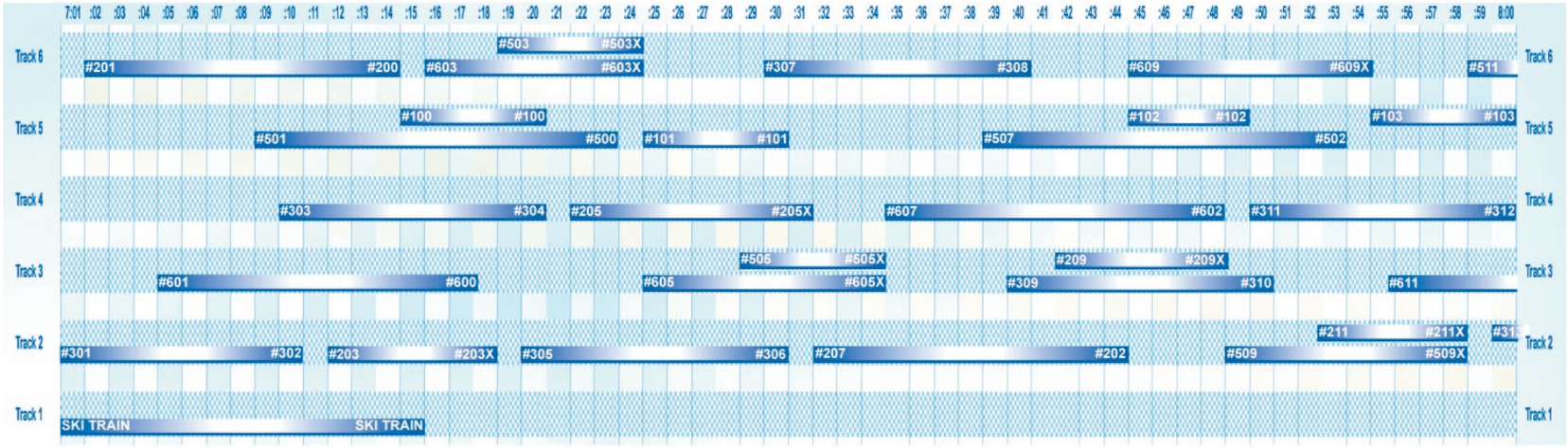
Passenger Rail Simulation Vision Plan



Assumptions for Simulation Vision Plan (Stub Station)

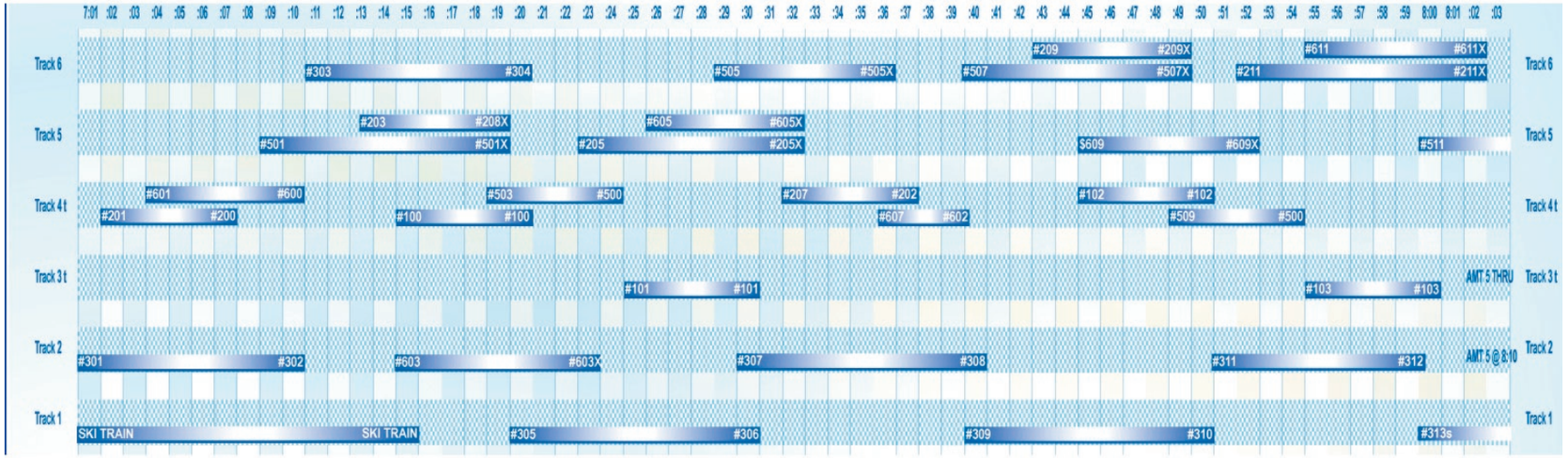
East Corridor Air Train	300	6/hr = 12
Boulder Commuter	200	6/hr + 2 reverse out
Future North Line	500	6/hr + 2 reverse out
North Metro	600	6/hr + 2 reverse out
Intercity NFR	100	2/hr
Intercity SFR	100	2/hr
AMTRAK #5 & #6		
Ski Train		

Operating Schedule Assumptions

300 Series	Arrive & Depart	at 00 - 10 - 20 - 30 - 40 - 50 - 00
200 Series	Arrive	at 02 - 12 - 22 - 32 - 42 - 52 - 02
200 Series	Depart (rev. com.)	at 14 - 44
500 Series	Arrive	at 09 - 19 - 29 - 39 - 49 - 59
500 Series	Depart (rev. com.)	at 23 - 53
600 Series	Arrive	at 05 - 16 - 25 - 35 - 45 - 55
600 Series	Depart (rev. com.)	at 18 - 48
IC NBFR	Arrive	at 15 & 45 - Depart at 20 - 50
IC SBFR	Arrive	at 25 & 55 - Depart at 30 - 00
Ski Train & AMTRAK		Operate Track #1 0600 - 0900

Passenger-rail platform schedule, showing train dwell times and platform assignments over a one-hour peak period for a stub station.

Passenger Rail Simulation Vision Plan

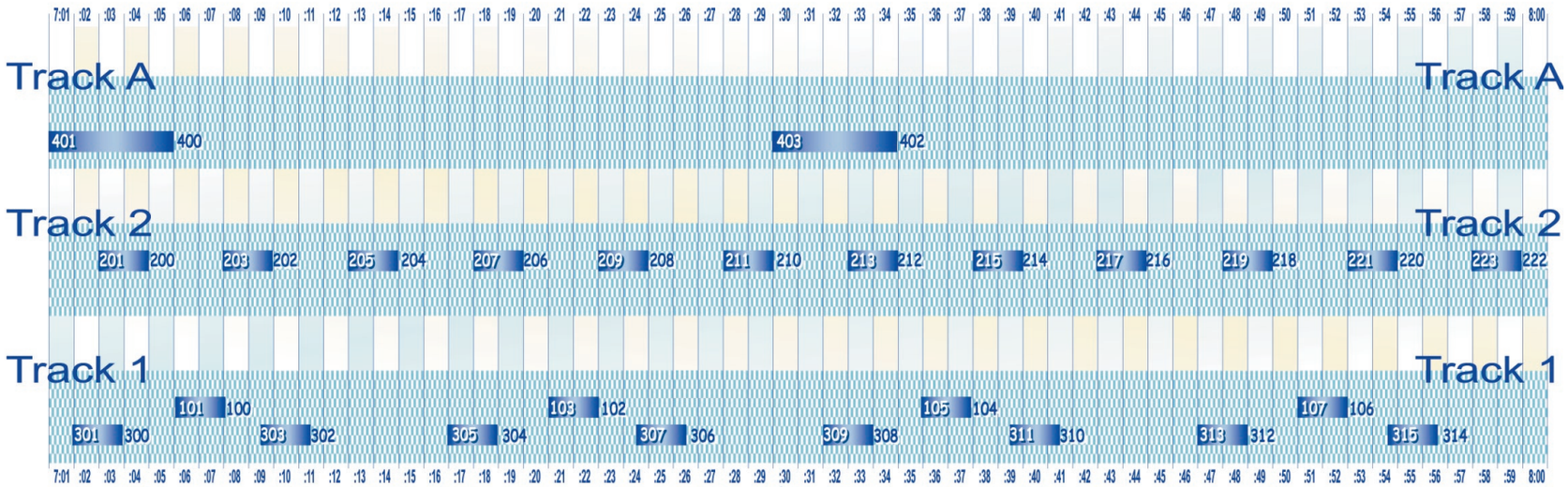


Simulation Vision Plan (Through Station)

1). Intercity (100 Series) utilize CML platform with complete loop
2). Reverse Commuter Departures utilize CML platform with complete loop
3). AMTRAK #5 & #6 utilize loop on inbound leg prior to backing into #1 or #2
4). Ski Train utilizes loop on inbound leg prior to backing into #1 or #2
5). Reverse Commuter Trains Depart 05" after arrival via South loop
6). 600 Series trains reverse commute at 10 & 40
    200 Series trains reverse commute at 07 & 37
    500 Series trains reverse commute at 24 & 57

Passenger-rail platform schedule, showing dwell times and platform assignments over a one-hour peak period for a through station.

Light Rail Simulation



Assumptions for LRT Simulation

Southeast/Southwest	100	4/hr = 8
West	200	12/hr = 24
Gold Line	300	8/hr = 16
I-70 Mountain (future)	400	2/hr = 4

Operating Schedule Assumptions

100 Series Arrive (Tk1)	at 06 - 21 - 36 - 51- 06
100 Series Depart (Tk1 - loop out)	at 08 - 23 - 38 - 53 - 08
200 Series Arrive (Tk2)	at 03 - 08 - 13 - 18 - 23 - 28 - 33 - 38 - 43 - 48 - 53 - 58 - 03
200 Series Depart (Tk2 - loop out)	at 05 - 10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 - 55 - 60 - 05
300 Series Arrive (Tk1)	at 02 - 09.5 - 17 - 24.5 - 32 - 39.5 - 47 - 54.5 - 02
300 Series Depart (Tk1)	at 04 - 11.5 - 19 - 26.5 - 34 - 41.5 - 49 - 56.5 - 04
400 Series Arrive (TkA)	at 00 - 30
400 Series Depart (TkA)	at 05 - 35

Light-rail platform schedule, showing LRT dwell times and platform assignments over a one-hour peak period.

The Consolidated Main Line studies identified possibilities for moving some or all of the Master Plan's rail components to the CML.

Consolidated Main Line (CML) Studies

The possibility of placing some or all transportation components away from the Denver Union Station site on land next to the Consolidated Main Line (CML) between 16th and 19th Streets was studied to resolve the challenge of incorporating a through-station for passenger rail.

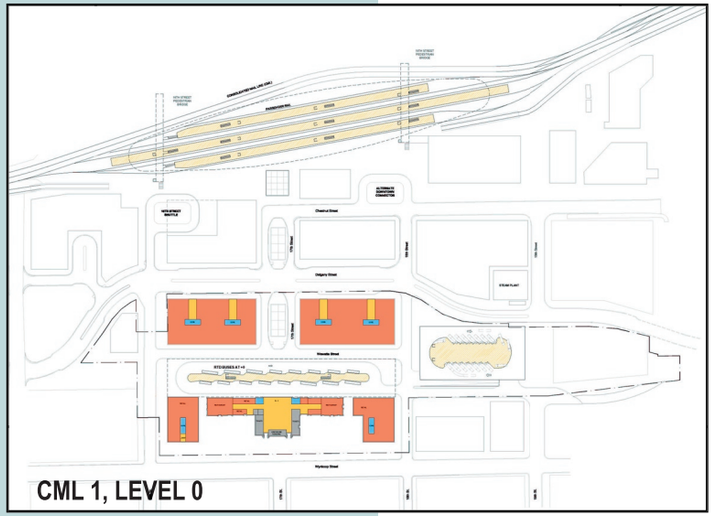
The graphics provided illustrate four options:

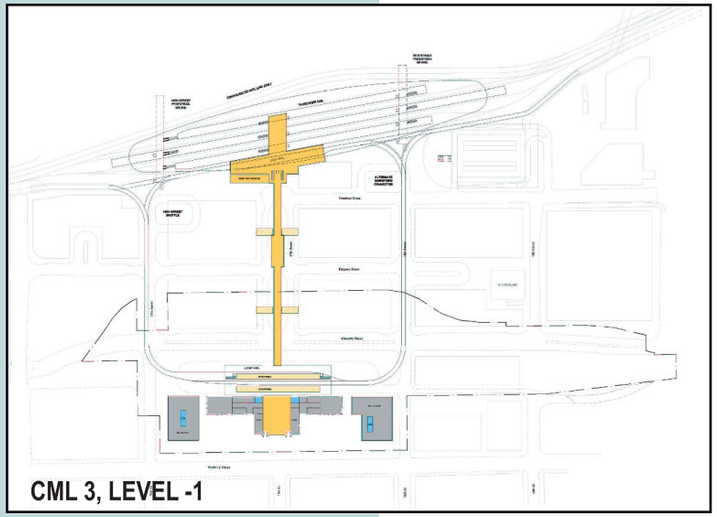
CML-1 moves just the through-station passenger-rail and light-rail stations to the CML, thus eliminating the Denver Union Station stub tracks from the 19.5-acre site. It extends the 16th Street Mall Shuttle and proposed Downtown Circulator to the CML to serve both the CML and the multimodal complex.

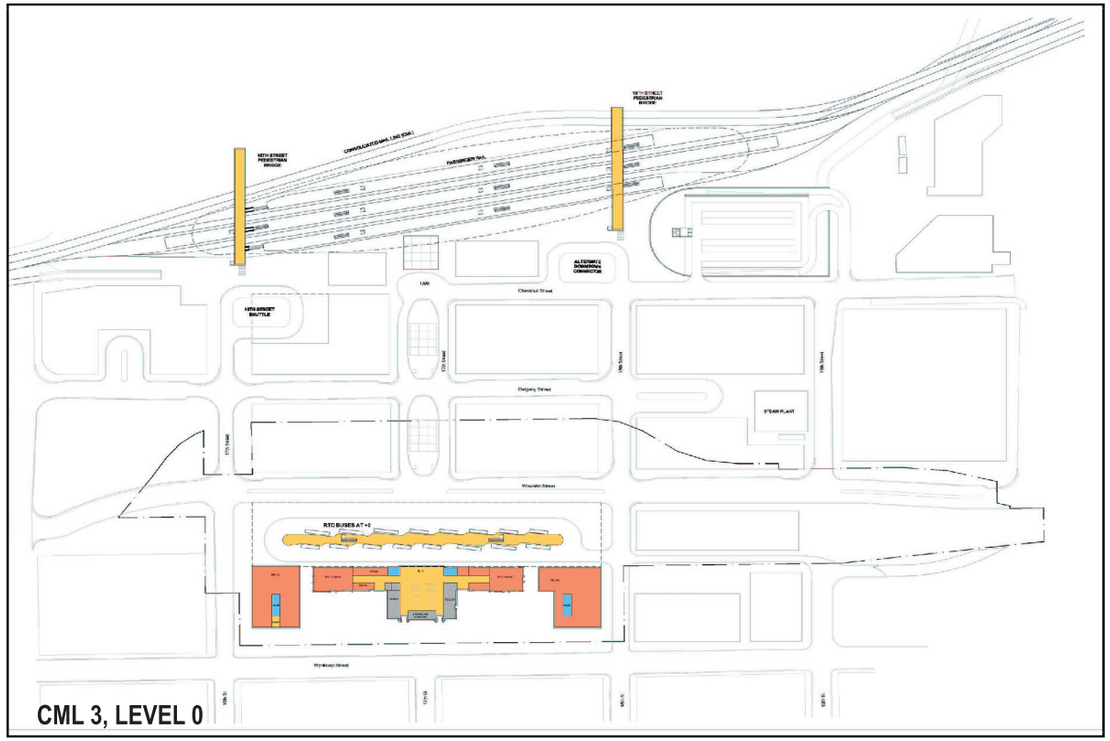
CML-2 also moves the through-station passenger-rail and light-rail stations to the CML. It straightens part of Wewatta Street, permitting a potential land swap for a portion of the CPV to minimize project costs.

CML-3 also moves the commercial bus facility program to the CML and straightens Wewatta Street between 16th and 19th Streets. This creates a larger land parcel for a potential swap for property next to the CML for multimodal components, and may also reduce costs of the alternative. The elimination of two bends in Wewatta could increase the function and safety of this arterial street, but more traffic analysis is needed.

CML-4 relocates all multimodal functions and the historic building to the CML, which extends the city grid without interruption by the existing tracks and DUS building. Land swaps could help realize this compact alternative with through-station rail capability and no net addition of land. The historic Denver Union Station building could be moved intact. Wewatta Street would also be straightened to increase its function and safety.







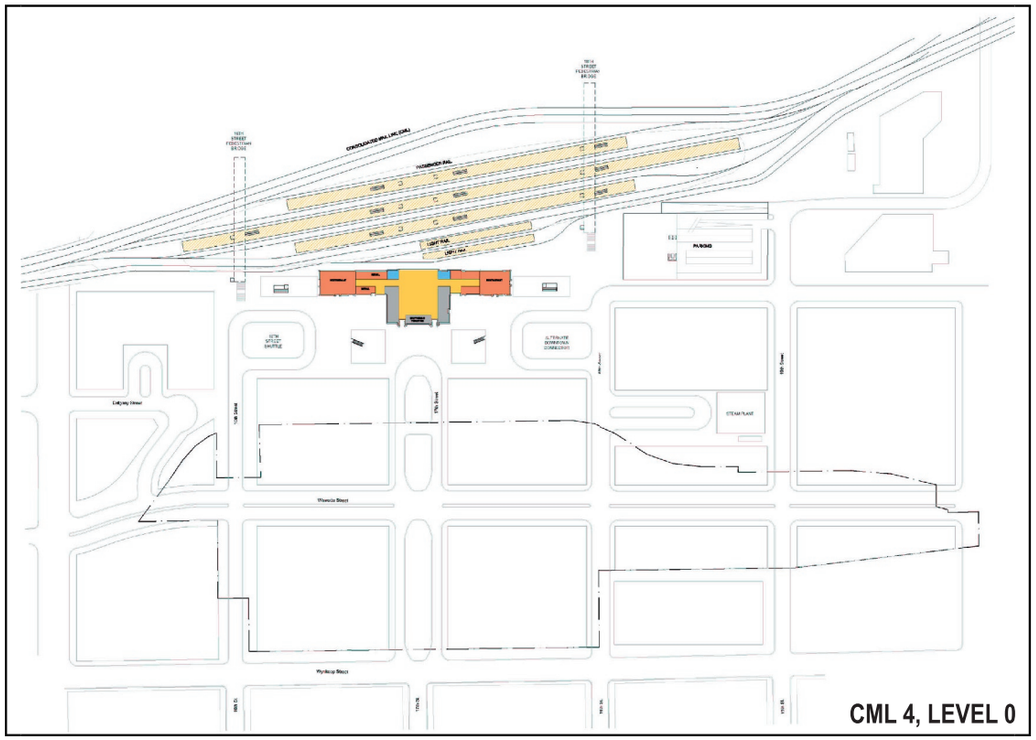
The CML options included benefits such as:

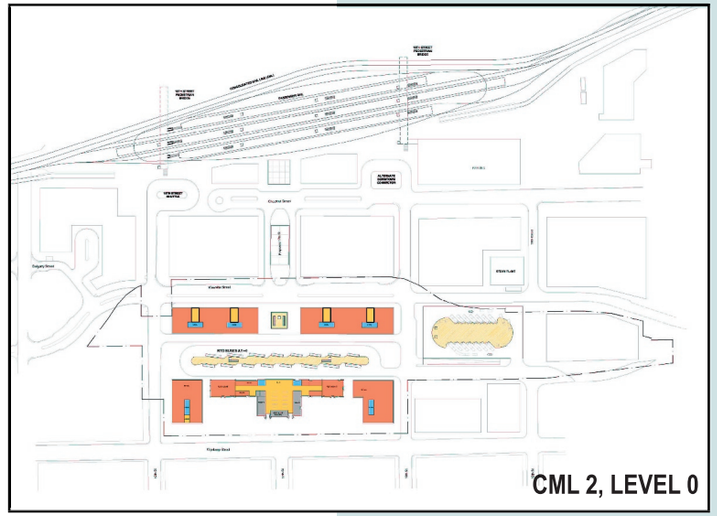
- each CML option produces a through-station passenger-rail facility;
- permitting 18th and 19th Streets to operate as through streets connecting Downtown to the Central Platte Valley;
- increasing the capacity of the multimodal station;
- eliminating the spur tracks and stub-end station;
- offering more flexibility for phasing each alternative;
- decreasing the need for temporary relocation of the passenger rail, light rail, and buses during construction; and
- easing program pressure on the tight site.

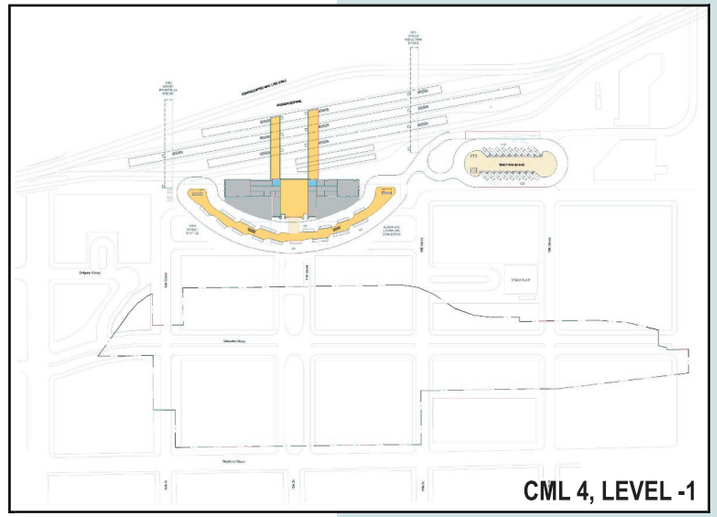
Significant disadvantages also emerged, including:

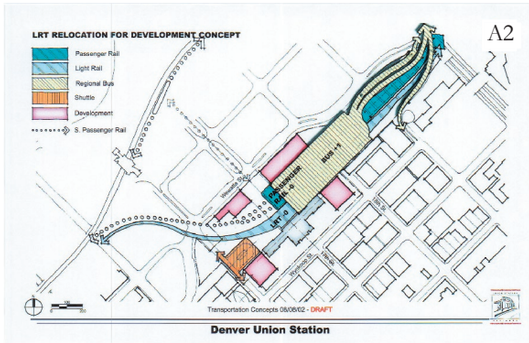
- extending the station over several blocks, making transfers less convenient and requiring other new infrastructure;
- possibly complicated land acquisitions and swaps;
- detaching the historic station from railroad uses (except CML-4 which moves the station closer to the CML);
- removing the historic station from LoDo, where it is a landmark, in CML-4;
- requiring the rezoning of the Commons Neighborhood and the Denver Union Station site;
- through-passenger rail service is possible only for north-to-south and south-to-north rail movements, not for commonly used north-to-north movements;
- conflicts with CML freight traffic; and
- difficult connections from the CML to the I-70 East Corridor.

As the challenges seemed to far outweigh potential benefits, these alternatives were not pursued. Yet some elements may someday provide opportunities for multimodal expansion.








LRT RELOCATION FOR DEVELOPMENT CONCEPT
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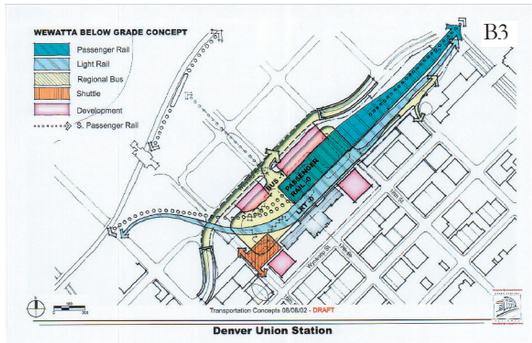
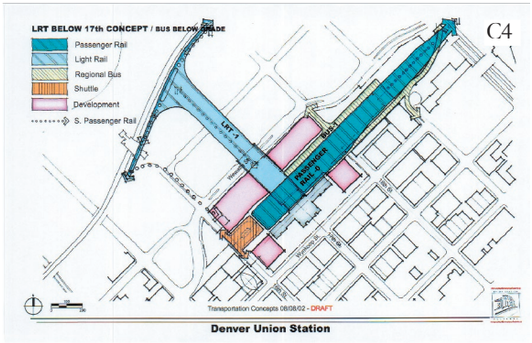
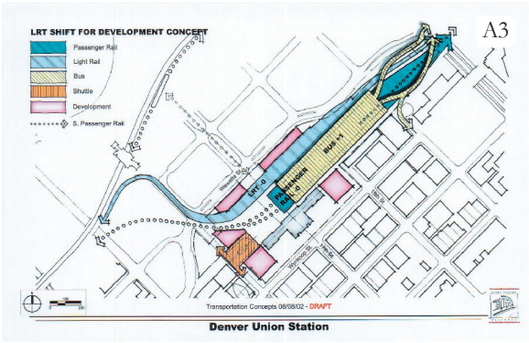
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


WEWATTA BELOW GRADE CONCEPT
B3
Passenger Rail
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


LRT BELOW 17th CONCEPT / BUS BELOW GRADE
C4
Passenger Rail
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


LRT SHIFT FOR DEVELOPMENT CONCEPT
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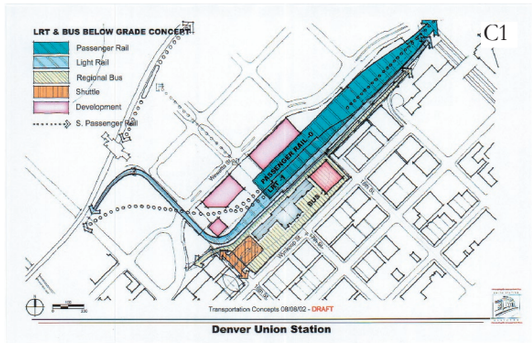
Light Rail
Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


LRT & BUS BELOW GRADE CONCEPT
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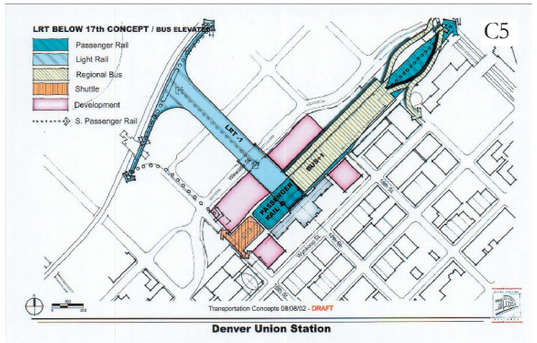
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


LRT BELOW 17th CONCEPT / BUS ELEVATED
C5
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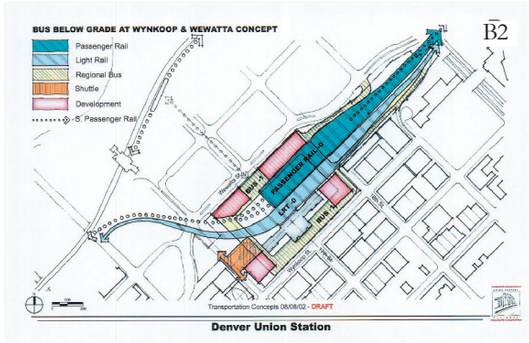
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


BUS BELOW GRADE AT WYNKOOP & WEWATTA CONCEPT
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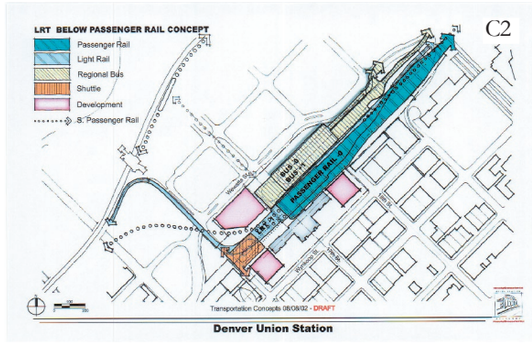
Passenger Rail
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
Transportation Concepts 08/08/02 - DRAFT
Denver Union Station


LRT BELOW PASSENGER RAIL CONCEPT
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Light Rail
Regional Bus
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Development
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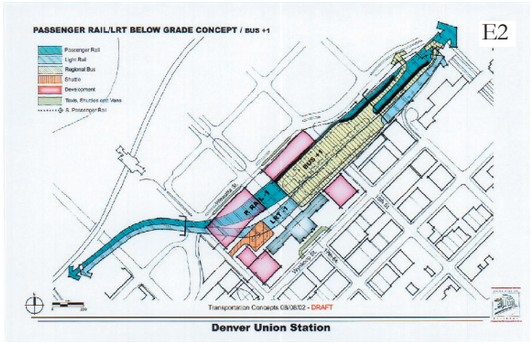
Denver Union Station


PASSENGER RAIL/LRT BELOW GRADE CONCEPT / BUS +1
E2
Passenger Rail
Light Rail
Regional Bus
Shuttle
Development
S. Passenger Rail
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Denver Union Station Master Plan
Abbreviations used in the Master Plan document:

BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
ca	Circa
CBD	Central Business District
CCD	City and County of Denver
CDOT	Colorado Department of Transportation
CMAQ	Congestion Mitigation Air Quality
CML	Consolidated Main Line
CPV	Central Platte Valley
DEIS	Draft Environmental Impact Statement
DIA	Denver International Airport
DMAP	Downtown Multimodal Access Plan
DMU	Diesel Multiple Unit
DRC	Development Review Committee
DRCOG	Denver Regional Council of Governments
DUS	Denver Union Station
EIS	Environmental Impact Statement
EOC	Executive Oversight Committee
FAR	Floor-Area Ratio
FEIS	Final Environmental Impact Statement
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transportation Administration
GDP	General Development Plan
HOT	High-Occupancy Toll
HOV	High-Occupancy Vehicle
HT	Height
LEED	Leadership in Energy and Environmental Design
LoDo	Lower Downtown
LOS	Level of Service
LPA	Locally Preferred Alternative
LPC	Landmark Preservation Commission
LRT	Light-Rail Transit
MAX	Maximum
NEPA	National Environmental Policy Act
NOI	Notice of Intent
PMT	Project Management Team
PRV	Platte River Valley
PUC	Public Utilities Commission
PUD	Planned Unit Development
RFP	Request for Proposal
ROD	Record of Decision
RNO	Registered Neighborhood Organization
ROW	Right-of-Way
RTD	Regional Transportation District
RTP	Regional Transportation Plan
SF	Square Feet
TAC	Technical Advisory Committee
TDP	Transit Development Plan (RTD)
TIP	Transit Improvement Plan (DRCOG)
T-MU	Transit Mixed-Use
UP	Union Pacific
USAC	Union Station Advisory Committee


TICKETS