

**TEHAMA COUNTY TRANSPORTATION COMMISSION
RTIP/STIP TECHNICAL ADVISORY COMMITTEE (TAC)
TRANSIT POLICY ADVISORY COMMITTEE (TPAC)**

December 9, 2003

AGENDA ITEM #11

Bus Stop Design Standards-Policies and Procedures

BUS STOP STANDARDS, POLICIES, AND PROCEDURES

Bus stops are the front door to a transit system. They provide essential information and basic components for the public resulting in increased ridership. Bus stops introduce transit service as well as, make transit safer, more accessible, more attractive, and operationally functional for passengers/drivers and vehicles.

Administration and oversight of bus stops shall be the responsibility of the Tehama County Transit Agency and the Tehama County Department of Public Works in accordance with the Agreement for Transit Services in Tehama County between the County of Tehama, and the Incorporated cities of Corning, Red Bluff, and Tehama as adopted on February 25, 2003 (miscellaneous agreement book # 63-2003).

Frequency placement criteria

1. Transit industry and traffic engineering standards practice is to place bus stop signs at intervals of 660 to 880 feet, or about every two to three blocks, excluding undeveloped areas.
2. Bus stops shall be identified with a bidirectional sign and shall be placed at minimum intervals of 700 to 900 feet along each route in the incorporated cities and in densely populated areas of the county, excluding undeveloped areas.
3. In developed areas where it is not practical to place bus stop signs at above intervals due to auto-oriented development patterns, bus stops shall be placed in close proximity to subdivisions access points and within one block of activity centers such as shopping centers, schools, health care facilities, social service offices, apartment complexes, and mobile home parks.

Bus stop location, layout, and criteria

4. Bus stop locations shall be as approved by the jurisdiction's director of public works and installed in accordance with the standards herein.
5. Bus stop signs, benches, and shelters shall be placed to allow adequate maneuvering space for pedestrians
6. The preferred location of a bus stop is a far side of an intersection, as it requires the least curb area, minimizes conflicts with pedestrians and turning vehicles, and facilitates safe departure of the bus from the stop during breaks in traffic provided by stop signs or traffic signals. Other locations may be more suitable depending on transit operations, traffic and development considerations.
7. Far-side bus stops are preferred at intersections where sight distance or signal capacity problems exist, and where right or left turns by general traffic are heavy.
8. Near-side bus stops shall be an alternative at intersections where transit flows are heavy, but traffic and parking conditions are not critical.
9. Mid-block bus stops shall be an alternative in strip commercial areas (such as Antelope Boulevard in Red Bluff) where the block faces are longer, with multiple destinations served within the block; and in downtown areas where multiple routes require long loading areas that might extend an entire block, or where traffic, physical or environmental conditions prohibit near or far-side stops.

BUS STOP STANDARDS, POLICIES, AND PROCEDURES

10. Turn-out bus stops shall be an alternative where traffic conditions make conventional on-facility placement of bus stops unsafe or unsuitable, as turnouts provide a safe refuge for the bus while loading or unloading passengers.
11. Bus turnout locations shall be determined by Tehama County Transit Agency, subject to approval by the jurisdiction's director of public works, and shall be constructed in conformance with the Standards adopted by the Transit Agency.
12. Specifically, turn-out bus stops will be required where current streets are of insufficient width to allow a bus stop width of 10 feet from the edge of the traveled way where speed limits are 25 MPH or less, or 12 feet where speed limits are greater than 25 MPH but less than 45 MPH.
13. Turn-out bus stops will be required at all timed stops where the speed limit exceeds 45 MPH.
14. Except for new developments, bus stops will be installed at the expense of the Transit Agency.

Bus stop accessibility

15. Access to bus stops via the street and sidewalk are essential for TRAX mobility-impaired individuals. The Americans with Disabilities Act (ADA) requires TRAX to provide accessibility to bus stops. If bus stops are not accessible paratransit service may be required to comply with ADA.
16. Accessibility criteria include wheelchair deployment area of a hard flat surface, or pad, measuring eight (8) feet wide by eight (8) feet deep (behind and contiguous to the curb face). An accessible path in compliance with ADA and California building codes must link the bus stop to adjacent streets, sidewalks, and nearby buildings.
17. Not all TRAX bus stops are or will be accessible in the immediate future. In newly developed areas, the need for accessible features shall be considered during the site plan review process. In older developed areas, a program with retrofit features for accessibility should target: medical facilities and residential areas for the seniors/disabled; other life and service needs of seniors/disabled (social services, post office, banks).

Establishing a bus stop

18. To establish a bus stop, a site inspection should be made for visibility and safe footing. The following criteria dictate actual placement of the bus stop:
 - Spacing relative to other bus stops on the route.
 - Potential for use, given the land uses within one-fourth mile.
 - Visibility (vehicle safety).
 - Traffic.
 - Passenger safety.
 - A hard flat surface for safe footing.
 - An accessible loading area.
 - Effect on adjacent property owner.
 - Ease of transit service operation.
 - Natural or pre-existing amenities (shade, shelter, seating, lighting, public phones, public restrooms).
 - Existing red curb space or No Parking zone (used wherever possible).

BUS STOP STANDARDS, POLICIES, AND PROCEDURES

19. The location is then assessed for the following needs:
 - A red curb or “No parking” sign, if not already present.
 - A bench.
 - A shelter.
 - A trash receptacle.

All designated bus stops - minimum equipment

20. The minimum requirement for a bus stop shall be:
 - A bidirectional sign with a pictograph of a transit bus.
 - A pole or an existing surface suitable for mounting a sign.
 - A flat safe boarding area.
 - Within the communities, or areas with parking conflicts, a red curb or a No parking sign.

Other equipment at designated bus stops

21. A bench or other seating will be included at a bus stop if the site can accommodate a bench, and if the location meets one or more of the following criteria:
 - The bus stop boarding activity is at least five passengers per day.
 - The bus stop is adjacent to a senior citizen housing complex or activity center.
 - The bus stop is accessed by disabled, students, seniors, or transit dependant individuals.
 - The bus stop is adjacent to a medical facility.
 - The stop is located at a major shopping center.
 - The stop servers as a transfer point between two or more TRAX routes.
 - The stop is identified as needing a bench by the Tehama County Transit Board, or the local jurisdiction (e.g., City Council, Board of Supervisors).
22. A shelter will be considered at a bus stop that meets all of the following criteria:
 - The bus stop warrants a bench.
 - A bench, if installed would be exposed to the elements (rain, wind, direct sun) and there is no nearby structure that provides reasonable shelter.
 - The bus stop boarding activity is at least eight passengers per day.
23. A trash receptacle may be installed at any bus stop that warrants a bench or shelter if littering is perceived or found to be a problem at that stop.

Bus stops for new development

24. Upon receipt of notification of any development proposals from one of the City or the County Planning Directors, the Transit Agency will review such proposals in a timely manner for bus facility needs. If the Agency determines that bus facilities are needed, it will identify the locations and type of facilities to be installed, and any right of way dedications or circulation improvements that may be needed. The Agency will then provide that information to the Planning Director who submitted the notification.
25. *At a minimum bus stops at new developments shall include bidirectional signs, benches, shelter(s) and trash receptacle.* Routine maintenance of the site is the responsibility of the jurisdiction.
26. Turn-out bus stops are the preferred bus stop for new development.

BUS STOP STANDARDS, POLICIES, AND PROCEDURES

27. Bus stop facilities shall be installed at developer's expense with all new developments to be served by current or planned bus routes.

Communication

28. The Transit Agency shall request assistance from the appropriate jurisdiction regarding safety issues or the trimming, removal of limbs/shrubs/litter at bus stops or within the transit service area as needed.
29. The County or incorporated cities of Corning, Red Bluff, and Tehama shall communicate safety concerns related to bus stops or issues with the transit service area to the Transit Agency.

Reimbursement of incurred cost

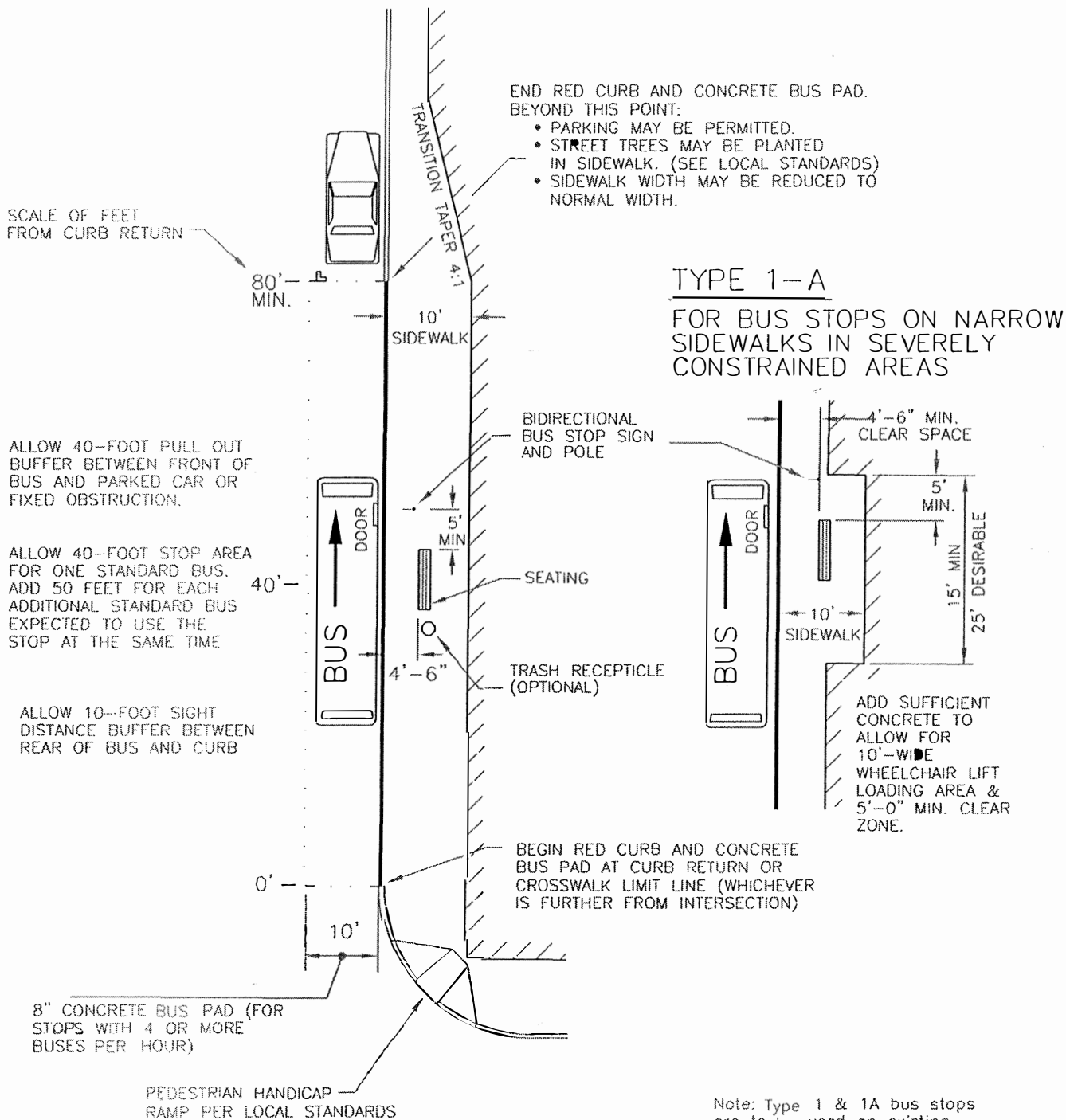
30. The cost of repairs for broken benches, replacement of safety glass, painting, or modifications to allow display of transit information or other repairs, shall be reimbursed by the Transit Agency only after the appropriate jurisdiction has submitted an estimate for repairs to the Transit Agency.
31. Repair estimates will include all labor and materials (including tax) and shall be submitted to the Transit Agency prior to repairs being made. The Transit Agency shall respond to the jurisdiction in a reasonable time.
32. The Transit Agency shall not provide reimbursement for any repairs if an estimated cost was not submitted or if the repair was completed prior to the approval of the estimate by the Agency (this process is needed for budgeting purposes). The Executive Director of the Transit Agency may grant an exception if reasonable information is presented by a jurisdiction.
33. All costs related to bus stops, except the procurement of shelters/benches by the Transit Agency, shall be on a reimbursement basis only.
34. Funding for the reimbursement of repairs, procurement of benches or shelters and installation is identified in the Transit Agency's annual budget.

Maintenance

35. Routine maintenance, cleaning, and litter removal shall be the responsibility of the respective jurisdictions.
36. If bus routes are revised and an existing bus stop is no longer needed, the cost of removal(s) shall be reimbursed by the Transit Agency.

Advertising

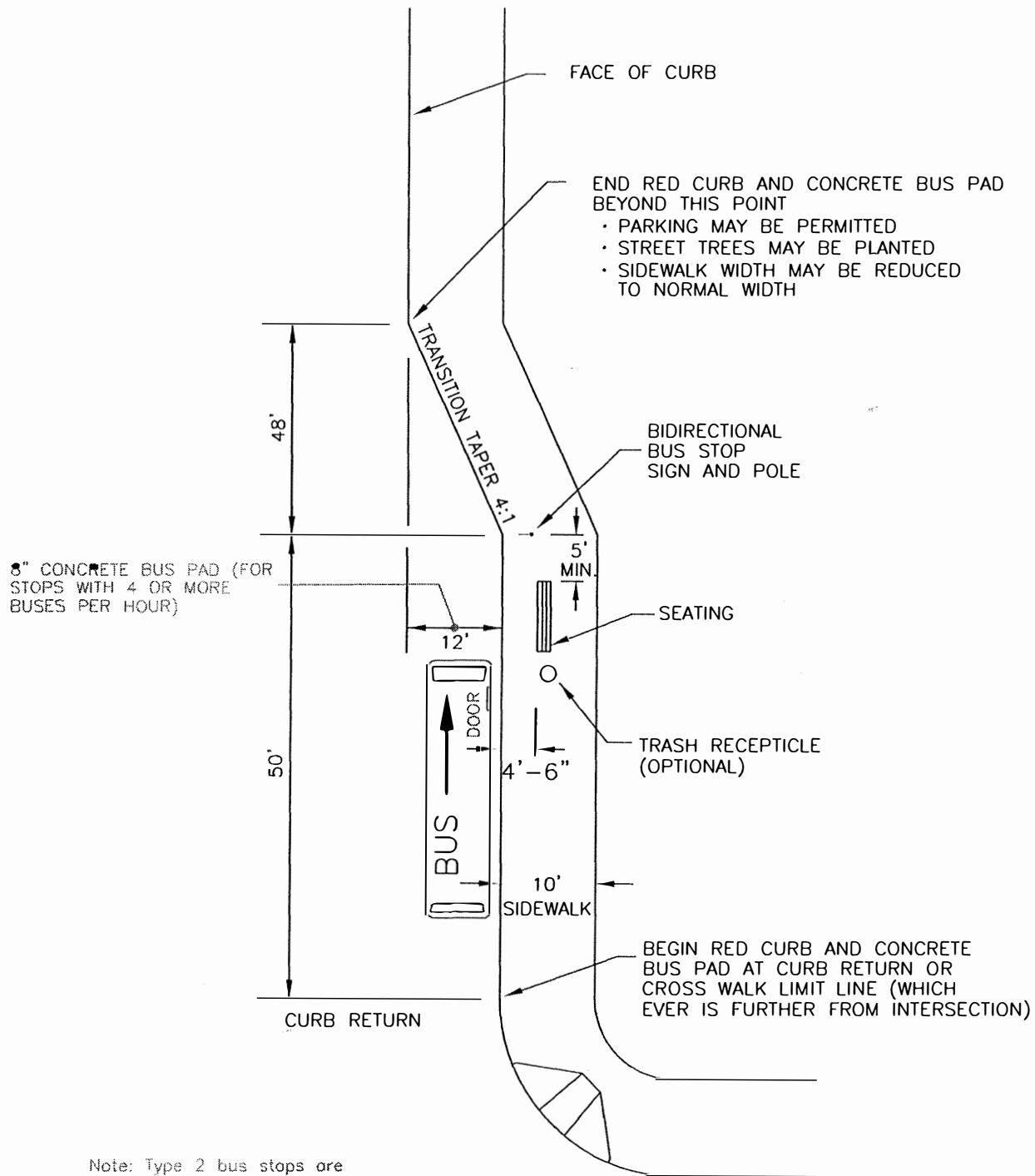
37. Bus stop benches and shelters shall not be used for advertisements unless specifically authorized to do so by the responsible jurisdiction which includes the approval of Transit Agency Board.
38. Prior to advertising at a proposed bus stop the Transit Agency Board shall approve an advertising policy and all related the advertising material related to the proposed bus stop.



TEHAMA COUNTY TRANSIT AGENCY

Approved _____
Director/Executive Director

TYPE 1&1A
BUS STOP
LAYOUT-FAR SIDE
NO TURNOUT



Note: Type 2 bus stops are to be used with new developments

TEHAMA COUNTY
TRANSIT AGENCY

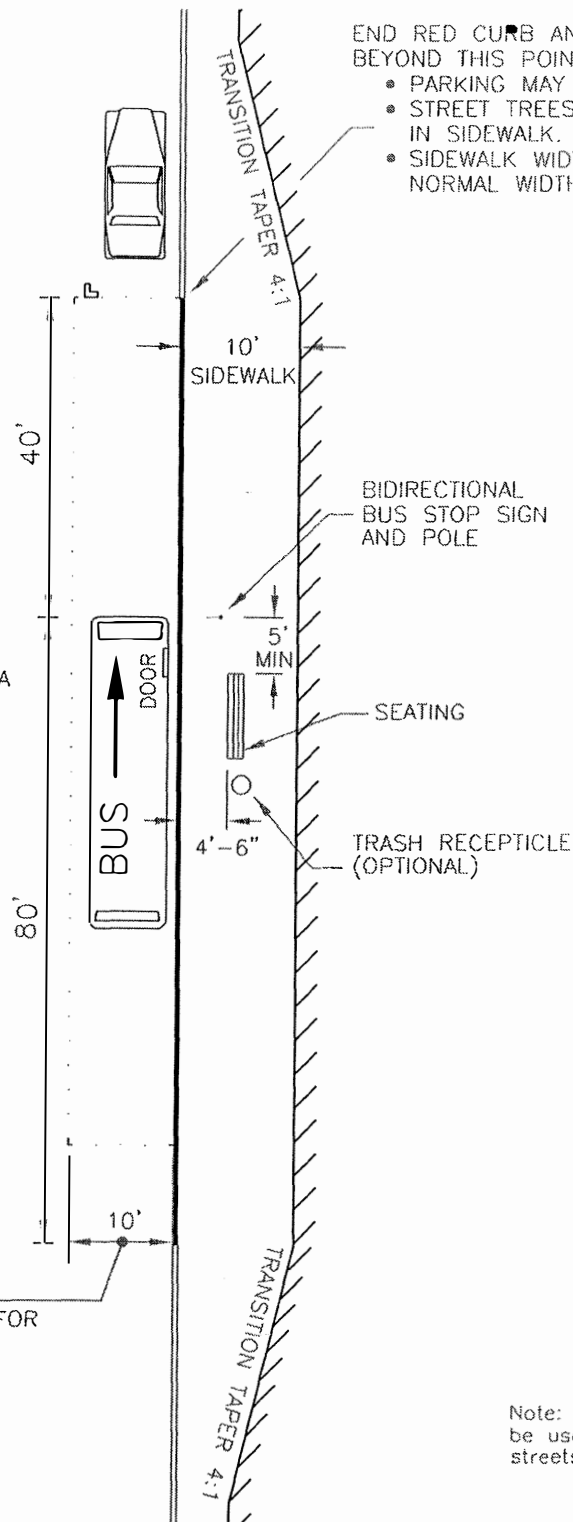
Approved _____
Director/Executive Director

TYPE 2 BUS STOP
LAYOUT-FAR SIDE
WITH TURNOUT

2

ALLOW 40-FOOT STOP AREA
FOR ONE STANDARD BUS.
ADD 50 FEET FOR EACH
ADDITIONAL STANDARD BUS
EXPECTED TO USE THE
STOP AT THE SAME TIME

8" CONCRETE BUS PAD (FOR
STOPS WITH 4 OR MORE
BUSES PER HOUR)



END RED CURB AND CONCRETE BUS PAD.
BEYOND THIS POINT:

- PARKING MAY BE PERMITTED.
- STREET TREES MAY BE PLANTED IN SIDEWALK. (SEE LOCAL STANDARDS)
- SIDEWALK WIDTH MAY BE REDUCED TO NORMAL WIDTH.

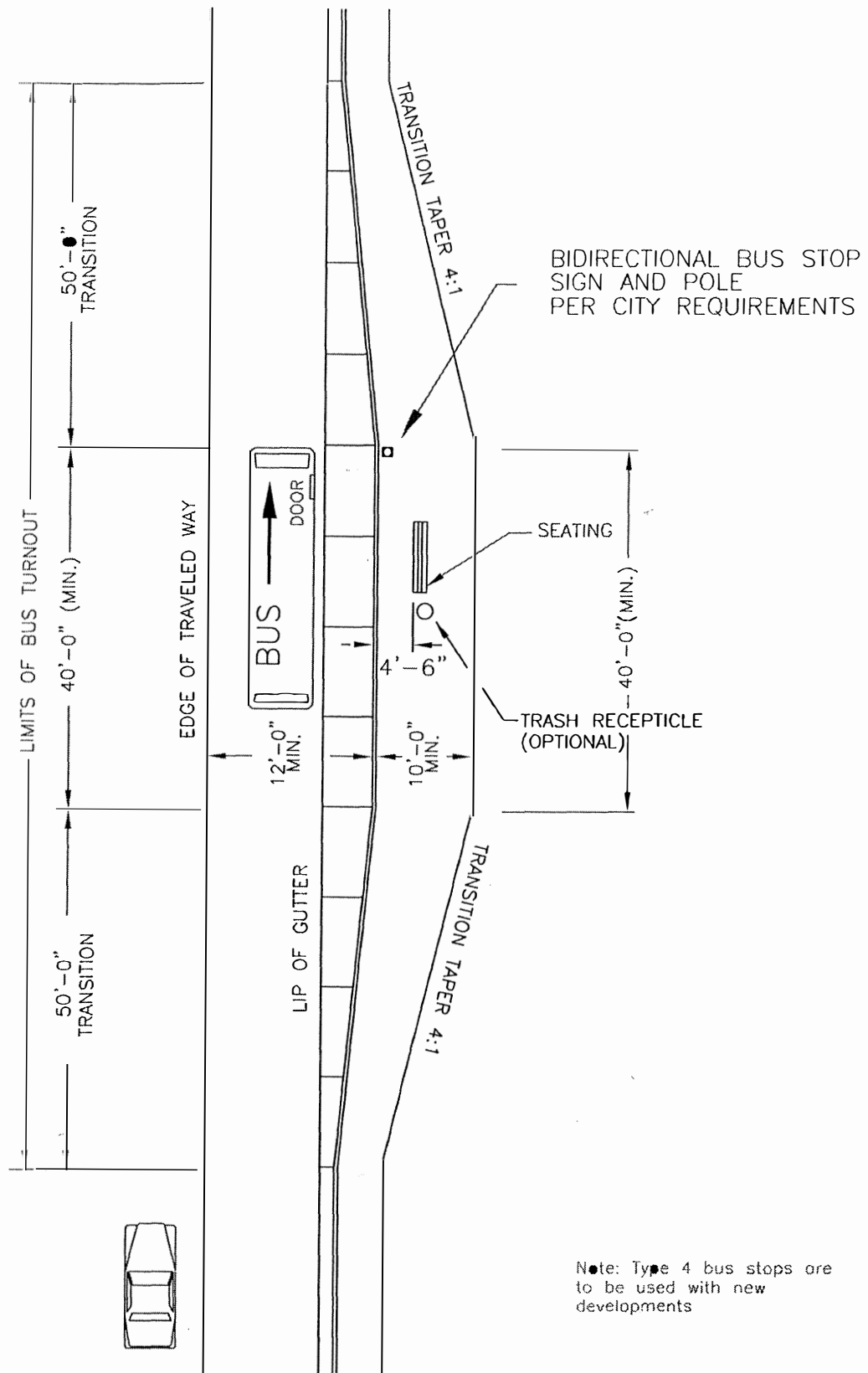
Note: Type 3 bus stops to
be used on existing
streets only

TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

TYPE 3 BUS STOP
LAYOUT-MID-BLOCK
NO TURNOUT

3

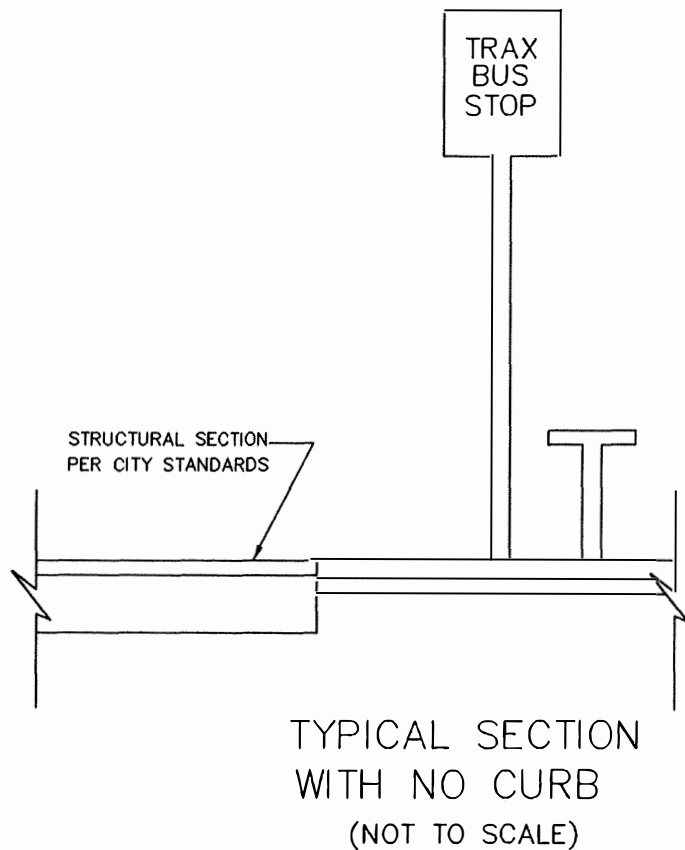
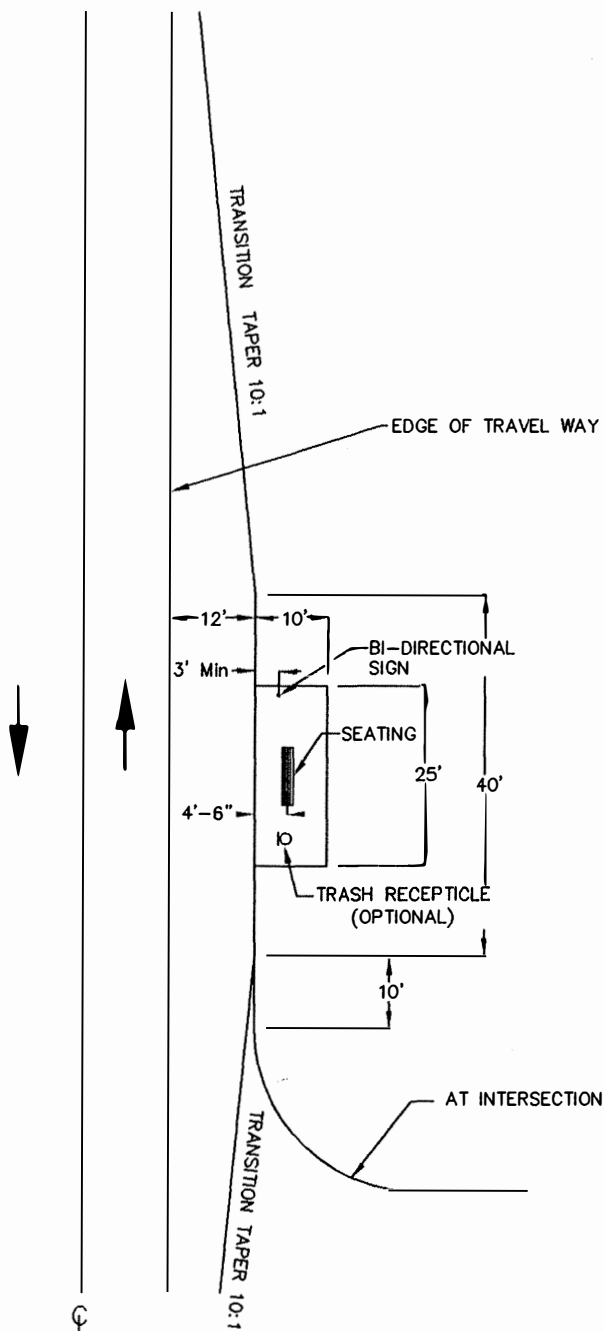


TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

TYPE 4 BUS STOP
LAYOUT-MID-BLOCK
WITH TURNOUT

4



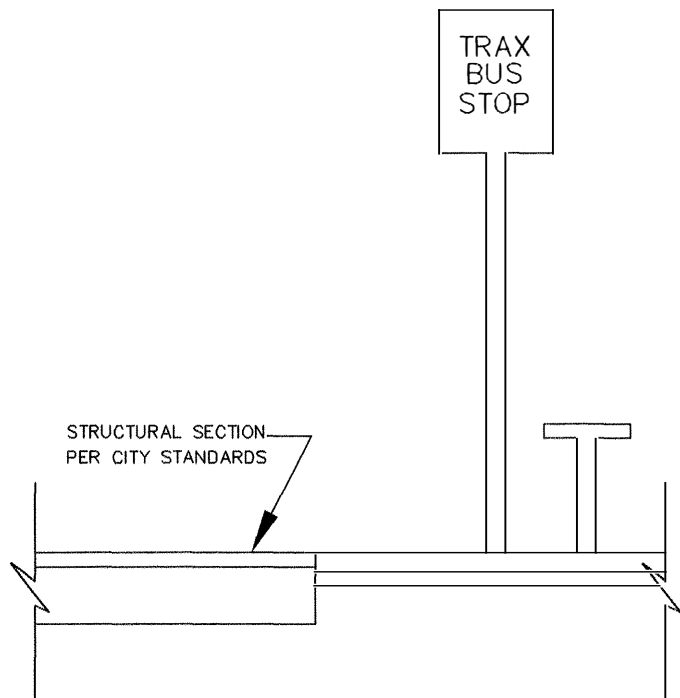
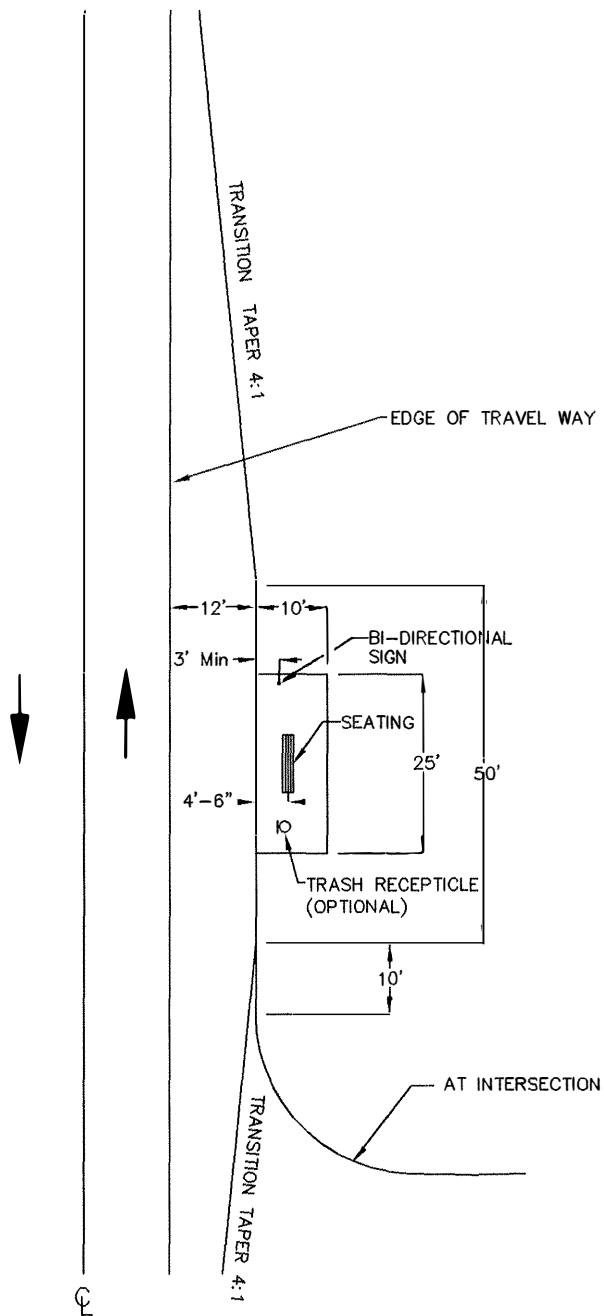
NOTE:
TYPE 5 BUS STOP TO BE USED
ON EXISTING STREETS
WITH NO CURBS

TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

TYPE 5 BUS STOP
LAYOUT-NO CURB
SPEED LIMIT
EXCEEDS 45 MPH

5



TYPICAL SECTION
WITH NO CURB
(NOT TO SCALE)

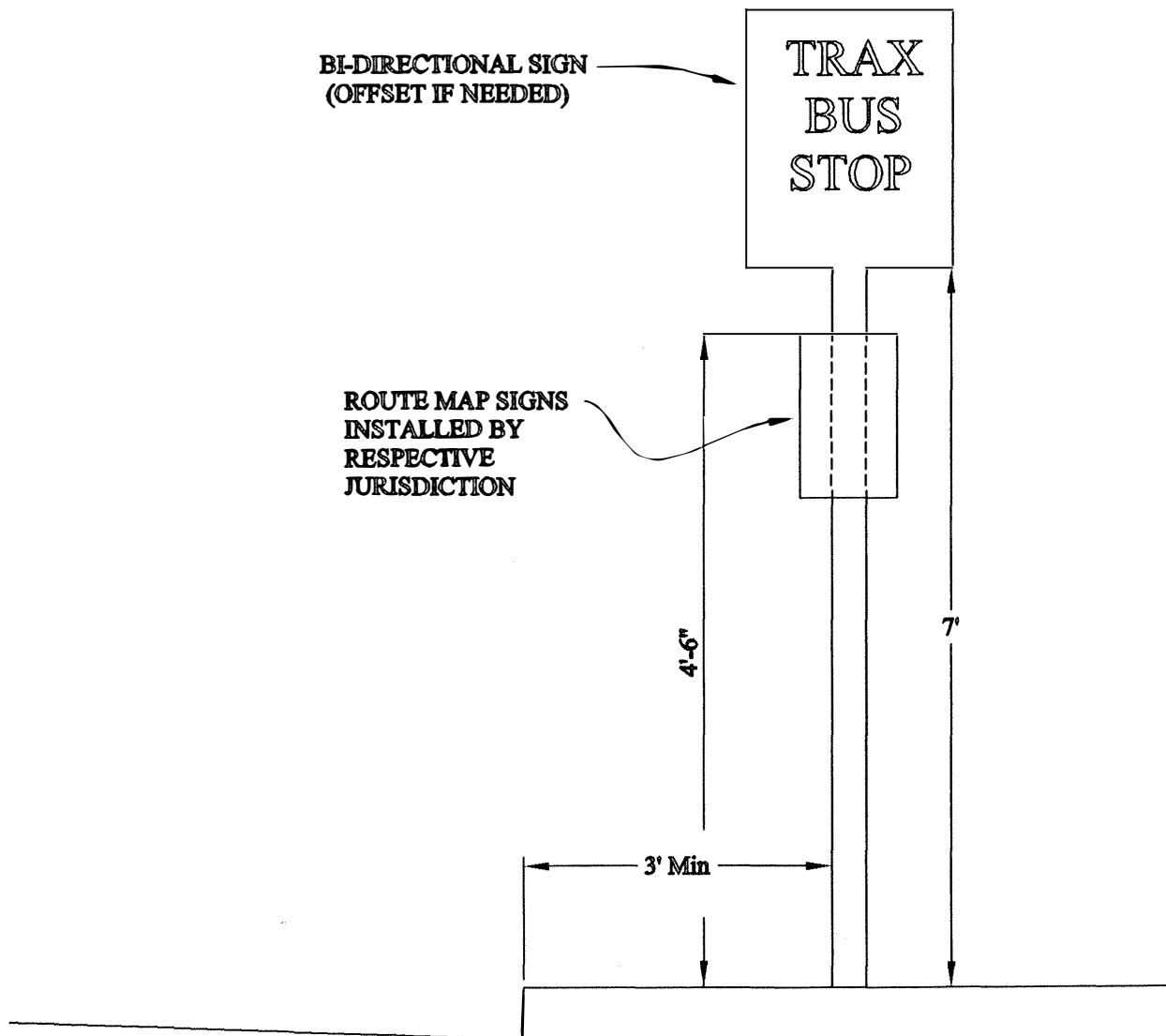
NOTE:
TYPE 6 BUS STOP TO BE USED
ON EXISTING STREETS
WITH NO CURBS

TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

TYPE 6 BUS STOP
LAYOUT-NO CURB
SPEED LIMIT
LESS THAN 45 MPH

6

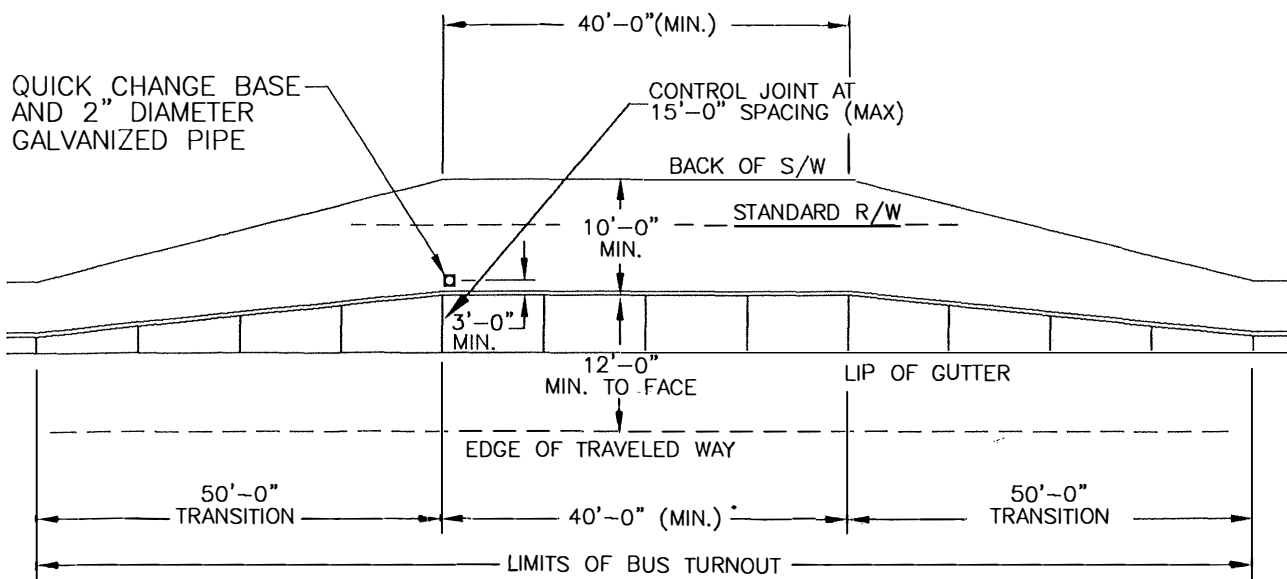


TEHAMA COUNTY
TRANSIT AGENCY

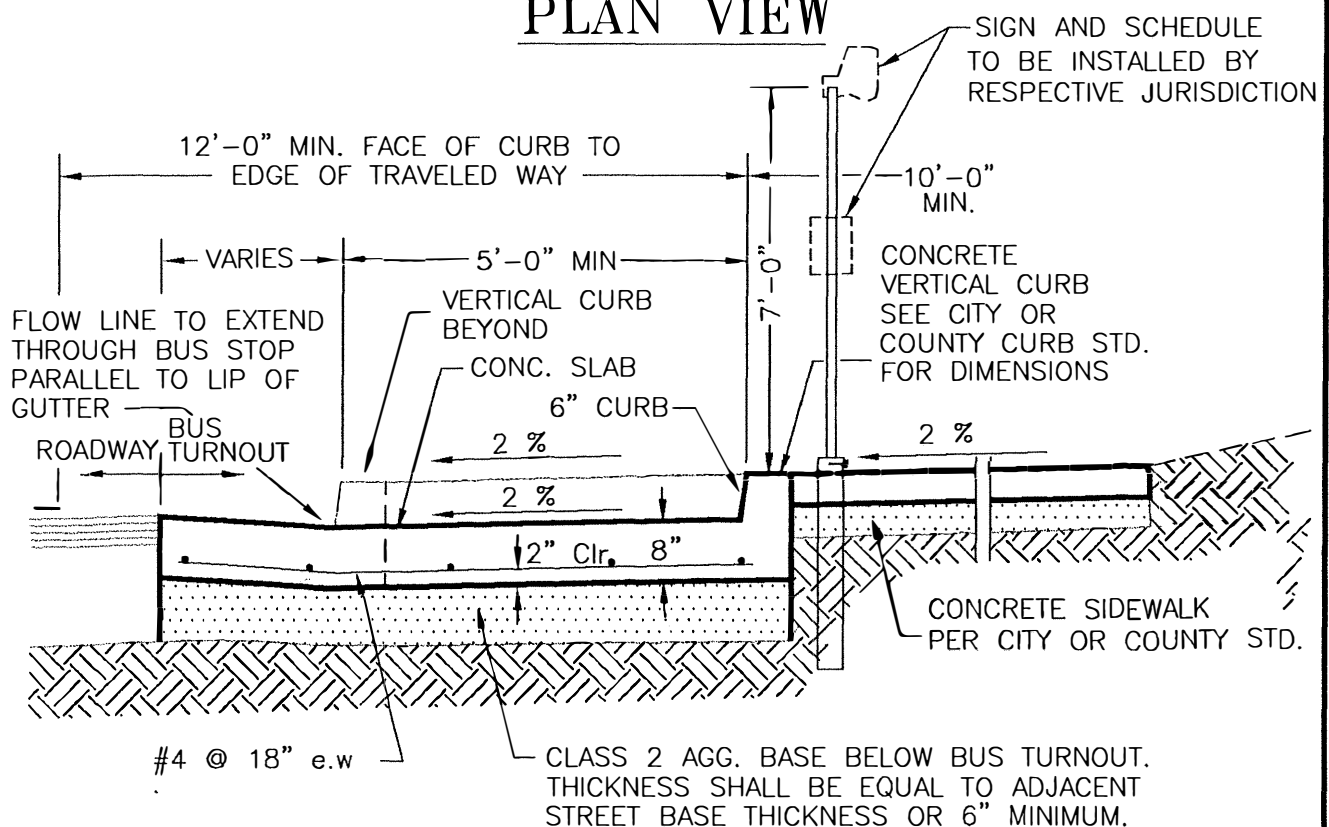
Approved _____
Director/Executive Director

TYPE 7
BUS STOP SIGN

7



PLAN VIEW



NOTE:

1. EASEMENT DEDICATION REQUIRED TO BACK OF SIDEWALK. CONTROL JOINTS SHALL BE 1 1/2" MIN. DEPTH TOOLED JOINTS.

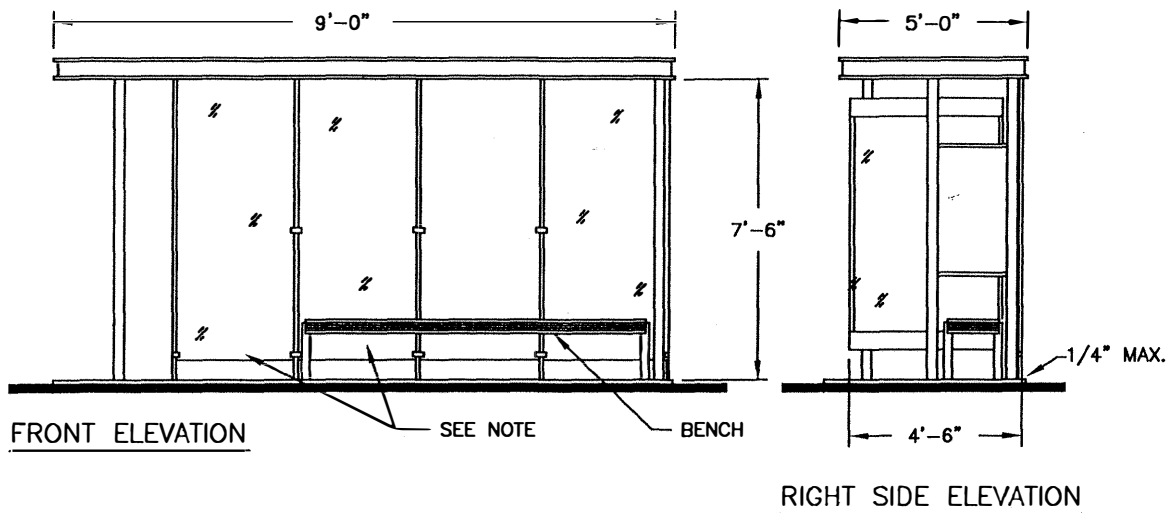
SECTION

TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

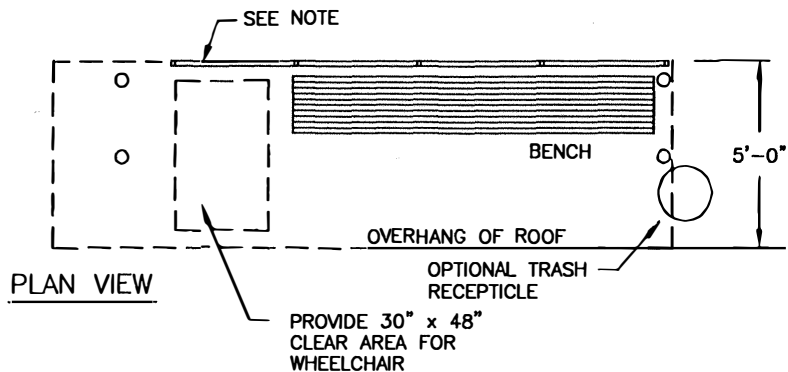
BUS TURNOUT
DETAIL

8



NOTE:

LEFT-REAR TEMPERED SAFETY GLASS (OR EQUAL) PANEL MAY BE OMITTED IF ACCESS FROM THE REAR OF THE SHELTER IS REQUIRED. IF PANEL IS OMITTED AN ALTERNATE 30" x 48" WHEELCHAIR SPACE SHALL BE PROVIDED ADJACENT TO THE BENCH AND UNDER THE SHELTER ROOF.



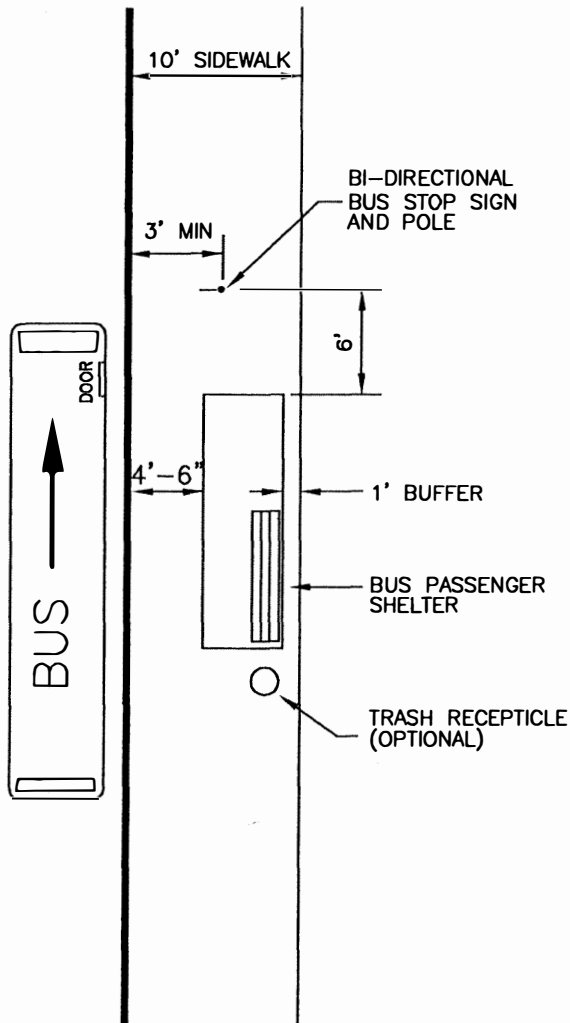
TEHAMA COUNTY
TRANSIT AGENCY

Approved _____
Director/Executive Director

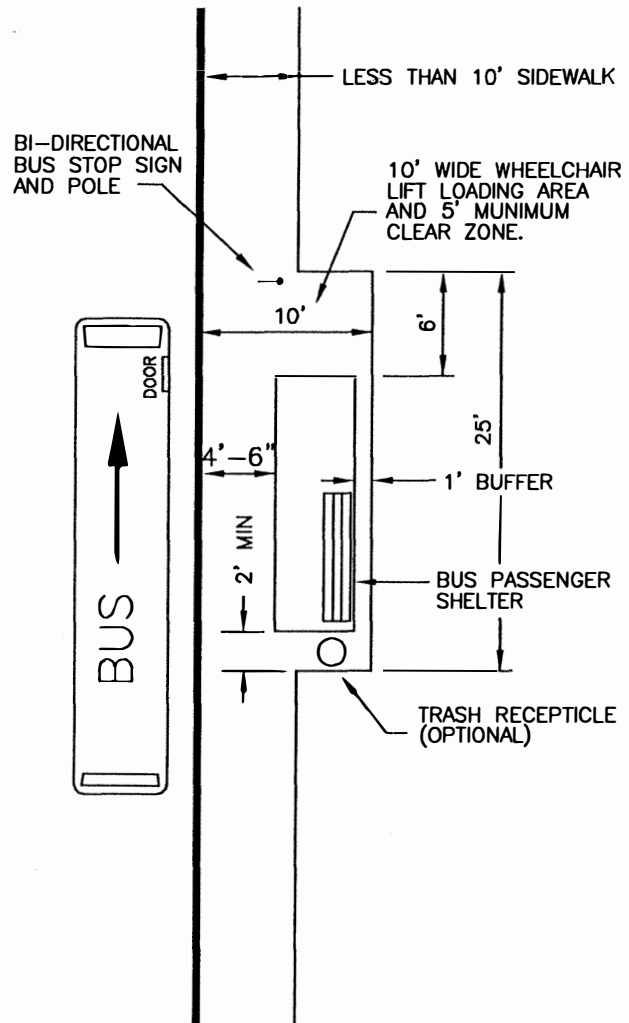
BUS PASSENGER
SHELTER LAYOUT

9

**CASE I:
FOR STANDARD
BUS STOPS**



**CASE II:
FOR BUS STOPS ON NARROW
SIDEWALKS IN SEVERELY
CONSTRAINED LOCATIONS**



**TEHAMA COUNTY
TRANSIT AGENCY**

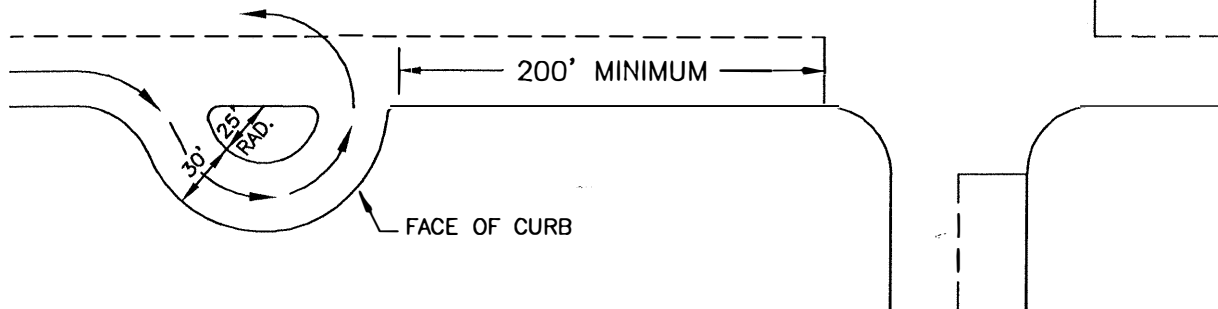
Approved _____
Director/Executive Director

**BUS PASSENGER
SHELTER PLACEMENT**

10

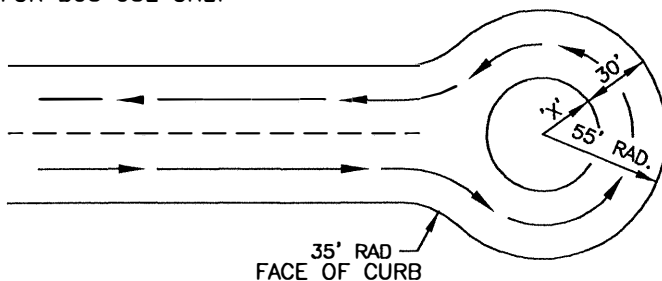
CASE I: JUG HANDLE

FOR BUS USE ONLY



CASE II: SYMMETRICAL CUL-DE-SAC

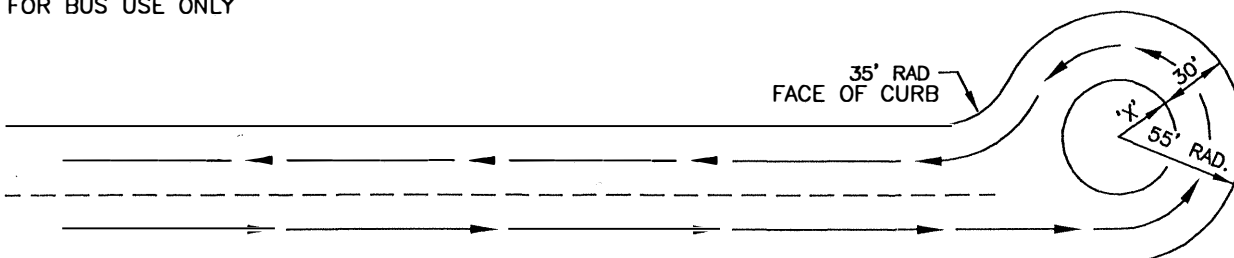
FOR BUS USE ONLY



NOTE:
'X' = 25 FT RADIUS (MAX)
IF ISLAND DESIRED

CASE III: ASYMMETRICAL CUL-DE-SAC

FOR BUS USE ONLY



NOTE:
'X' = 25 FT RADIUS (MAX)
IF ISLAND DESIRED

NOTE:

1. TO MAINTAIN SIGHT DISTANCE, ONLY LOW PLANTINGS ARE RECOMMENDED IN ISLAND AREAS.
2. 30 FT. LANE WIDTH ASSUMES NO PARKING IN LOOP AREA.

TEHAMA COUNTY
TRANSIT AGENCY

Approved

Director/Executive Director

BUS
TURNAROUNDS

11