

היבטים אורבניים והשפעת הרכבת על העיר ועל מרכזה



- הרגלי שימוש ברכב פרטי / תח"צ במודיעין
- מערכת הרכבות באירופה וארה"ב ביחס לישראל
- תחנות הרכבת במודיעין:
- השפעה על מחירי נדלן והתפתחות מסחר ותעסוקה
- מחשבות לעתיד בתכנית המתאר
- תנאים ופעולות להגדלת המשתמשים ברכבת



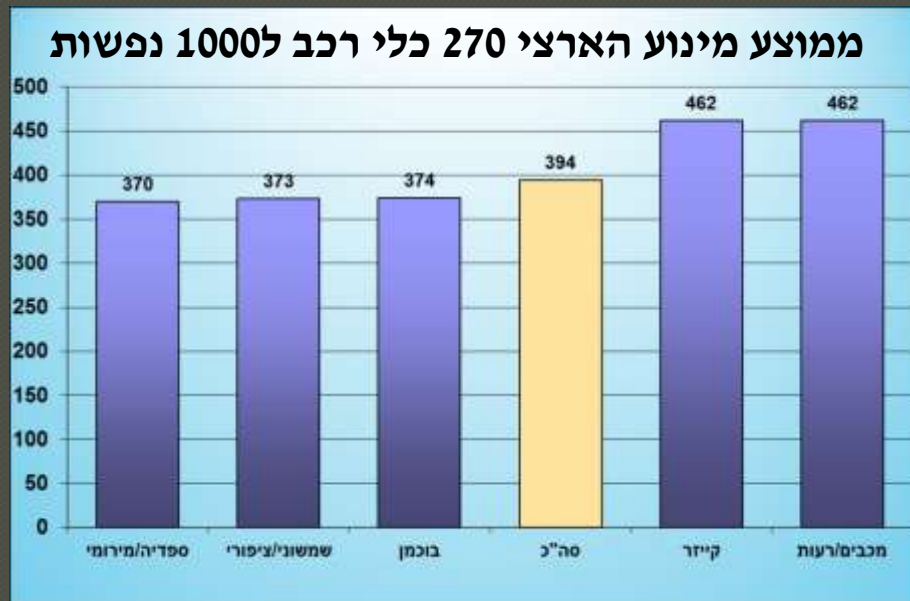


צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

העמקים

מיקום העיר בסמיכות למערכת כבישים ארצית

חתך סוציו אקונומי 8 (רמת מינוע לנפש גבוהה מאוד)



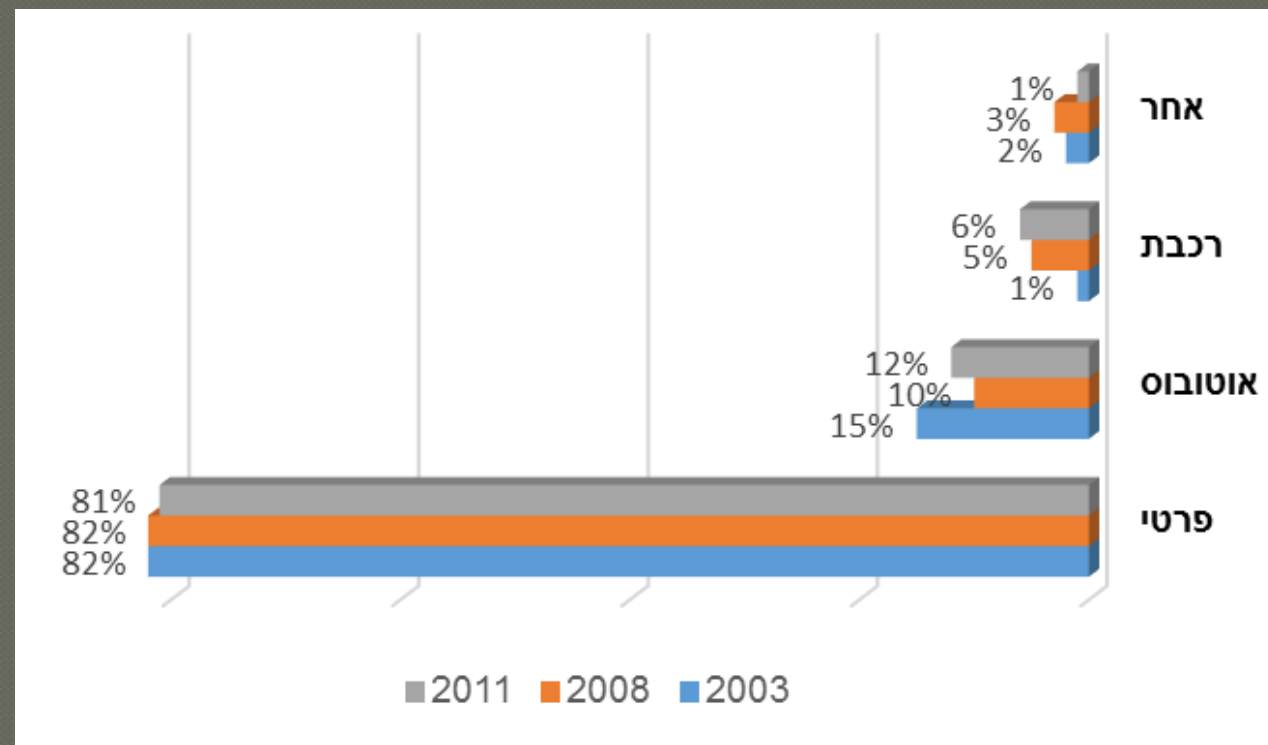
תכנון השכונות מוטה רכב פרטי

קווים עירוניים ארוכים בתדירות נמוכה
זמן נסיעה ארוך

מציאות שבה רמת השימוש בתחבורה
ציבורית ביחס לרכב הפרטי נמוכה

שינוי בהתפלגות כלי הרכב שבהם מגיעים לעבודה 1995-2008

הסעות	מוניות	אוטובוס	רכבת	עובדים בבית	באופניים	ברגל	רכב פרטי	אמצעי התחבורה
14.3	1.8	25.6	0.3	2.4	1.8	11.5	58.1	1995
10.4	1.7	20.3	0.7	2.6	1	11	67	2008
-27%	-5.5%	-26.1%	+130%	+7.6%	-45%	-4.5%	+15.1%	השינוי באחוזים



עפ"י נתוני רכבת ישראל:
 2011-2014 גידול של 10% במשתמשים
 2011-2015 גידול של 22%, גידול של 12% בשנה
 סקר שנערך לאחרונה עולה כי 12% מכלל הנוסעים בשטלים לת"א הם ממודיעין מכבים רעות
מה צריך לעשות ע"מ שאותם 12% ורבים אחרים יצאו מהעיר ברכבת?

התפלגות השימוש בכלי תחבורה במודיעין

ההבדלים היסודיים בין מערכת התחנות והמסילות בארץ לבין
מקבילותיה בארצות אירופה ואמריקה:

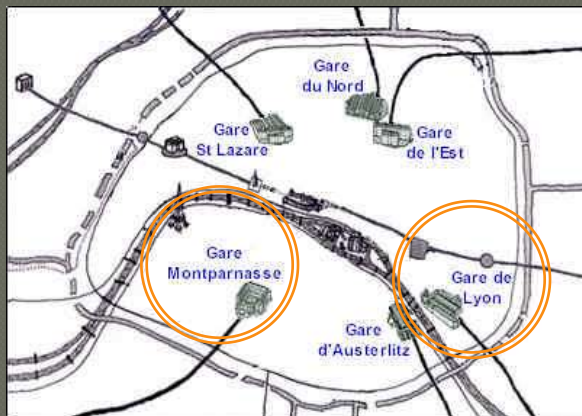
מיעוט מטרופוליטנים (4 סה"כ) ללא קישור למטרופולינים
בארצות שכנות (מגביל את נפחי המשתמשים)

ריבוי יחסי של תחנות פרבריות
(המחייב מערך תומך של הזנה לתחנת הרכבת)

מיעוט תחנות קצה (מגביל אפשרויות לתחנות במרכזי ערים)

הבדלים ביחס למערכת הרכבות באירופה וארה"ב

PARIS



DE-LYON

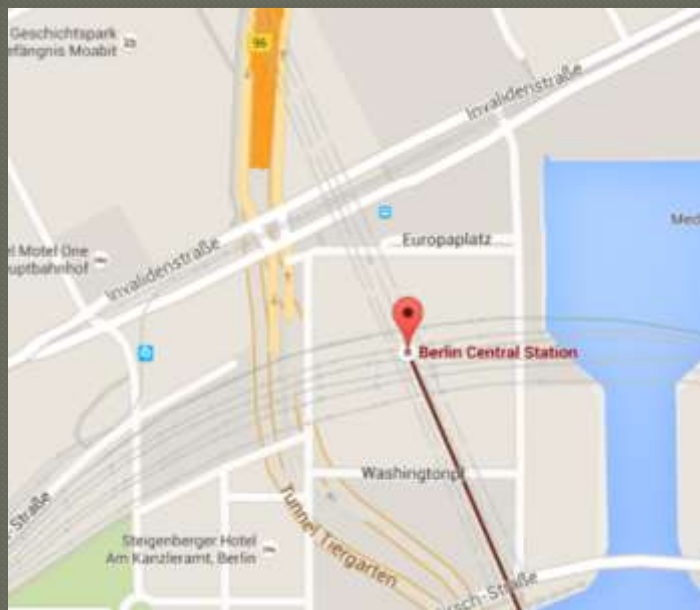


MONTPARNASSE



תחנת קצה מאפשרת כניסה של המערכת המסילתית אל לב העיר, תוך יצירת אפשרות לפיתוח אינטנסיבי סביב התחנה ללא המגבלה של המשכיות הקו

BERLIN



NEW YORK



Liège-Guillemins

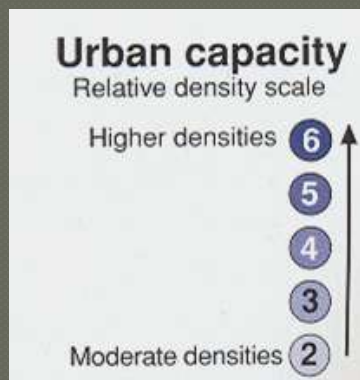


צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

מיקום תחנות בעולם

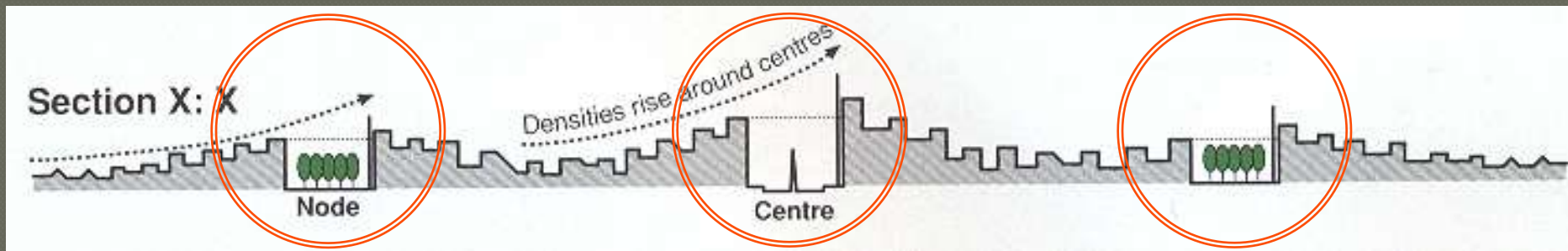
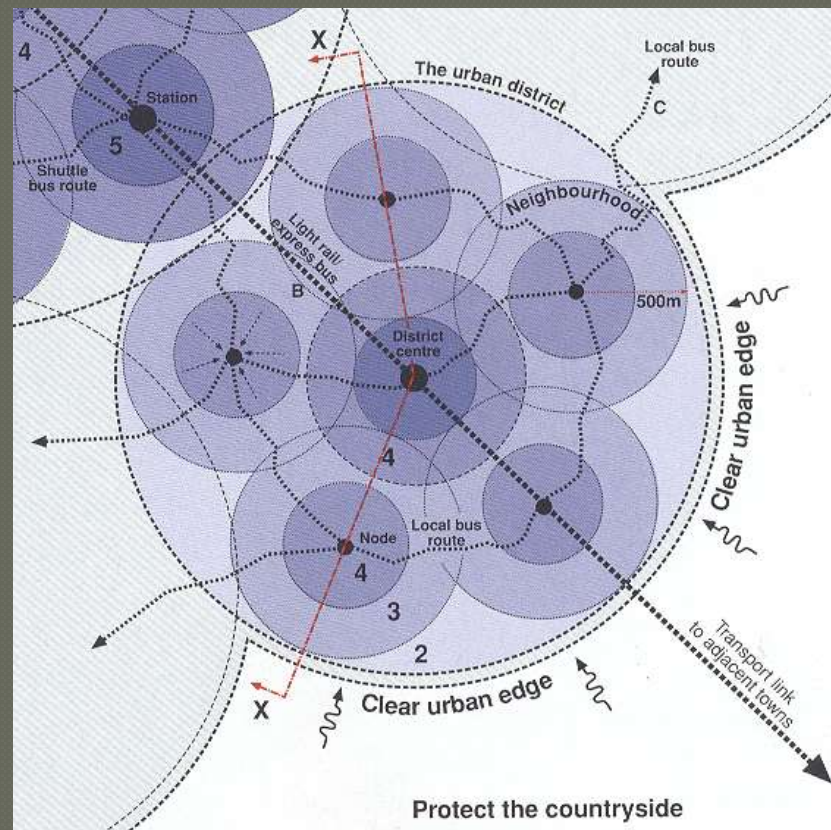
הפיתוח סביב התחנות, עונה למדיניות המעדיפה
הגדלת זכויות הבניה בסמוך למרכזי תחבורה.

בישראל – עפ"י תמ"א 35, ניתן להגדיל את זכויות
הבניה בקרבת מרכזי תחבורה.

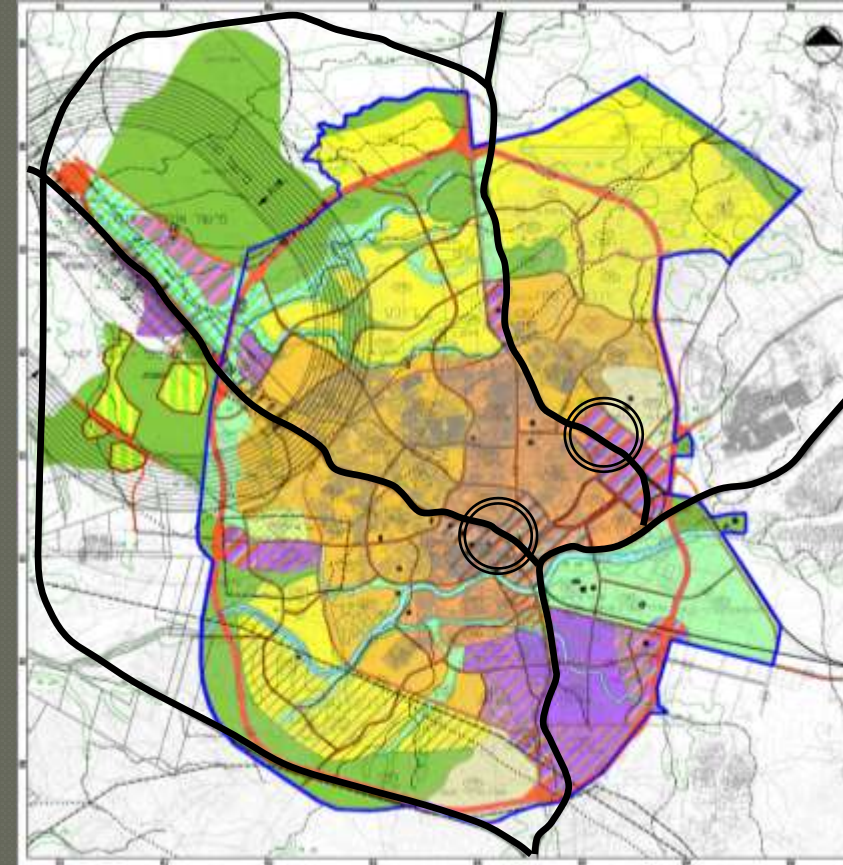


מתוך:

TOWARDS AN URBAN RENAISSANCE



תכנית מתאר ב"ש – אסיף - מליס אדריכלות ובינוי ערים



באר שבע

תוואי הרכבת מזין את המרכז
המטרופוליני

תכנית מתאר מחוז ת"א- תמ"מ 5- לרמן, שחר, ספיבק



תל-אביב

תוואי הרכבת עובר בלב המע"ר יחד עם
עורק התחבורה הראשי, האיילון

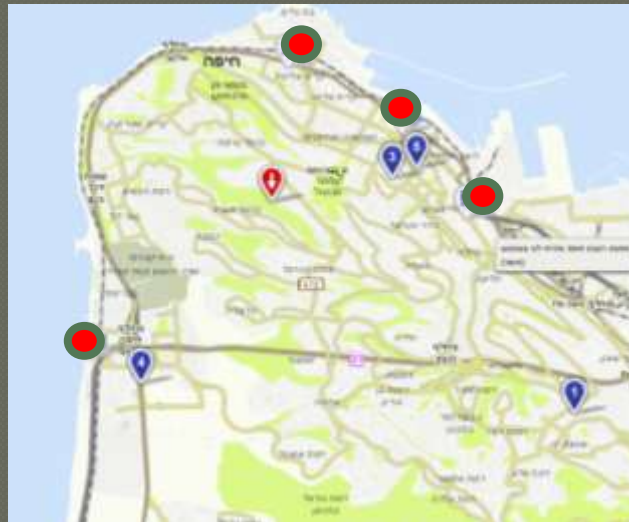
בתכניות המטרופולינים בישראל, עקרונות אלה באים לידי ביטוי וקווי הרכבת מותווים בלב המטרופולין

מיקום התחנה ביחס לעיר

ירושלים



חיפה



נתניה



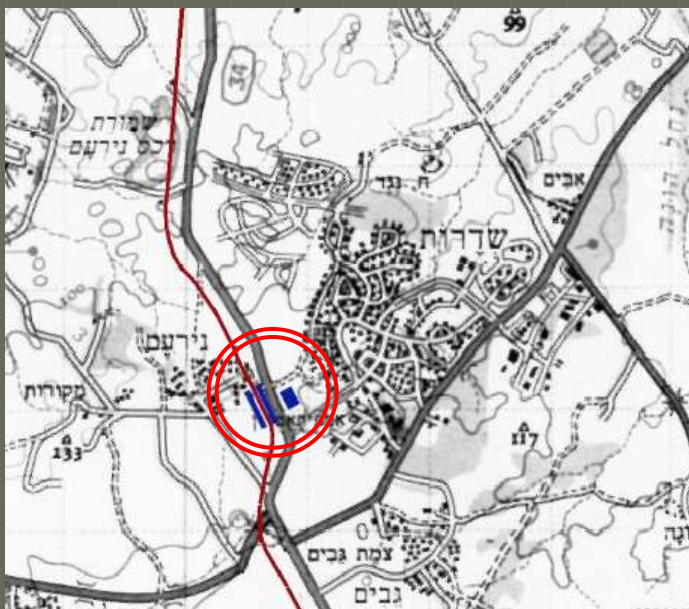
מיקום תחנות ביחס לערים בישראל

צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

הגורמים למיקום "ברירת מחדל" של התחנה ביחס לעיר:
הימנעות מתחנות קצה.

חסכון בהוצאות הכרוכות בהעברת קו רכבת בלב מרקם
עירוני.

העדר טיפול כולל במרכזי תחבורה משולבים.



התווייה בריחוק ממרכז העיר הקיים
ובסמיכות למתחם BIG, אילוצי השטח
הרחיקו את התחנה ממבני הרציפים.

המיקום הנוכחי מעודד תחבורה פרטית

מיקום שכזה גורר:

העדפת שימוש ברכב ע"פ תח"צ.

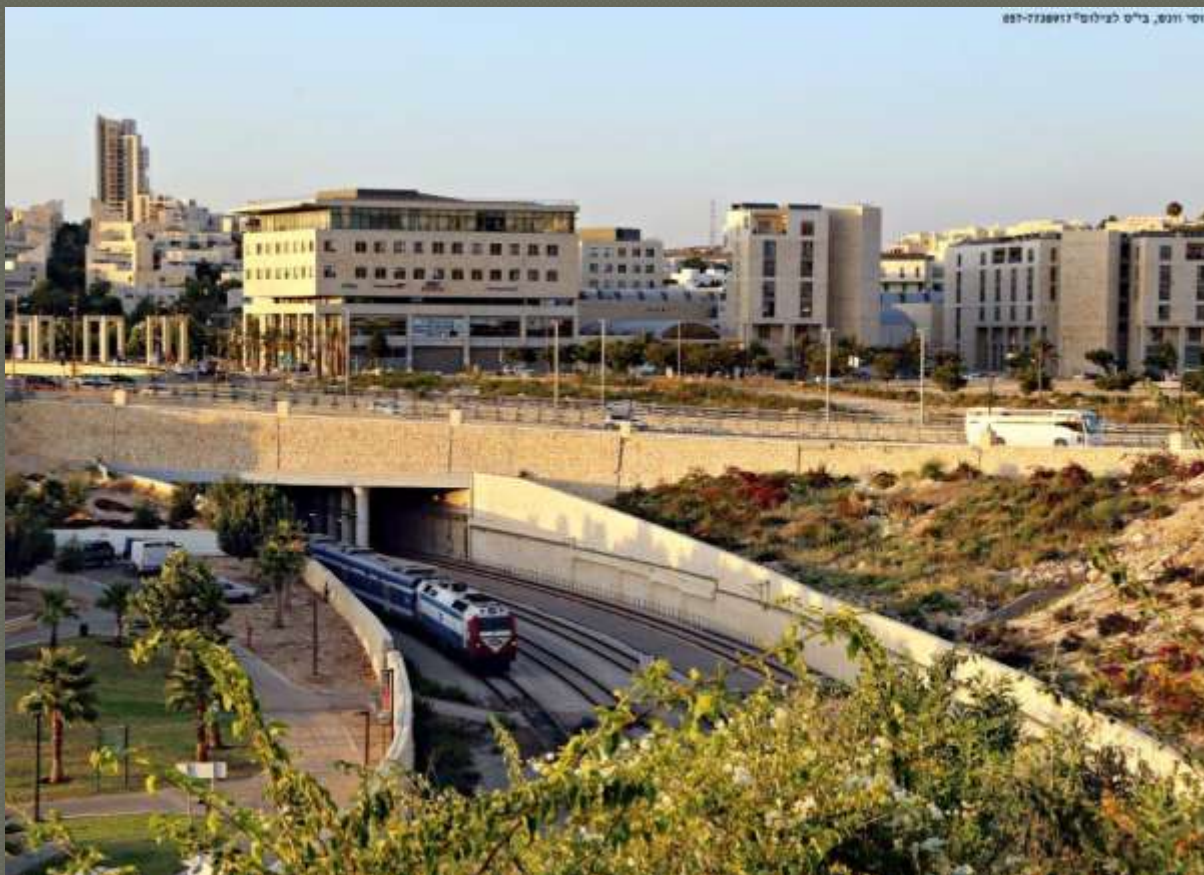
התדרדרות מרכזי החיים העירוניים וצמצום חיי הרחוב.
כמות המשתמשים יורדת.



2001 התקבלה החלטה על בניית תחנת רכבת
2008 הרכבת החלה לפעול
תחנת הרכבת התת-קרקעית הראשונה
בישראל,
רציפי התחנה ממוקמים כ-15 מטרים מתחת
לפני האדמה.



התחנה היא חלקה ממרכז תחבורה המאחד את
תנועות התח"צ בעיר. (רכבת, אוטובוסים בין עירוני ועירוני)



כניסה למנהרת התחנה

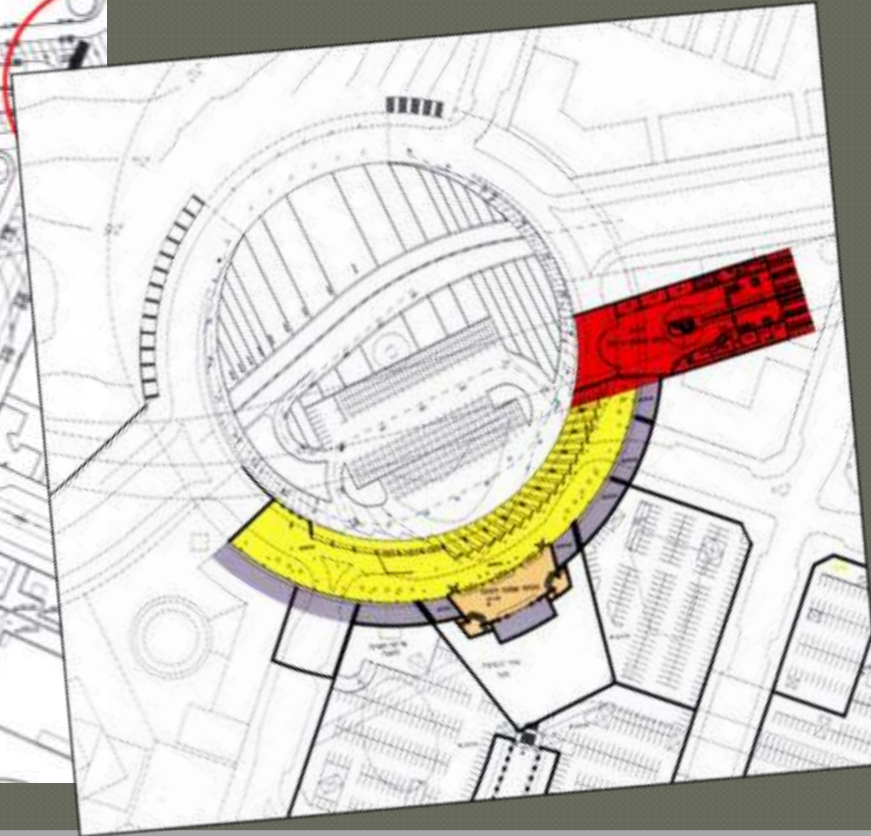
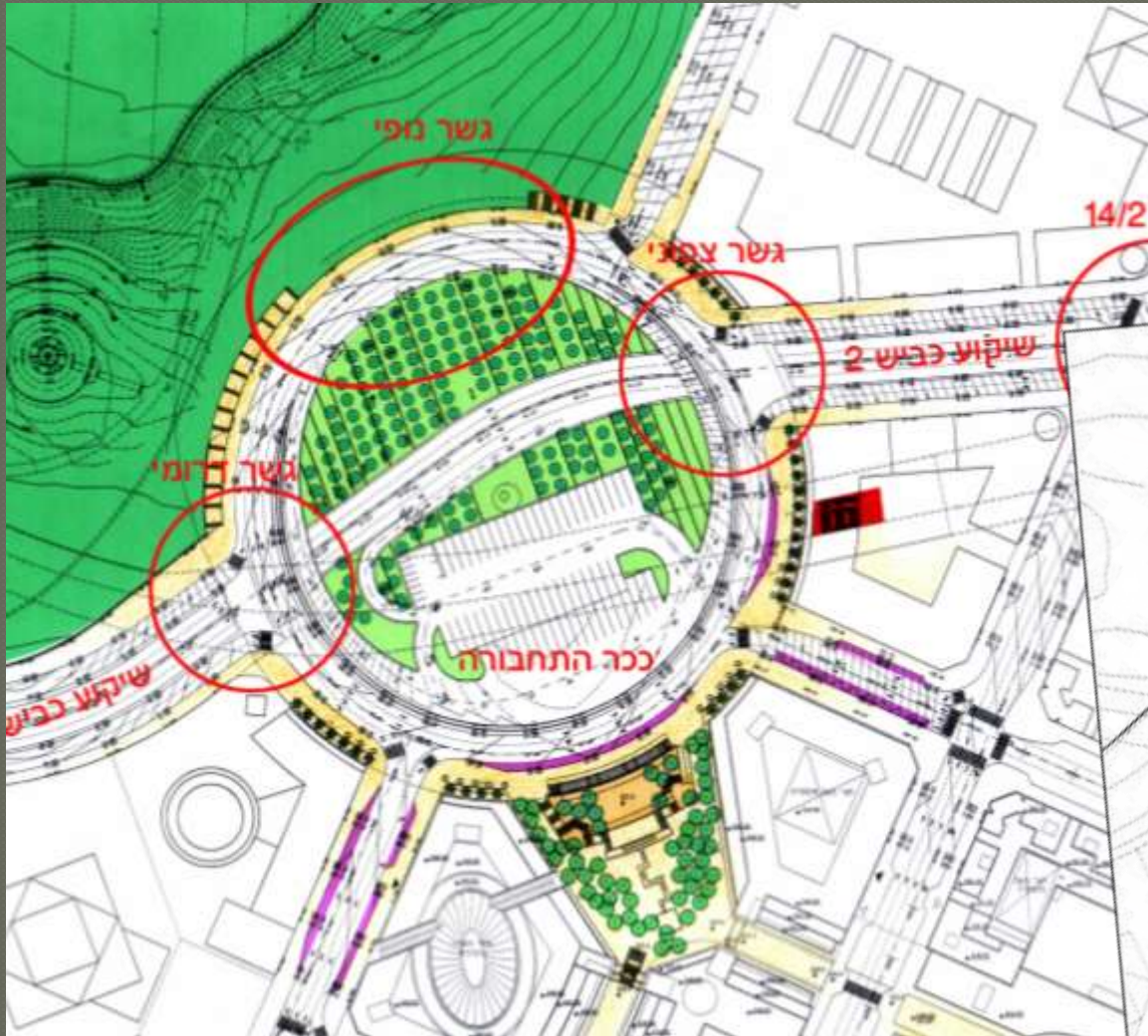


רציפים 15 מטר מתחת למפלס

■ תחנת רכבת

■ מסוף אוטובוסים בין עירוני

■ מסוף אוטובוסים עירוני





מסוף אוטובוסים
עירוני ובין עירוני
והקשר המידי
לתחנת הרכבת



צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

מרכז לתחבורה ציבורית

מרכז ספורט
עירוני

מכללה ומעונות
סטודנטים

דיור מוגן
עד 120

מרכז עסקים
שימושים
מעורבים

פארק ענבה

מודיעין מרכז

קניון עזריאלי

מרכז תרבות





מבט אל מרכז לתחבורה ציבורית

צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

מרכז תח"צ משולב

אדריכל עוזי גורדון

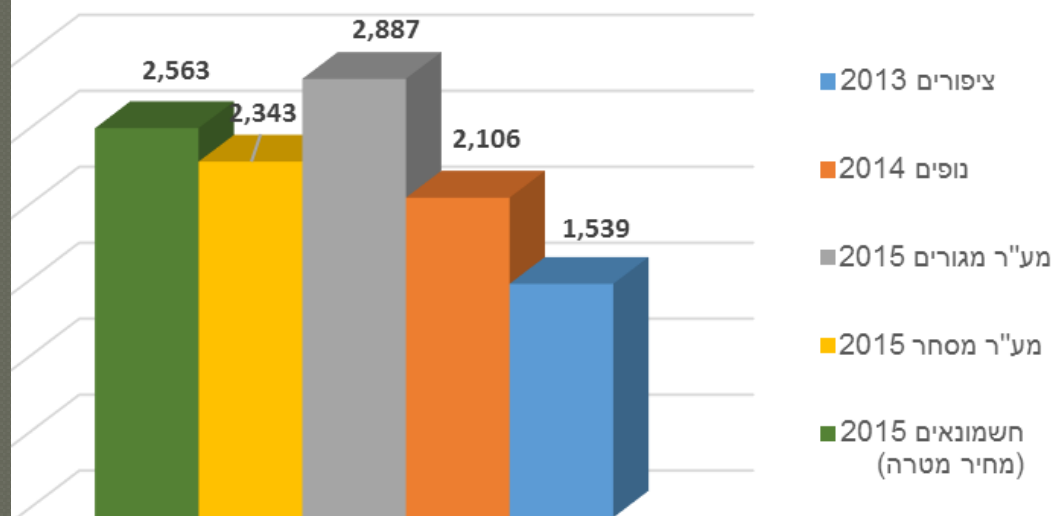


מרכז תחבורה המפרץ

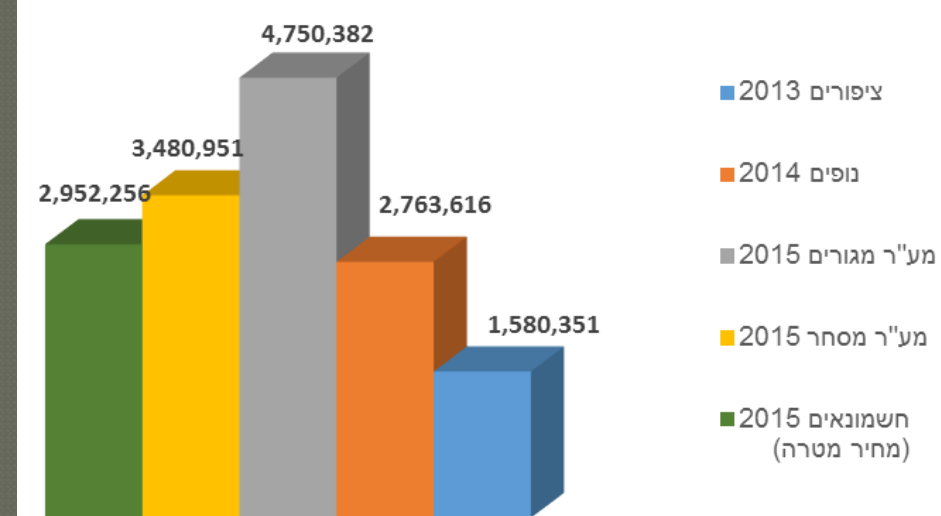
צחי כץ
מהנדס העיר
מודיעין
מכבים רעות



מחיר ממוצע הוצאות פיתוח למטר



מחיר ממוצע לדונם



**מחירי קרקע והוצאות פיתוח ביחס למרחק ממרכז
התחבורה**



**מיקום תחנת הרכבת הוא הדבר
הבא של עולם המסחר והמשרדים**

**יזמים מחפשים קרקעות בסביבת
תחנות רכבת עתידיות**

מחירי הנדלן בעפולה נסקו בעקבות הגעת הרכבת

**עזריאלי זיהה את הפוטנציאל ראשון, הוא היחיד שניגש למכרז
בצמוד לתחנת השלום. השאר הוא כבר היסטוריה.**

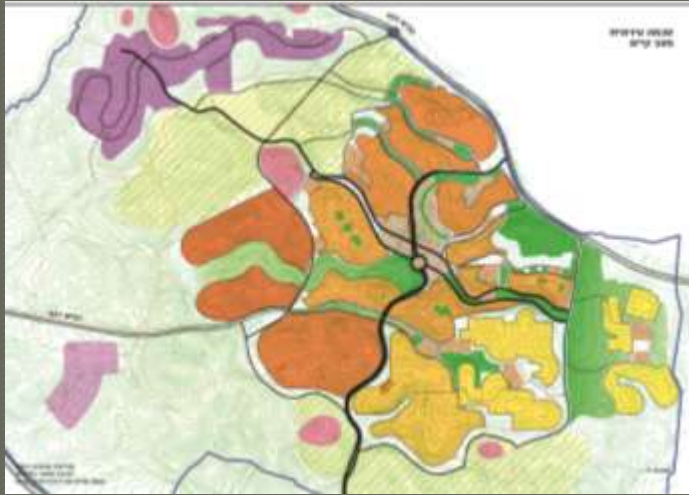
תמיר בן שחר (שמנסקי בן שחר)



צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

תחנת הרכבת כמנוף לפיתוח מסחר ותעסוקה

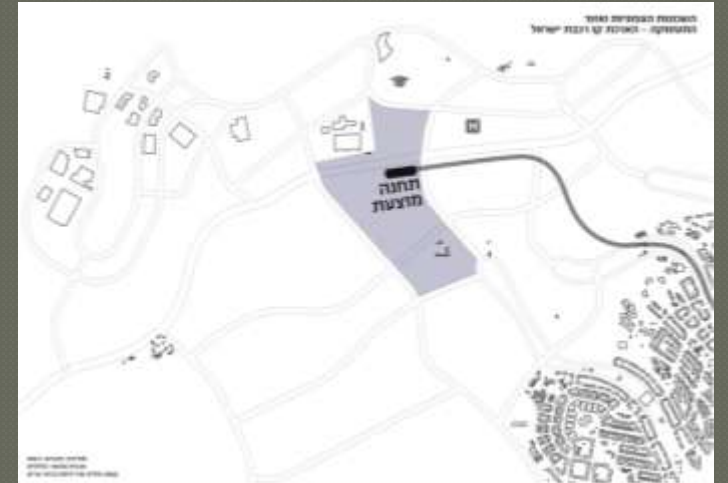
מד/2020



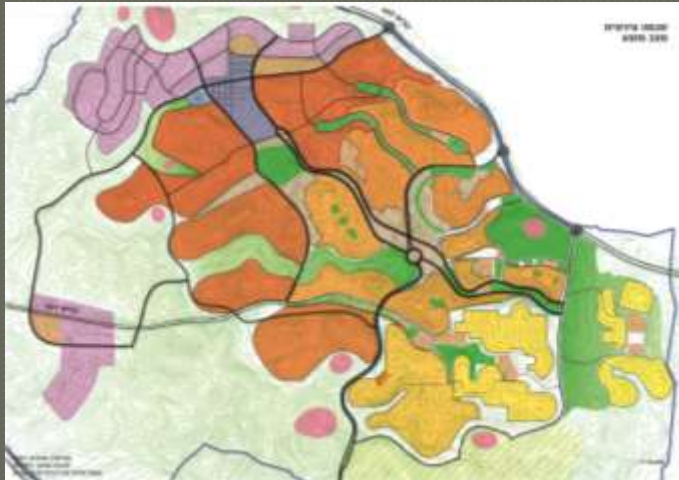
הארכת קו הרכבת לרובע העסקים



תחנה ברובע העסקים



מתאר בהתהוות



רובע עסקים שימושים מעורבים



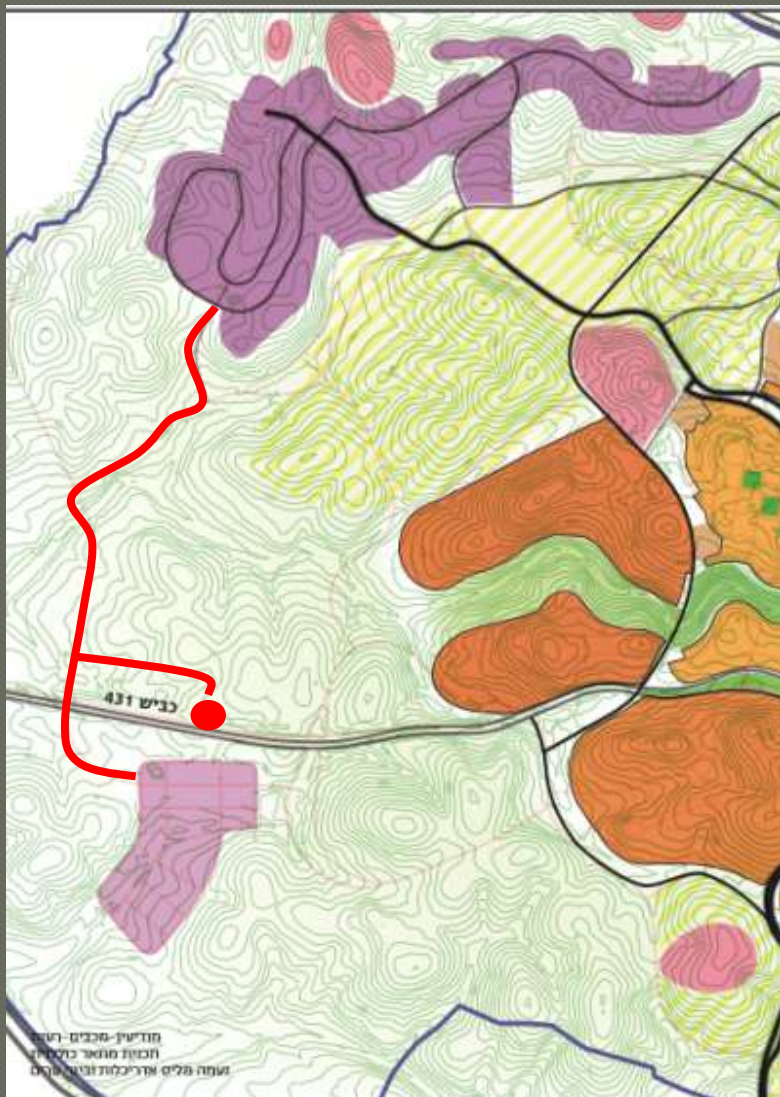
תחנת רכבת

תכנית בינוי



צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

רכבת תכניות לעתיד – תכנית מתאר 2040

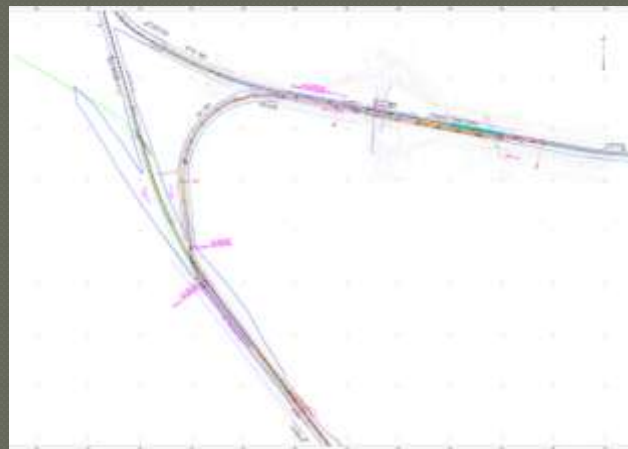


נבנתה בניתוק ממרכזי המסחר והתעסוקה

**הכשרת חניון ל 800 כלי רכב
הקמת גשר להולכי רגל מעל כביש 431 ומסילות הרכבת**

פספוס הזדמנות! ניצול הזדמנות?

חיבור ישיר לקו A1 לירושלים
זמן נסיעה משוער של 17 דק' בלבד.



קו A1 לירושלים



קו למודיעין

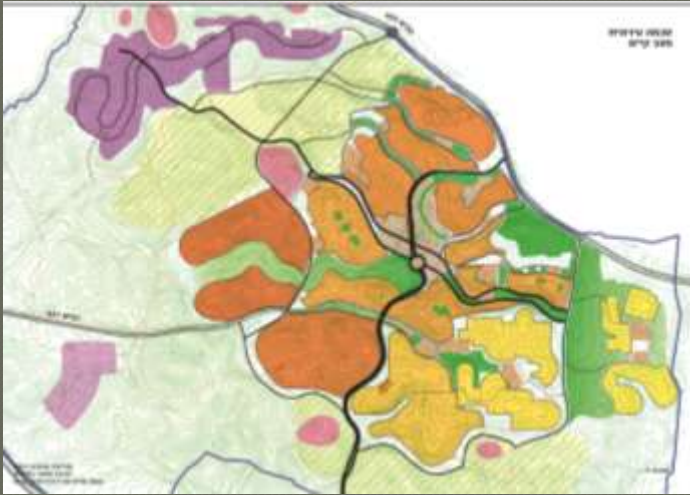


קשת מודיעין

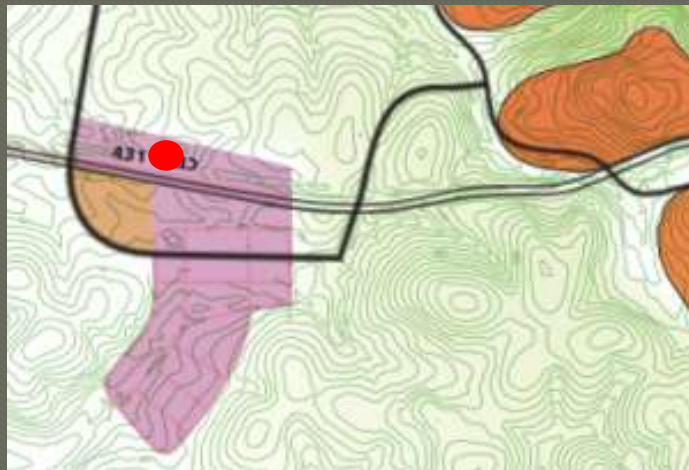
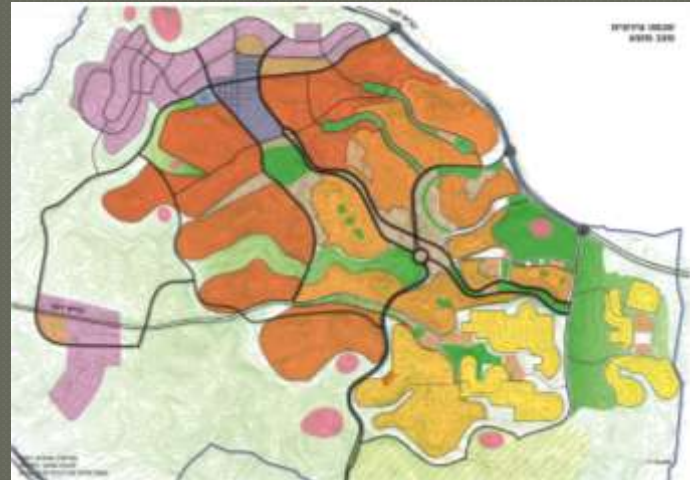


קשת מודיעין (חיבור ישיר לירושלים)

מד/2020



מתאר בהתהוות



צחי כץ
מהנדס העיר
מודיעין
מכבים רעות

עיבוי בינוי שימושים מעורבים בתחנת פאתי מודיעין

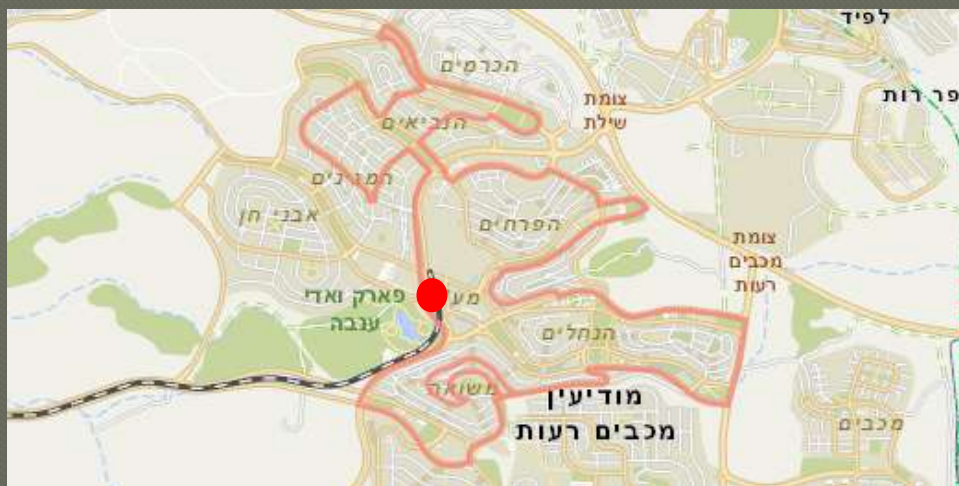
נגישות נוחה לתח"צ לוחות זמנים קבועים יצירת וודאות בזמן ההגעה מהבית לעבודה יצירת אמון בין התח"צ למשתמש



מה יגרום לך לוותר על הרכב הפרטי ולנסוע רק בתחבורה ציבורית?

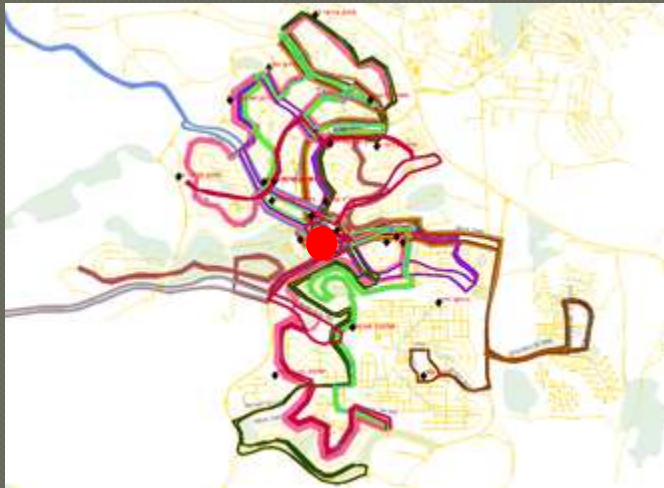
תח"צ נוחה ואמינה 29%
מהירות 23%
מחיר 10%
תח"צ בשבת 5%
שום דבר 24%
לא יודע/לא רלוונטי 9%





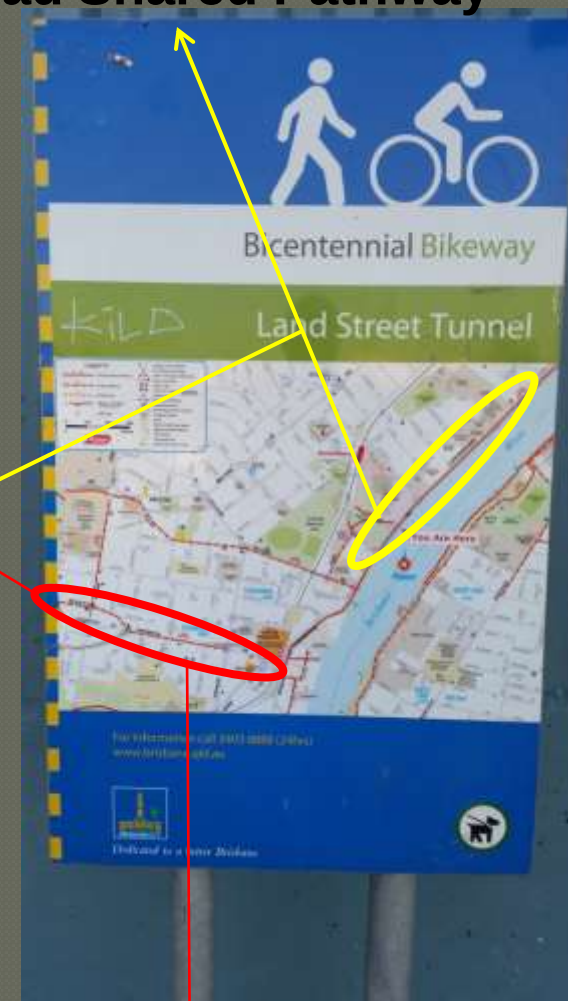
קווים ארוכים נגישות מסורבלת לתחנת הרכבת
חוסר וודאות בזמן ההגעה מהבית לעבודה

מסלולי אוטובוסים עירוניים – מצב קיים



קווים מעגליים וקצרים מהשכונה למרכז התחבורה וחזרה
נגישות מהירה בזמינות גבוהה לתחנת הרכבת
הגברת וודאות במשך זמן ההגעה מהבית לעבודה

Off-Road Shared Pathway



On-Road Bikeway

Bicycle Queensland members' newsletter

MARCH/APRIL 2015

Gabba to Goodwill bikeway plans unveiled

Recently, Bicycle Queensland called on all parties contesting the Brisbane council elections on March 19 to commit to saving lives by funding the construction of a major separated bikeway along one of the city's busiest and most dangerous roads.

Plans were unveiled for the Stanley Street bikeway that would stretch 1.2 kilometres from the Gabba to the Goodwill Bridge at South Bank.

The year-long planning process, which was headed by BQ, involved civil engineers Bligh Turner, traffic engineering and transport planners Cambray Consulting, and urban designers Tract Consultants.

The proposed bikeway would create a critical infrastructure link that would allow thousands of people to cycle safely in a part of inner Brisbane that is used by 45,000 vehicles per day.

Commencing at the corner of Ipswich Road and Stanley St, the two-way route would provide bike riders with separation from vehicles all the way along the busy traffic corridor linking with South Bank, the Bicentennial Bikeway and the Goodwill Bridge to the CBD.

The plan also includes expanded pedestrian zones, newly paved areas, sculpture opportunities, a public plaza, and trees and shelters for shade to enhance Brisbane's reputation as a new world city.

Bicycle Queensland CEO Ben Wilson urged Brisbane's Lord Mayoral candidates to throw their support behind the proposal.

"This commitment is relatively low in cost and in traffic implications, and is a golden opportunity to make a part of Brisbane rideable for the thousands of people in the rapidly growing Woolloongabba area and inner eastern suburbs," said Mr Wilson.

"Separated bikeways make riding so much safer and have a proven record of getting people taking up cycling for transport, which relieves congestion."

"This bikeway's value-for-money is sensational and critically important to the city."

"The project will lift this busy Stanley Street corridor from an ugly, hostile and dangerous road into a pleasant place to live, dine, commute by bike and walk along by creating a new buffer-boulevard."

The plan will also address some of the key recommendations made by the coroner in December following an inquest into the death of bike rider Rebekka Meyer.

Continued page 2...

- President's Spin.....1 - Editorial Preview.....2 - Bike Week's Back.....3 - Council recommendations.....4	- Separation for Sunshine Coast.....1 - QANTAS returns to ATIS.....2 - Ride from the South to beach on CO.....3 - NTB World Cup coming to Cairns.....5
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BICYCLE QUEENSLAND
BQ.ORG.AU

is awaiting with very of our first h-vis commuter

the purpose-ective jerseys y and a further arative in

of in association land, the new o-reflective collar, I sleeves, with on the back To pre-order a on 3844 1144.

behaviour priority

urban keways in ated a new nge which is eager to take mbers.

cycling body will with Brisbane ng months on prove rider t pathways.

cus on the e respecting s and riding to ay commuter rians abound.

Priority crossing trial for North Brisbane Bikeway

In a first for Brisbane, priority cycle crossings will be trialled at points along the proposed North Brisbane Bikeway.

A State Government and City Council project, the North Brisbane Bikeway will help improve the take-up rate for cycle commuters travelling from Brisbane's northern suburbs.

The design of the priority bicycle crossings will be based on the State Government's separated cycleway guidelines, with the raised platforms and coloured markings making it clear to motorists that a priority cycle crossing is present.

expressed by improvements e city's popular cycle Queensland imilar with.

ed proposal will tbound 1.5 metre nptthl Street and ctng the right, old Street. Other rtbound were r several years of bying.

ude removal es and one he descent space for the ision.

ssed at a South ble in October nsured the item during Brisbane City r 31.

tone Road's mly on the coming financial I CEO Ben Wilson

ensland has ncial for several

The round-table was chaired by BCC's Transport Chair, Cr Peter Matic and attended by several BCC design team members.

The October 31 meeting provided Bicycle Queensland with an opportunity to state more clearly its case for continuation of the "one-way" bike lane on the outbound descent of Gladstone Road.

BQ is most supportive of council's preferred plan which provides room for a dedicated uphill bike lane on the approach to Dornoch Terrace.

Pictured above: The intermittent green-painted bike lane on Gladstone Road, Brisbane. A right-angled turn is in the approach to Dornoch Terrace.

One of the alternative proposals put forward was for a separated dual-direction bike lane on the outbound descent of Gladstone Road beyond the intersection with Dornoch Terrace.

"Notionally, Bicycle Queensland supports separation of bicycles where reasonable to do so, however we believe the case of Gladstone Road does raise some safety issues," Ben said.

"With the limited space available, the gradient, the multitude of side-streets and driveways, and the likelihood of

Progress on Ferny Grove to Samford bikeway project.

Bicycle Queensland is excited to see work being undertaken creating new dedicated bike lanes and bike awareness along Lane Road at Ferny Grove.

The work, undertaken by Brisbane City Council, is one part of the ongoing Ferny Grove to Samford Bikeway joint venture with Moreton Bay Regional Council and the State Government.

The project aims to create a commuter/recreational rider-friendly link between Ferny Grove and Samford via the old Camp Mountain Railway cutting.

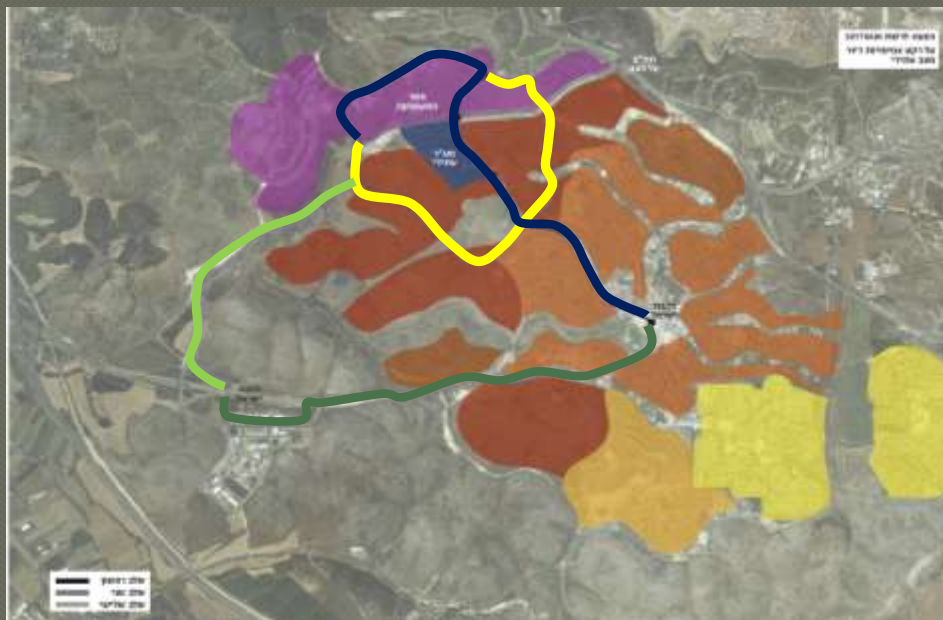
Brisbane to Gold Coast jerseys are still available

Benefit from changes to road rules

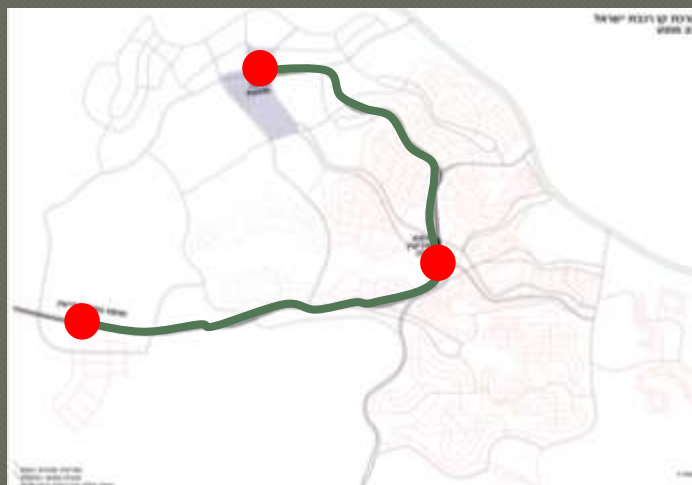
Changes to Queensland road rules designed to clear up confusion about roundabouts and zebra crossings came into effect on 1 January 2015.

Ride easy with new rules

It's safe to ride on the road. 2. Ride in a single file. 3. Ride on the left. 4. Ride on the right. 5. Ride on the left. 6. Ride on the right. 7. Ride on the left. 8. Ride on the right. 9. Ride on the left. 10. Ride on the right. 11. Ride on the left. 12. Ride on the right. 13. Ride on the left. 14. Ride on the right. 15. Ride on the left. 16. Ride on the right. 17. Ride on the left. 18. Ride on the right. 19. Ride on the left. 20. Ride on the right. 21. Ride on the left. 22. Ride on the right. 23. Ride on the left. 24. Ride on the right. 25. Ride on the left. 26. Ride on the right. 27. Ride on the left. 28. Ride on the right. 29. Ride on the left. 30. Ride on the right. 31. Ride on the left. 32. Ride on the right. 33. Ride on the left. 34. Ride on the right. 35. Ride on the left. 36. Ride on the right. 37. Ride on the left. 38. Ride on the right. 39. Ride on the left. 40. Ride on the right. 41. Ride on the left. 42. Ride on the right. 43. Ride on the left. 44. Ride on the right. 45. 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שמירת זכויות דרך למערכת הסעת
המונים בתכנית המתאר החדשה
לקשר רציף ומהיר לתחנות הרכבת



הפעלת קו רכבת בתדירות גבוהה בין
פאתי מודיעין לרובע העסקים



- **תחנת רכבת במרכז העיר מהווה מנוף לפיתוח וצמיחה כלכלית**
(התייחסות היזמים במע"ר לתחנת הרכבת, מכללה, ואזורי התעסוקה)
- **מומלץ בתכניות מתאר:**
 - **לקבוע מיקום לתחנה קרובה ככל שניתן למרכז העיר כולל זכויות דרך לרכבת ונתיבי אופנים מדיניים.** (גם במחיר של גישה תת קרקעית)
 - **לבחון התאמת שימושים (מעורבים) ותוספת זכויות במרחב התחנה**
- **יצירת וודאות למשתמש באמינות וזמינות תח"צ אל תחנת הרכבת**
- **התייחסות לתחנה כאל שער כניסה לעיר הן בהיבט האדריכלי והן בהיבט העסקי**