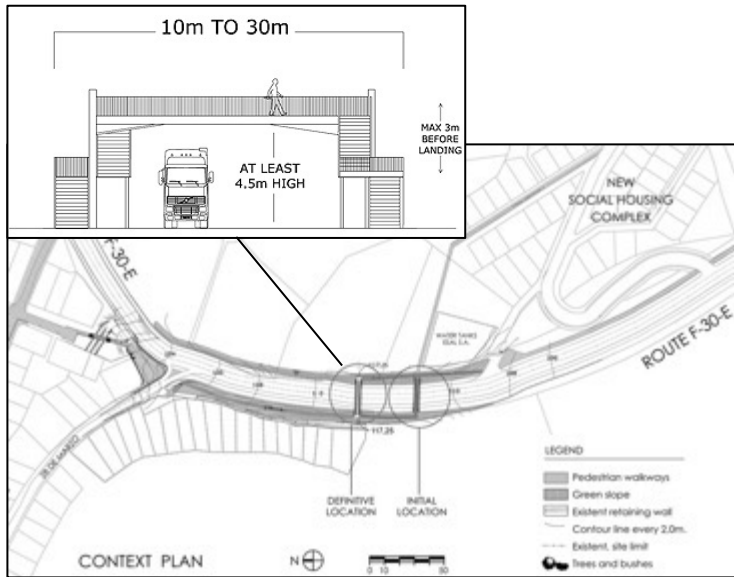
Predicted Fatality and Serious Injuries:

Vehicle Occupants: 1.6    Motorcyclists: 9.8    Pedestrians: 1.4    Bicyclists: 2.2

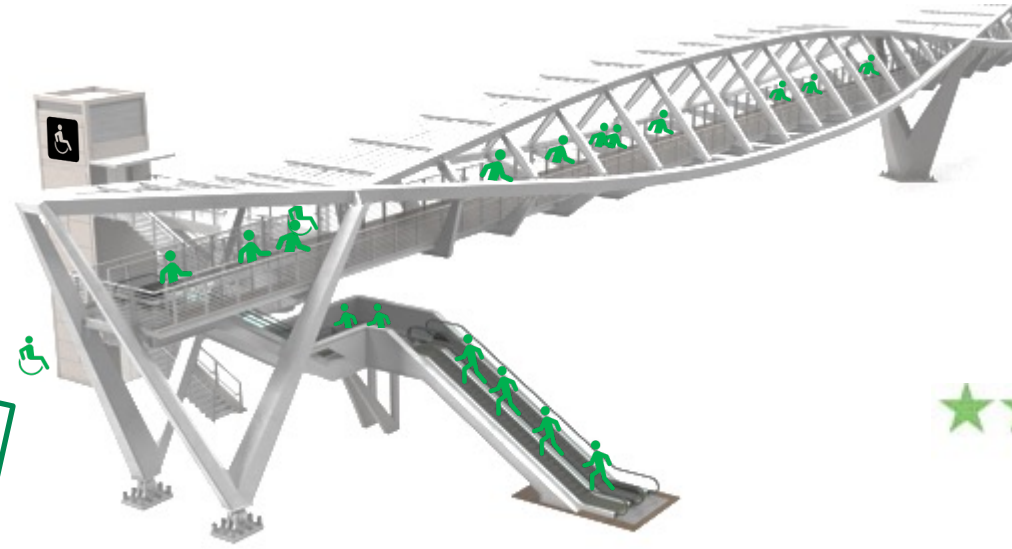
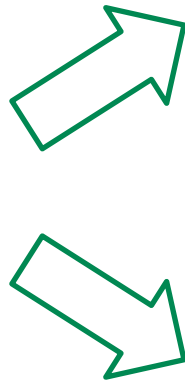
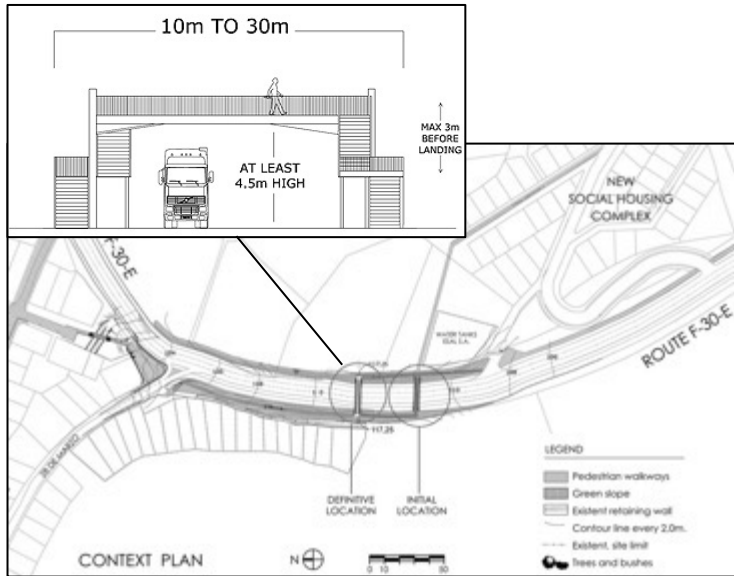
**TOTAL: 15.0**

**(58% reduction in Fatal and Serious Injuries)**

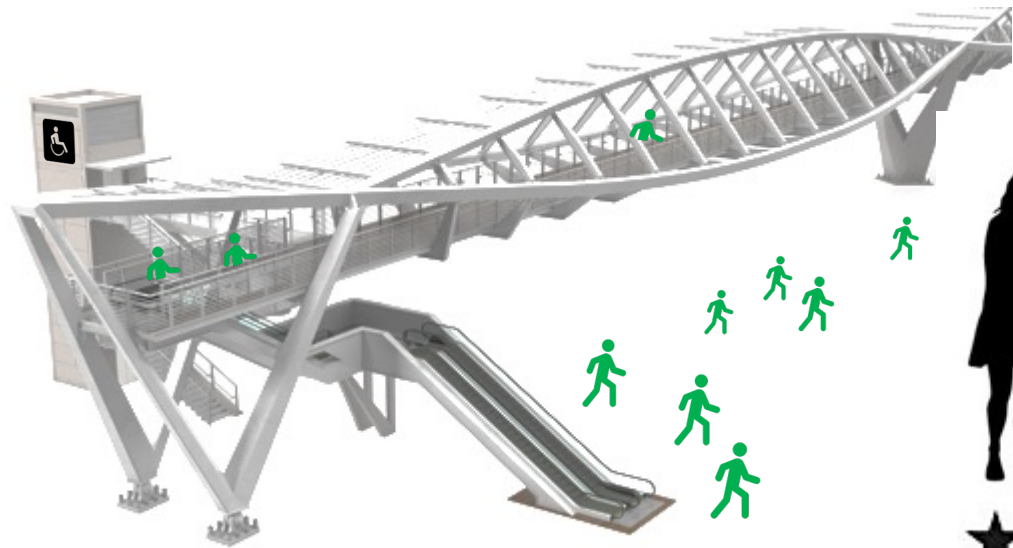
# СИТУАЦИОННЫЙ КОНТРОЛЬ



# СИТУАЦИОННЫЙ КОНТРОЛЬ



★★★★★ 5-star



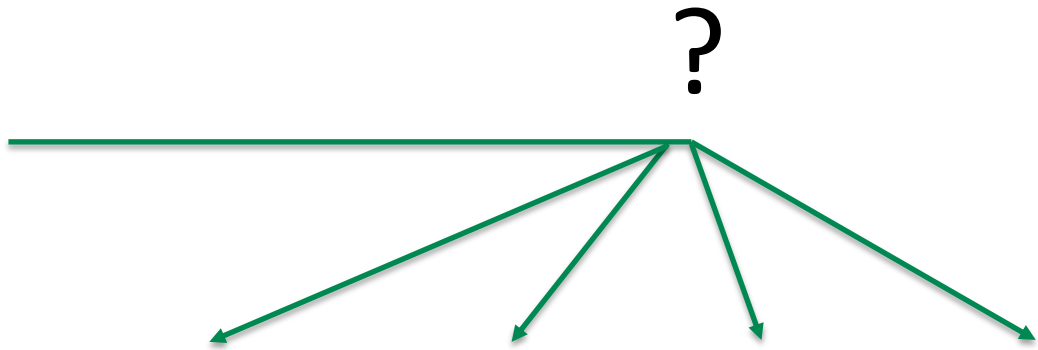
★ 1-star















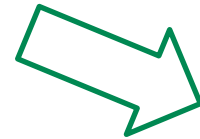
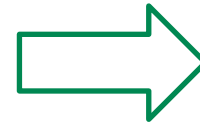
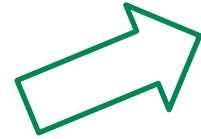




 <b>END</b>	 <b>METAL</b>	 <b>CONCRETE</b>	 <b>WIRE ROPE</b>
<p>Unprotected safety barrier end Code: 15</p> <p>Aggressive ends to safety barriers.</p> <p>Examples are ramped ends, unprotected ends, sharp ends or fish-tail terminals.</p> <p>This category should also be used to record damaged sections of safety barrier.</p>	<p>Safety barrier – metal Code: 1</p> <p>Metal safety barrier sufficient to restrain most cars and small vehicles (not wire rope safety barrier).</p> <p>Should be a continuous length of unbroken, undamaged safety barrier.</p>	<p>Safety barrier – concrete Code: 2</p> <p>Concrete safety barrier sufficient to restrain most cars and small vehicles.</p> <p>Should be a continuous length of unbroken, undamaged safety barrier.</p>	<p>Safety barrier – wire rope Code: 4</p> <p>Wire rope safety barrier sufficient to restrain most cars and small vehicles.</p> <p>Should be a continuous length of unbroken, undamaged safety barrier.</p>
			

# СИТУАЦИОННЫЙ КОНТРОЛЬ

# СИТУАЦИОННЫЙ КОНТРОЛЬ



## Опции кодирования iRAP



Present

Code: 2

Pedestrian fencing is complete and effective.

Pedestrian fencing can be on one or two sides or in the centre of the road.



Not present

Code: 1

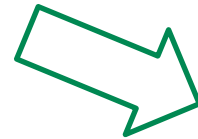
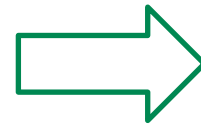
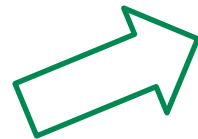
Pedestrian fencing/barriers are incomplete or ineffective.



Pedestrian fencing traps pedestrians on the road

Road Safety Auditor input

# СИТУАЦИОННЫЙ КОНТРОЛЬ



## Опции кодирования iRAP



Poor

Code: 2

Signing of hazards, or centre and edge markings are generally absent or in poor condition.



Adequate

Code: 1

Signs warning of severe hazards, and centre and edge markings are generally present and visible.



Line marking directs (or misleads) drivers into a hazardous situation

Road Safety Auditor input



# СИТУАЦИОННЫЙ КОНТРОЛЬ

Новая дорога

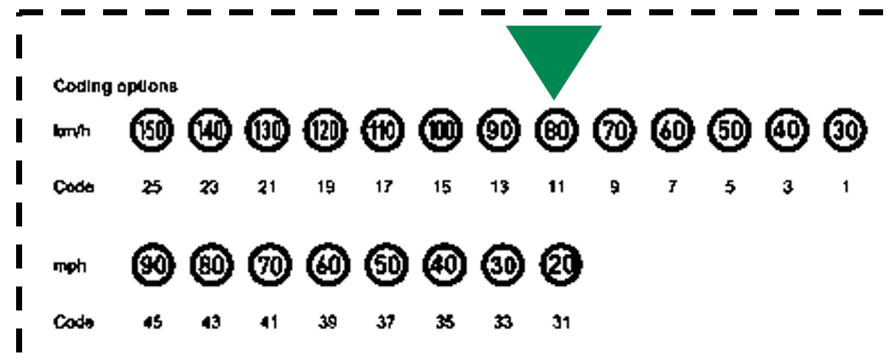


Source: Sebatek

Ограничение скорости



Рабочая скорость (85 процентиля)



Данные аудитора по безопасности дорожного движения для новой дороги

# КТО? АУДИТОРЫ МОГУТ ДЕЛАТЬ ЗВЕЗДНЫЙ РЕЙТИНГ

Обучение и компетенции	Уровень ЗРАБДД		
	Уровень 1	Уровень 2	Уровень 3
<b>Обучение и компетенции в области АБДД</b>			
Прохождение официального курса по АБДД	✓	✓	✓
Опыт работы АБДД		✓	✓
<b>Обучение и компетенции в области iRAP</b>			
Возможность использования Демонстратора ЗР	✓	✓	✓
Завершение курса ЗР для проектов (SR4D)		✓	✓
Возможность использования инструмента ЗР для проектов (SR4D)		✓	✓
<b>ЗРАБДД</b>			
Завершение основного курса ЗРАБДД	✓	✓	✓

- Инструменты iRAP можно использовать бесплатно.
- Аккредитация iRAP не обязательна, но рекомендуется для ЗРАБДД Уровней 2 и 3





# СТАНДАРТНОЕ ТЕХНИЧЕСКОЕ ЗАДАНИЕ

- Техническое задание (ТЗ) определяет цель и структуру проекта и должно содержать:
  - Предпосылки, видение, цели, объем и результаты (что должно быть достигнуто)
  - Заинтересованные стороны, роли и обязанности (кто вовлечен)
  - Планы по ресурсам, финансам и качеству (как это будет достигнуто)
  - Структура разбивки работ и график (когда это будет достигнуто)
- Руководство по звездному рейтингу для аудита безопасности дорожного движения (ЗРАБДД) содержит пример технического задания (адаптированного из Руководства 1 по инженерной безопасности дорожного движения ЦАРЭС) для тех, кто хочет провести или заказать звездный рейтинг для аудита безопасности дорожного движения.
- Шаблон можно использовать для привлечения консультантов для оказания услуг, а ТЗ может стать основой будущего контракта с поставщиками..

# СТАНДАРТНОЕ ТЕХНИЧЕСКОЕ ЗАДАНИЕ

- Подробная информация о дорожном проекте (краткое описание)
- На каком этапе находится АБДД
- Какой уровень ЗРАБДД требуется
- Информация, которая будет предоставлена (отчеты, чертежи, данные, предыдущие результаты iRAP)
- Ожидаемая продолжительность/человеко-дни
- Требования к отчетности/сроки
- Контактные данные заказчика

TERMS OF REFERENCE FOR A [insert stage name] STAGE STAR RATINGS FOR ROAD SAFETY AUDIT (SR4RSA) OF [insert name of the road project]

#### Background

The [insert name of road authority] has developed a proposal to [insert a brief description of the type and location of the proposal] to provide improved capacity and traffic performance along this corridor as well as increased safety for all road users.

#### The Task

The task in this assignment is to carry out a [insert stage name] stage Star Rating for Road Safety Audit (SR4RSA) of the proposed [insert name of project] so potential road safety problems can be identified, discussed, and minimized before the project is completed.

A Level [insert 1, 2 or 3] SR4RSA shall be undertaken in accordance with [name of national road safety legislation, strategy, action plan] and the process detailed in the current edition of the CAREC Road Safety Engineering Manual 5, and CAREC Road Safety Engineering Manual 1.

- The audit report should include Star Ratings and Star Rating Scores (SRS) for vehicle occupants, motorcyclists, pedestrians and bicyclists for each safety issue identified and recommendation made, as outlined in the current edition of the CAREC Road Safety Engineering Manuals 5.
- The team leader should sign and send the audit report electronically to the project manager.
- The team leader should attend the project manager's completion meeting to answer questions about the audit findings, the audit recommendations, and to discuss possible design changes.

The following information will be made available by the road authority to the audit team leader: [insert the list of reports, drawings, data, photographs, previous iRAP methodology reports or other background information.]

#### Qualifications and Experience

The audit services are to be provided by a team comprising two or more road safety engineering specialists; at least one (the team leader) should be a registered senior road safety auditor in a national register of accredited road safety auditors. At least one member should hold iRAP Accreditation in analysis and reporting. The audit team requires sound knowledge of road safety engineering and practical experience in highway design and traffic engineering.

Required Inputs [Adjust these requirements to suit the scale and complexity of the project.]

The assignment is expected to take up to .... person-days, as follows:

- ..... person-days for reviewing the reports and/or drawings and attending the commencement meeting
- ..... person-days for inspecting the site (daytime and nighttime inspections are required)
- ..... person-days for preparing the road safety audit report

#### Reporting

The senior road safety auditor should submit the completed and signed road safety audit report to the project manager in electronic format by [write submission date for the audit report.]

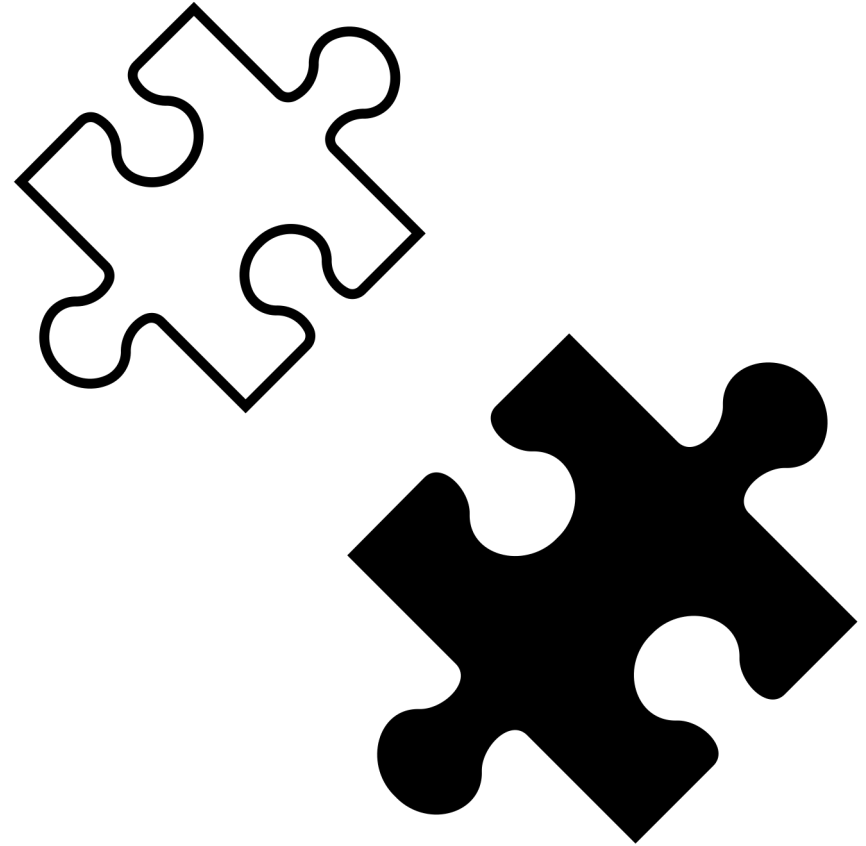
Any questions about the proposal or the audit are to be directed by the senior auditor to [insert name of the responsible engineer] via telephone [insert number] or e-mail [insert e-mail address].

Source: Adapted from Asian Development Bank.



# ЗАДАНИЕ

10 вопросов с множественным выбором по содержанию вебинара.



# ДЕЙСТВИЯ В РЕЖИМЕ ОНЛАЙН

- Откройте сайт <https://iraptraining.moodlecloud.com/>
- Ваше имя пользователя - это ваша электронная почта
- Используйте предоставленный вам пароль
- Обновите свой профиль
- Выполните задания
- Видео и презентация доступны там.



The screenshot shows a Moodle course page. On the left is a navigation menu with items like Participants, Badges, Competencies, Grades, Home, Dashboard, Calendar, Private files, My courses, and Intro Tz. The main content area is titled "CAREC Road Safety Engineering: Star Ratings for Road Safety Audits online workshop". It features a "Welcome!" message, a video player with a "STAR RATINGS FOR ROAD SAFETY AUDITS" thumbnail, and text explaining the course's purpose. The text mentions that road crashes kill more than 1.35 million people annually and that the course aims to improve road safety by combining RSA and IRAP methodologies. Logos for CAREC, ASIA-PACIFIC ROAD SAFETY OBSERVATORY, IRAP, and SAFE SYSTEM SOLUTIONS are displayed at the bottom of the page.

