NEW FLYER

XCELSIOR
BETTER BY DESIGN.

CITY AND COUNTY OF SAN FRANCISCO
San Francisco Municipal Transportation Agency
Request for Proposals
THE PROCUREMENT OF
30-Foot, 40-FOOT AND 60-FOOT LOW FLOOR
DIESEL HYBRID COACHES

Proposal Section	Title	Bid Submission Requirements
3-B	Internal Dimensions and Layout	1) Supply plan in left and right elevations of proposed seating, stanchion and handrail layout. The seat spacing, aisles, front platform, and tie-down areas should be dimensioned. Supply aisle width between front and rear wheelhouses, hip to knee distance for all forward-facing seating, correct stepwell dimensions, location of modesty panels and location of driver's wrap-around barrier and driver's seat. Note locations of any floor slopes and the amount of slope in percent grade. It is strongly preferred that the plan view and left and right elevations are shown on an 11 x 17 inch drawing. 2) Supply a dimensioned plan view of wheelchair tie down locations and the turning diagram of the ADA mobility aid device moving from the raised ramp through the front platform area to the area between the front wheelhouses. 3) Provide a drawing of ramp showing width at the platform, length between the raised barriers, height of the barriers, slope of the ramp (kneeled), and total deployed distance from the side of the bus. 4) Provide a drawing clearly showing the wheelchair maneuvering room in as much detail as shown in Attachment 11, Vol. 2. See also Section 3.7.5.1, Maneuvering Room of the Technical Specifications – Vol. 2.

Please find attached our seating questionnaire describing the key features of the proposed seat. We are also including detailed drawings with regards to seat position and wheelchair maneuverability. New Flyer is proposing our patented wheelchair ramp with Improved accessibility, incorporating the lowest entrance step height of any available bus design today, a wider entrance door (33.8" clear opening between handles) and 1:7 slope.

NEW FLYER

XCELSIOR
BETTER BY DESIGN

SALES INFORMATION BULLETIN
#526-001 | **Model:** Xcelsior | **Length:** specific to MUNI **Propulsions:** AIII

Passenger Seating

Please refer to the attached drawing for details regarding the proposed seat layout. In addition, New Flyer has included additional information regarding the seating features:

Seat Manufacturer & Model	**American Seating Vision**
Seating Capacity	52
Standee Capacity	39
Average Hip-to-Knee	30
Average Foot Room*	14"
Wheelchair Restraint System	Reliant 3-point system
Wheelchair Restraint Belts Model	Secura Swiv lock belts
Locking Mechanism on Flip-Up Seats	Up and Down
Seating Insert Material	Anti Graffiti Compliant
Seating Upholstery Fabric	Fiberglass Onserts
Seat Frame Material	Exposed stainless steel frames
Seat Back Panel Material	Stainless Steel
Seat Grab Rail Material	Stainless Steel
Arm Rest on Longitudinal Flip-Up Seats	Stainless Steel
Arm Rest on Standard Longitudinal Seats	Stainless Steel
Stop Request Type on Longitudinal Flip-up seats	Special MUNI Blue Stop Request

Specials:

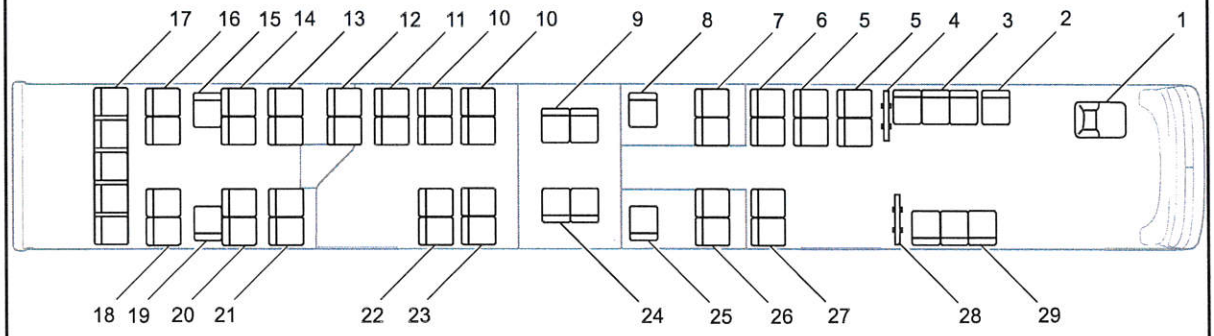
Trash deflector	Included at rear cross seat
Drain holes	Required
Anti-graffiti coating	Required
Docket 90 compliant	Not Required
Remote Release Belts	Required

Revision Level A
Revision Date 05.18.11

3. PASSENGER SEATING

3.1. Mounting Passenger Seats

The vehicle is equipped with a combination of two, three and five-passenger transverse and longitudinal sets. The seats located in the wheelchair area are of a flip-up and lock design. The center section of the five-passenger rear seat is designed to flip up to allow access to the engine and transmission compartments. All other seats are fixed and are supported by pedestals and the side wall seat rail. See "Fig. 17-12: Seating Layout" on page 14.



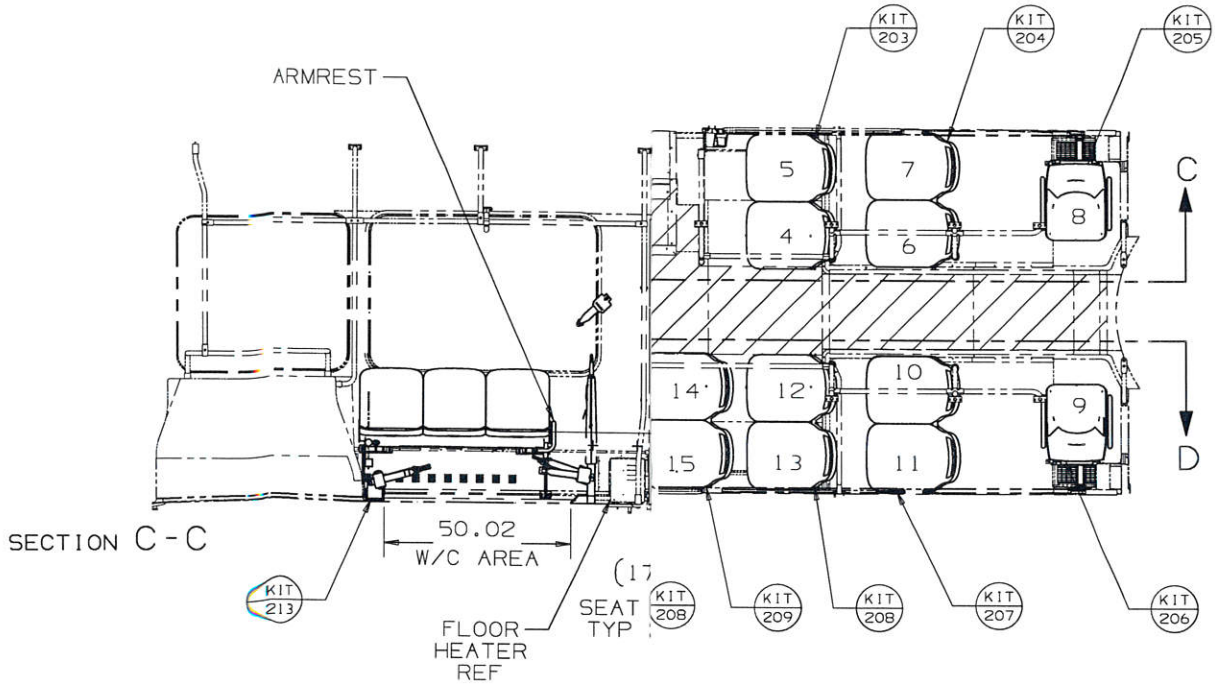
1. Driver's Seat Assembly
2. Seat Assembly, 1 Passenger Longitudinal Flip-Up
3. Seat Assembly, 3 Passenger Longitudinal Flip-Up
4. Barrier, Streetside
5. Seat Assembly, 2 Passenger Transverse
6. Seat Assembly, 2 Passenger Transverse
7. Seat Assembly, 2 Passenger Transverse
8. Seat Assembly, 1 Passenger Longitudinal
9. Seat Assembly, 2 Passenger Longitudinal
10. Seat Assembly, 2 Passenger Transverse
11. Seat Assembly, 2 Passenger Transverse
12. Seat Assembly, 2 Passenger Transverse
13. Seat Assembly, 2 Passenger Transverse
14. Seat Assembly, 2 Passenger Transverse
15. Seat Assembly, 1 Passenger Longitudinal
16. Seat Assembly, 2 Passenger Transverse
17. Seat Assembly, 5 Passenger Rear Cross
18. Seat Assembly, 2 Passenger Transverse
19. Seat Assembly, 1 Passenger Longitudinal
20. Seat Assembly, 2 Passenger Transverse
21. Seat Assembly, 2 Passenger Transverse
22. Seat Assembly, 2 Passenger Transverse
23. Seat Assembly, 2 Passenger Transverse
24. Seat Assembly, 2 Passenger Longitudinal
25. Seat Assembly, 1 Passenger Longitudinal
26. Seat Assembly, 2 Passenger Transverse
27. Seat Assembly, 2 Passenger Transverse
28. Barrier, Curbside
29. Seat Assembly, 3 Passenger Longitudinal Flip-Up

s0351423a.svg

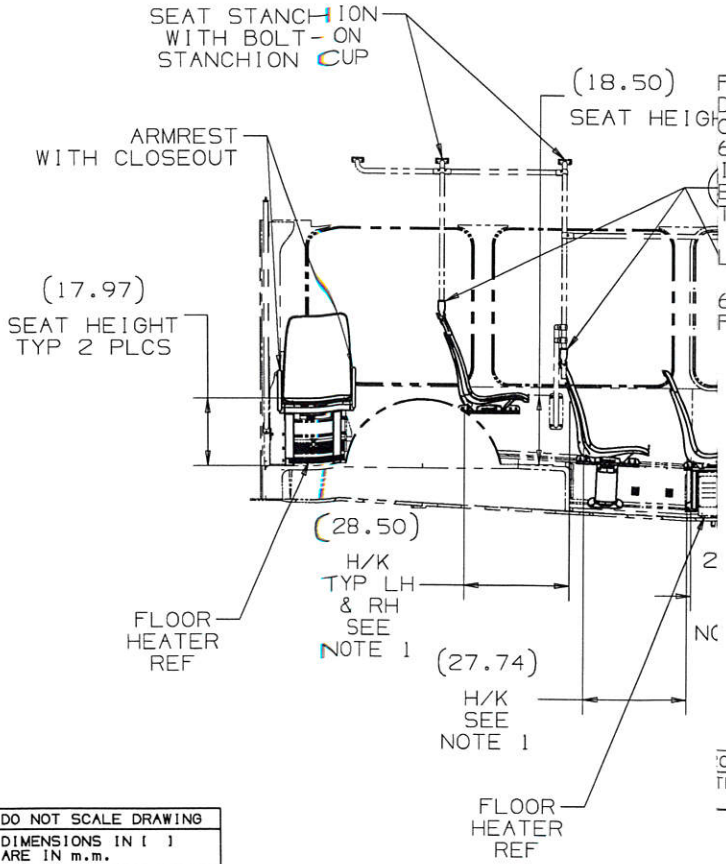
Fig. 17-12: Seating Layout

DRAWING N°
490957

OPEN FLOOR SPACE = 7688.48 IN²
= 53.39 FT²



SECTION C - C



THE APPROXIMATE HIP TO KNEE, SEAT HEIGHT
FOR HIP TO KNEE AND FOOT ROOM, SUBTRACT A
DDED INSERTS AND 1" FOR 1" PADDED INSERTS
OR SEAT HEIGHT ADD TO DIMENSIONS PER ABOVE.
65402-XXXX, WHERE XXXX IS THE SR#, FOR THE
IRED. NOTE THAT H/K DIMENSIONS ARE ONLY
EAT BACK INSERT AND FOOT ROOM AND SEAT
TED BY THE SEAT CUSHION INSERT PADDING.

LERANCE WHERE H/K = HIP TO KNEE

65402-XXXX, WHERE XXXX IS THE SR#, FOR
F CLOSEOUT.

ITEM	PART NO.	DESCRIPTION	WEIGHT
00	490958	KIT-SEATING L/D INSIGHT	-

DO NOT SCALE DRAWING	
DIMENSIONS IN [ ] ARE IN m.m.	
THD ANGLE	
DRAWN BY	
JOHN SLIPEC	
DATE (DD-MMM-YY)	
06-DEC-13	

REV	DESCRIPTION
B	1) CAD MODEL UPDATES TO KIT ITEMS 205 & 206 2) ALL VIEWS AND DETAILS UPDATED

UNSPEC'D TOLS.	DEC. IN.
.X	±.12
.XX	±.06
.XXX	±.03
HOLE DIA.	±.015
BEND RADII.	±.03
ANGLE TOL.	±1°

SIMILAR TO
-

TITLE
TMPLT-SEATING L/D INSIGHT

NEW FLYER

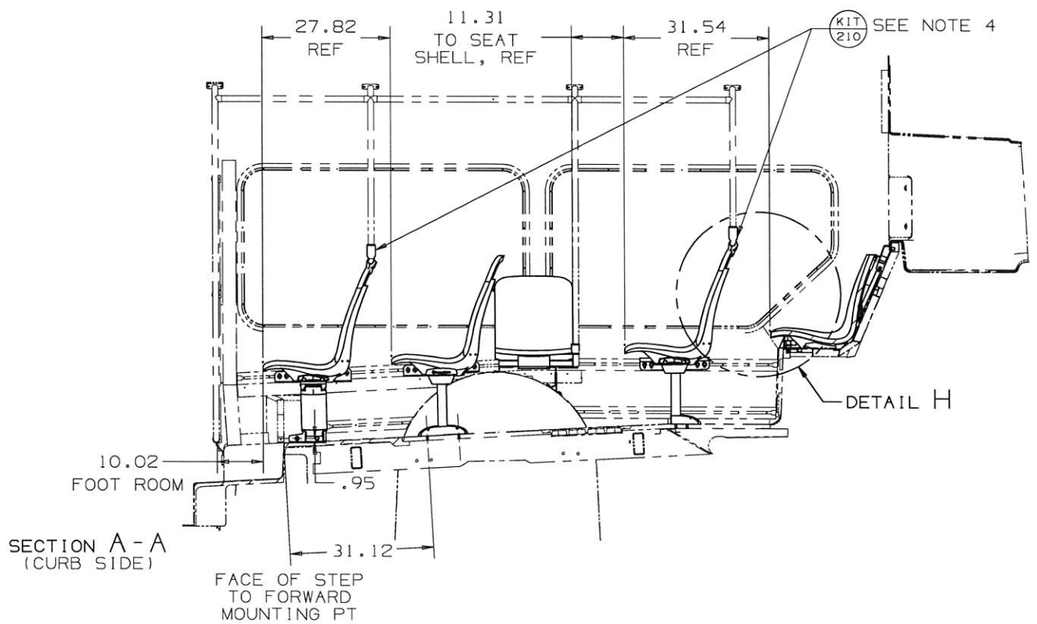
PART N°
490957
(NX)

SCALE 1:20 | D | SHEET 1 OF 1

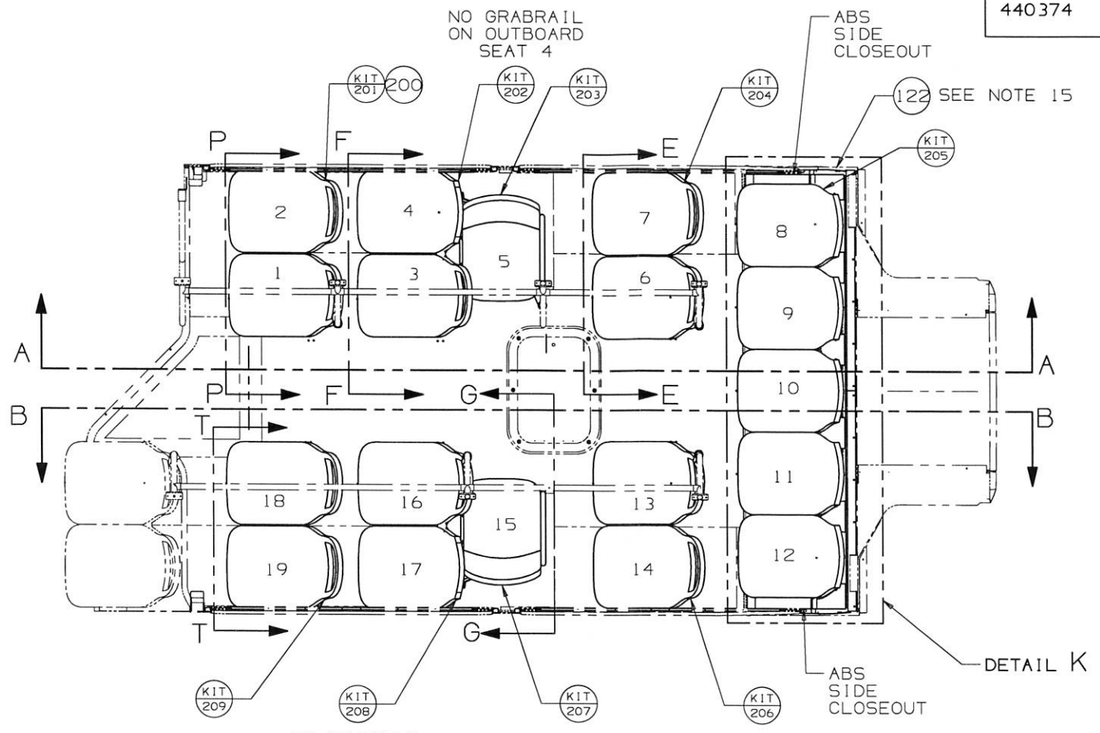
REPORT ALL ERRORS TO ENG. DEPT.

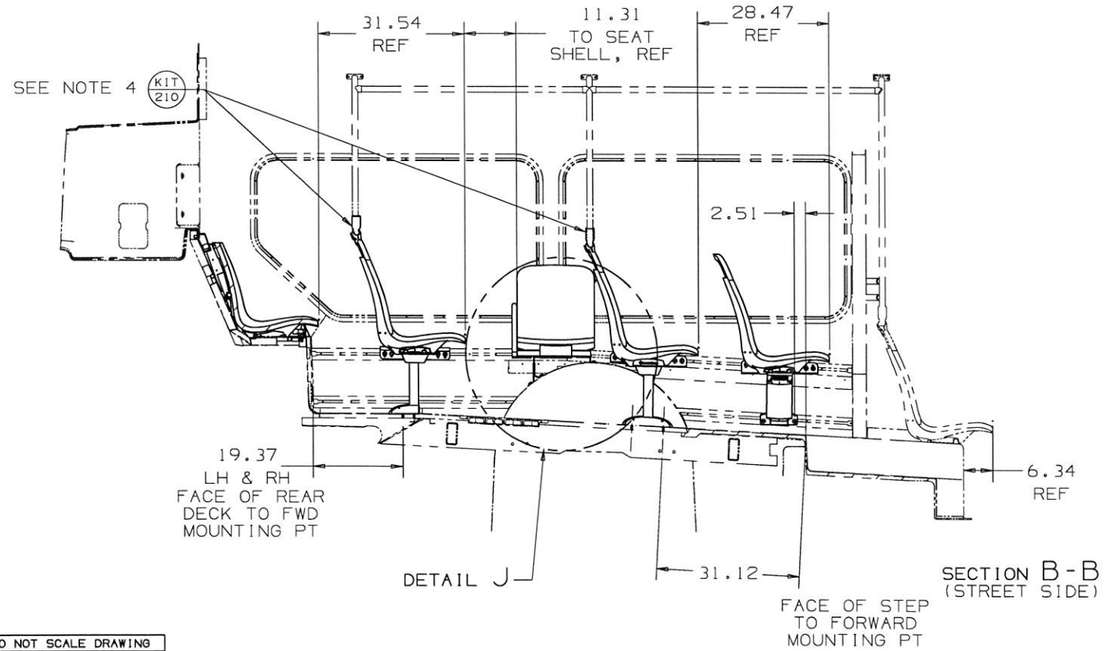
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N° 440374

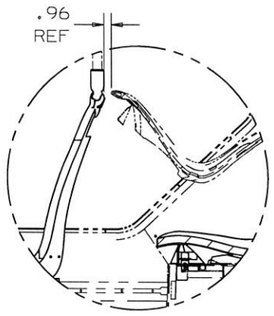


SECTION A-A
(CURB SIDE)





SECTION B-B
(STREET SIDE)



DETAIL H
SCALE 1:10

SEE NOTE 6

QTY	U/M	ITEM	PART NO.	DESCRIPTION	WEIGHT
1	EA	200	440368	KIT-SEATING U/D INSIGHT	-
4.000	FT	122	003502	CHANNEL-U RBR 1/2LX1/4W	
10.00	ML	121	242702	ADHESIVE-SIKA 221 WHITE	-
0.010	EA	120	081034	LOCTITE-243 MEDIUM 10ML	-
26	EA	79	356596	T-BOLT-SEAT MOUNTING	0.05 LBS
16	EA	78	20B06020	BOLT SS 3/8 X 1.25 L	-
6	EA	76	34S05016	SCREW-5/16-18X1.0 S/TAP	-
4	EA	75	34S04016	SCREW-1/4-20 X 1.0	-
4	EA	73	50W04000	WASHER-FLAT 1/4 NOM	-
15	EA	42	14S05016	SCREW 5/16 X 1.00 SS	-
15	EA	40	083651	INSERT 5/16-18 STEEL	-
8	EA	36	20B06032	BOLT-HEX SST 3/8UNC 2.00	-
16	EA	35	50N06000	NUT SST 3/8 UNC	-
21	EA	33	50W05000	WASHER FLAT SS 5/16 NOM	-
26	EA	32	8410536	NUT-CRN 3/8UNC GR5	0.03 LBS
92	EA	30	50W06000	WASHER FLAT SS 3/8 NOM	-

DESIGN REFERENCE NOTES:

- AMERICAN SEATING INSIGHT SEATS W/ CANTILEVER MOUNTING EXCEPT SEATS 3-7 & 13-17
- ENERGY ABSORBING COMPOSITE RESIN GRABRAILS
- STAINLESS STEEL ARMRESTS

- FOR 35' OR 40' XCELSIOR
- DIESEL, DIESEL ELECTRIC, CNG
- REAR WINDOW
- NON WARM WALL
- NON REAR WINDOW

REV	DESCRIPTION	ECO
F	1) ITEM 120 WAS P/N 8110440 QTY 0.01	ECN-027983

DO NOT SCALE DRAWING
DIMENSIONS IN [ ] ARE IN m.m.
THD ANGLE
DRAWN BY: JOHN SLIPEC
DATE (DD-MMM-YY): 05-DEC-13

MATERIAL: N/A
WEIGHT: N/A
TREATMENT: NONE

UNSPEC'D TOLS. / DEC. IN.
.X ±.12
.XX ±.06
.XXX ±.03
HOLE DIA. ±.015
BEND RADII. ±.03
ANGLE TOL. ±1°

SIMILAR TO 424842

TITLE: TMPLT-SEATING U/D INSIGHT

NEW FLYER

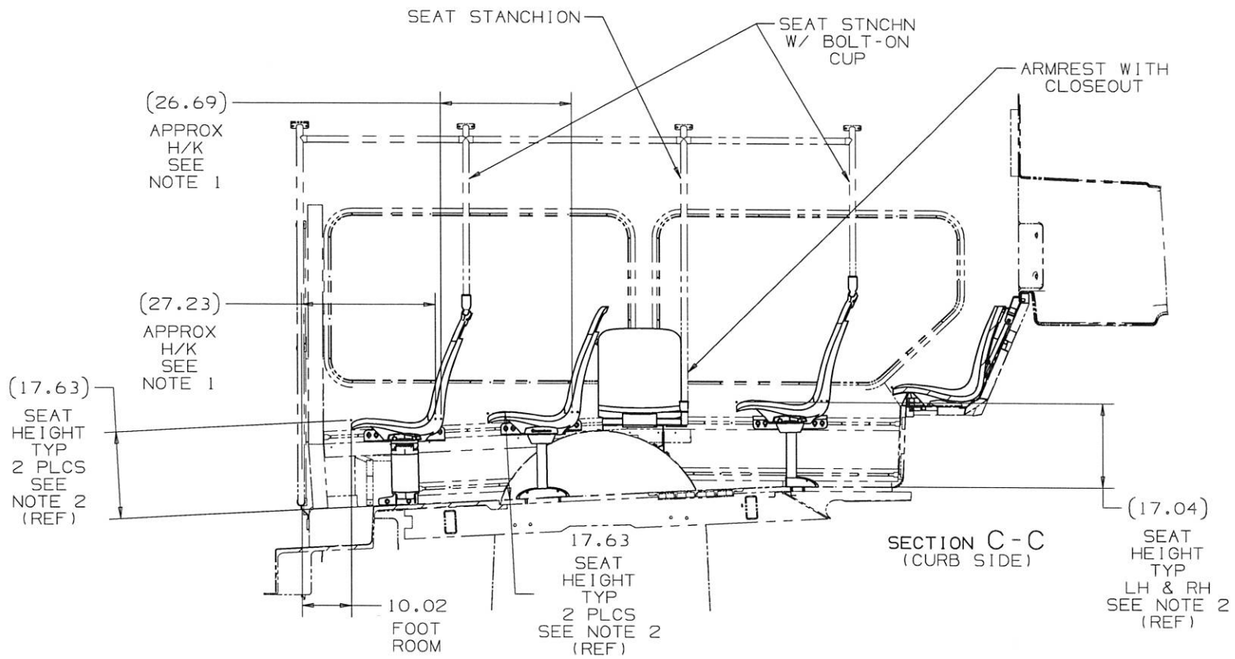
PART N° 440374 (NX)

SCALE 1:16 | D | SHEET 1 OF 3

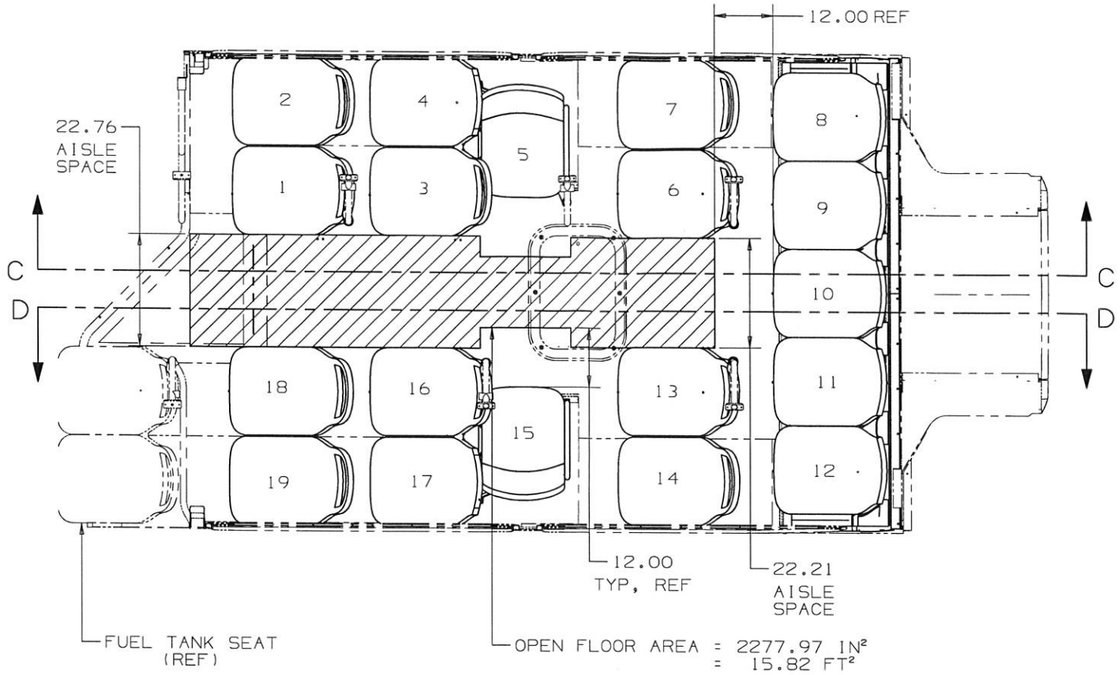
REPORT ALL ERRORS TO ENG. DEPT.

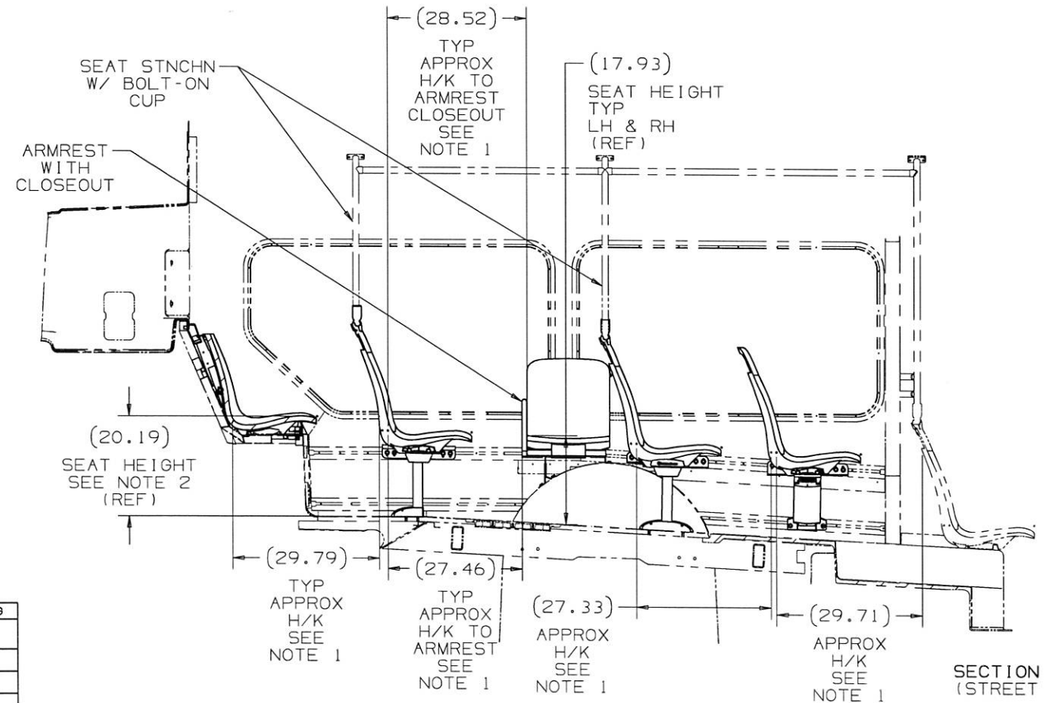
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°
440374



SECTION C-C
(CURB SIDE)





SECTION D-D
(STREET SIDE)

NOTES:

1) DIMENSIONS IN BRACKETS REPRESENT THE APPROXIMATE HIP TO KNEE WITH VR-50 ONSERT. SUBTRACT A 1/2" FROM THE HIP TO KNEE DIMENSION FOR PADDED ONSERTS (1/2" OR 1-1/4"). REFER TO CUSTOMER SPEC DWG P/N 265402-XXXX, WHERE XXXX IS THE SR#, FOR THE TYPE OF SEAT ONSERT THAT IS REQUIRED.
2) DIMENSIONS IN BRACKETS REPRESENT THE APPROXIMATE SEAT HEIGHT WITH VR-50 ONSERT. ADD 1/2" TO THE SEAT HEIGHT DIMENSION FOR 1/2" PADDED ONSERTS AND 1-1/8" FOR 1-1/4" PADDED ONSERTS RESPECTIVELY. REFER TO CUSTOMER SPEC DWG P/N 265402-XXXX, WHERE XXXX IS THE SR#, FOR THE TYPE OF SEAT ONSERT THAT IS REQUIRED.
3) ALL H/K DIMENSIONS HAVE ±.50" TOLERANCE WHERE H/K = HIP TO KNEE

DO NOT SCALE DRAWING	
DIMENSIONS IN [ ] ARE IN m.m.	
THD ANGLE	
DRAWN BY	JOHN SLIPEC
DATE (DD-MMM-YY)	05-DEC-13

REV	DESCRIPTION	ECN
F	SEE SHEET 1	ECN-027983

MATERIAL N/A	UNSPEC'D TOLS. .X ±.12, .XX ±.06, .XXX ±.03, HOLE DIA. ±.015, BEND RADII. ±.03, ANGLE TOL. ±1°	DEC. IN.
WEIGHT N/A		
TREATMENT NONE	SIMILAR TO 424842	

TITLE
TMPLT-SEATING U/D INSIGHT

NEW FLYER

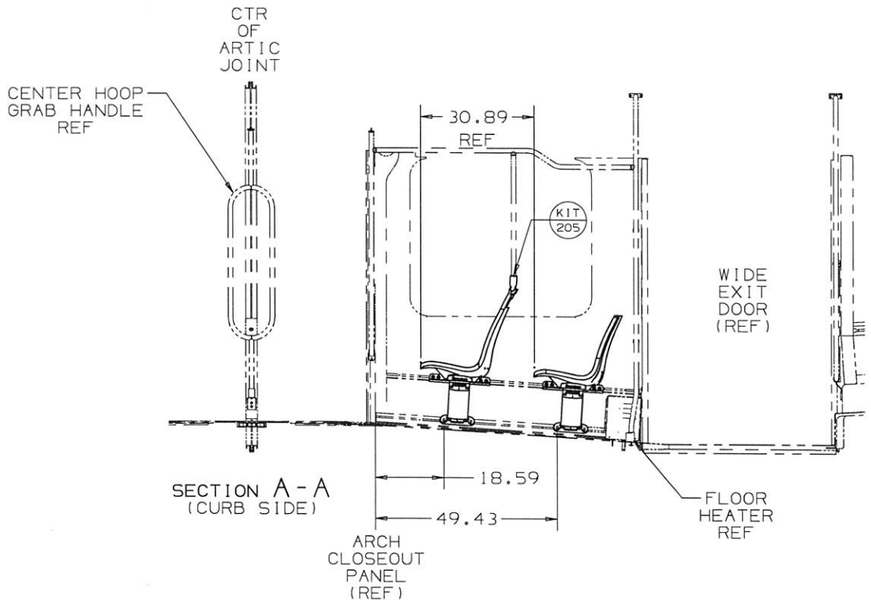
PART N°
440374 (NX)

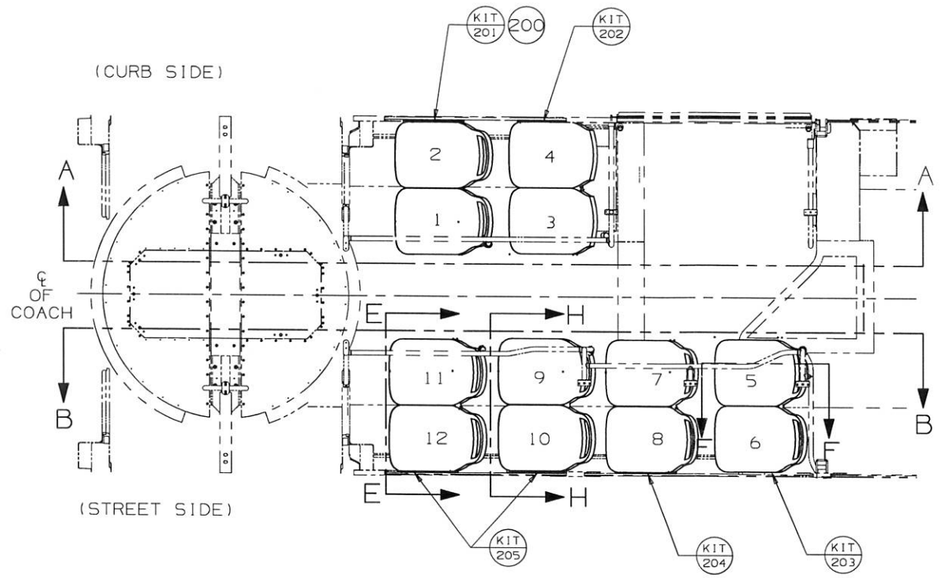
SCALE 1:15 | D | SHEET 2 OF 3

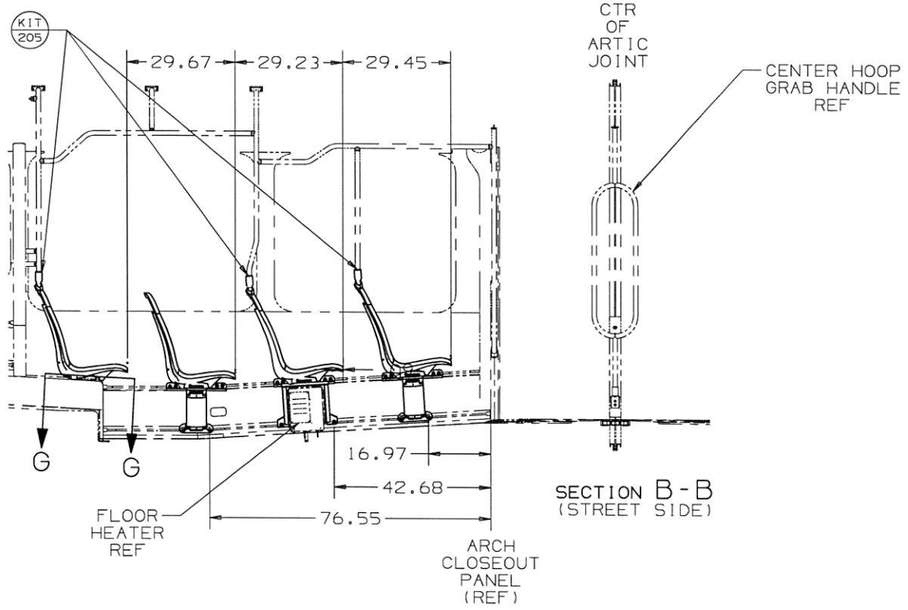
REPORT ALL ERRORS TO ENG. DEPT.

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°
490270







DESIGN REFERENCE NOTES:

- AMERICAN SEATING INSIGHT SEATS WITH CANTILEVER MOUNTING EXCEPT FOR STREET SIDE DECK MOUNTED SEAT
- NO SEATS IN ARTIC JOINT AREA

- FOR 60' XCELSIOR
- DIESEL, DIESEL ELECTRIC, CNG
- NON WARM WALL
- FLOOR HEATERS ON STREET & CURB SIDE
- WIDE EXIT DOOR VAPOR SLIDE GLIDE 45.2" BETWEEN PANELS

SEE NOTE 4

QTY	U/M	ITEM	PART NO.	DESCRIPTION	WEIGHT
1	EA	200	490269	KIT-SEATING C/D INSIGHT	-
0.010	EA	120	081034	LOCTITE-243 MEDIUM 10ML	-
22	EA	79	356596	T-BOLT-SEAT MOUNTING	0.05 LBS
8	EA	78	378311	T-BOLT-SEAT MOUNTING	0.05 LBS
8	EA	77	20B05024	BOLT HEX 5/16-18 X 1.50	-
8	EA	33	50W05000	WASHER FLAT SS 5/16 NOM	-
30	EA	32	8410536	NUT-CRN 3/8UNC GR5	0.03 LBS
44	EA	30	50W06000	WASHER FLAT SS 3/8 NOM	-

DO NOT SCALE DRAWING			
DIMENSIONS IN [ ] ARE IN m.m.			
THD ANGLE			
DRAWN BY			
JOHN SLIPEC			
DATE (DD-MMM-YY)	B	1) ITEM 120 WAS P/N 8110440 QTY 0.01 2) PICTORIAL UPDATE DUE TO REVISED CAD MODELS 3) ALL VIEWS AND DETAILS UPDATED	ECN-027983
06-DEC-13	REV	DESCRIPTION	ECO

MATERIAL

WEIGHT
N/A

TREATMENT
NONE

UNSPEC'D TOLS. / DEC. IN.
.X ±.12
.XX ±.06
.XXX ±.03
HOLE DIA. ±.015
BEND RADII. ±.03
ANGLE TOL. ±1°

SIMILAR TO
-

TITLE
TMPLT-SEATING C/D INSIGHT

NEW FLYER

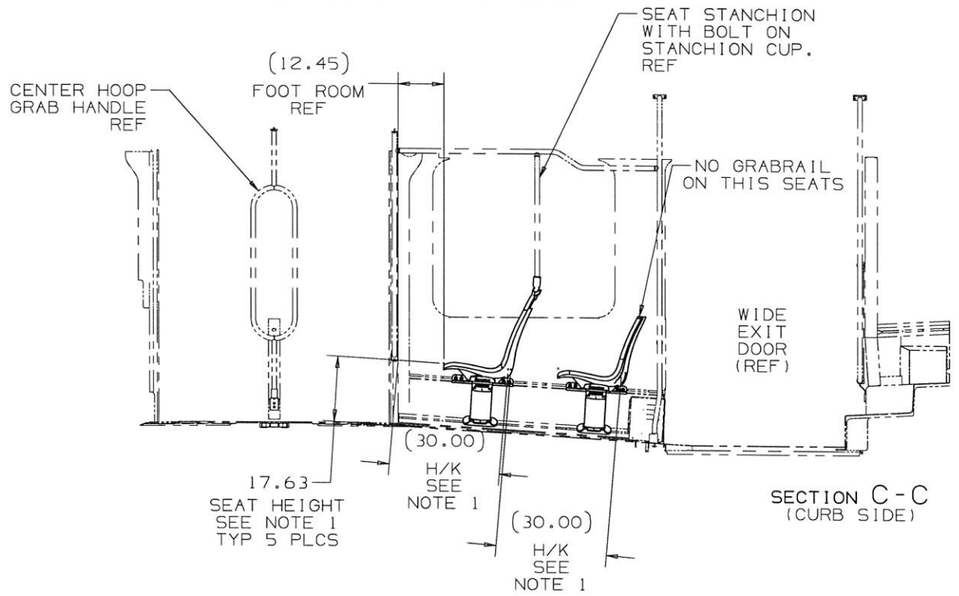
PART N°
490270
(NX)

SCALE 1:20 | D | SHEET 1 OF 3

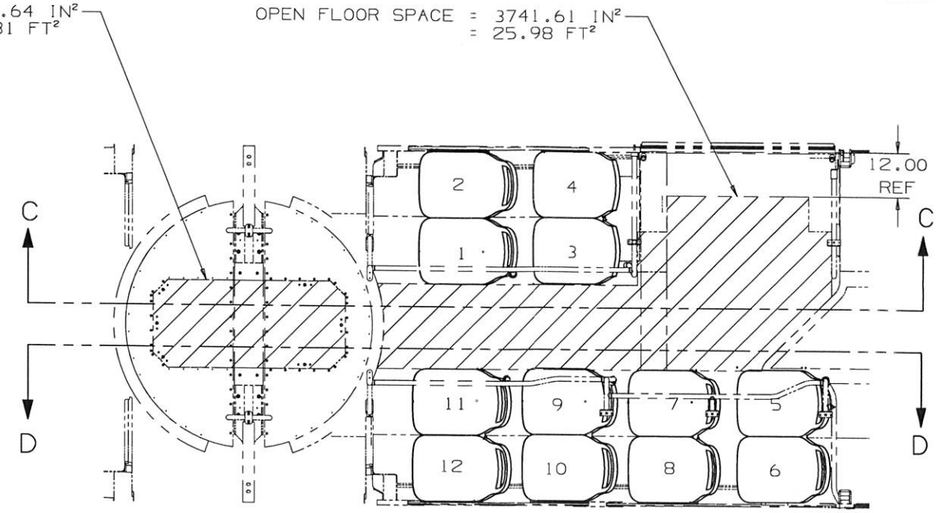
REPORT ALL ERRORS TO ENG. DEPT.

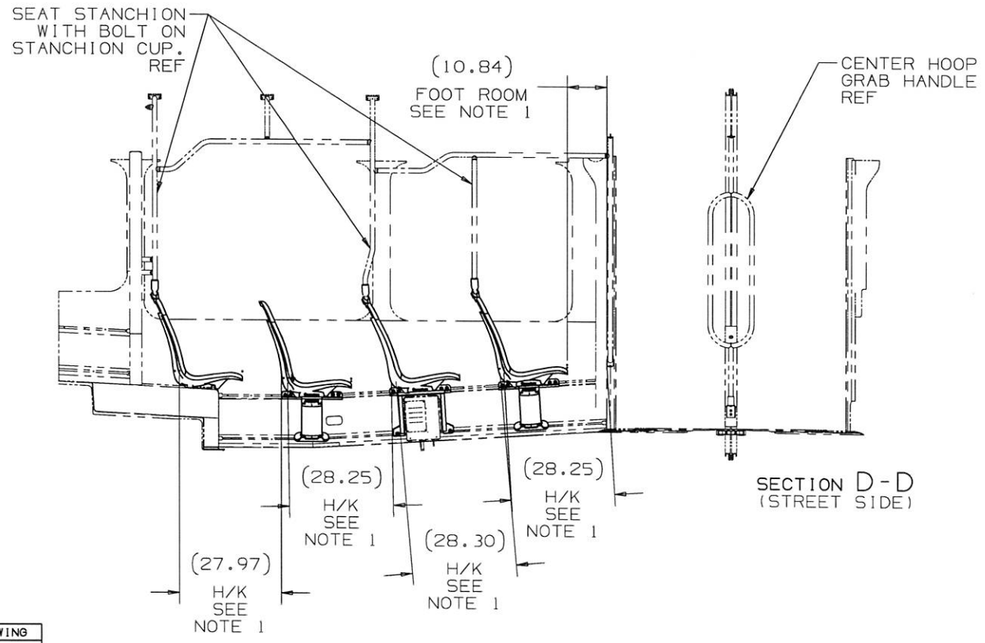
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°
490270



SECTION C - C
(CURB SIDE)





SECTION D - D
(STREET SIDE)

NOTES (WHERE APPLICABLE):

1) DIMENSIONS IN BRACKETS REPRESENT THE APPROXIMATE HIP TO KNEE, SEAT HEIGHT AND FOOT ROOM WITH T2C INSERTS. FOR HIP TO KNEE AND FOOT ROOM, SUBTRACT A 1/2" FROM DIMENSIONS FOR 1/2" PADDED INSERTS AND 1" FOR 1" PADDED INSERTS (INTERCITY FOAM) RESPECTIVELY. FOR SEAT HEIGHT ADD TO DIMENSIONS PER ABOVE. REFER TO CUSTOMER SPEC DWG P/N 265402-XXXX, WHERE XXXX IS THE SR#, FOR THE TYPE OF SEAT INSERT THAT IS REQUIRED. NOTE THAT H/K DIMENSIONS ARE ONLY AFFECTED BY THE PADDING ON THE SEAT BACK INSERT AND FOOT ROOM AND SEAT HEIGHT DIMENSIONS ARE ONLY AFFECTED BY THE SEAT CUSHION INSERT PADDING.

2) ALL H/K DIMENSIONS HAVE ±.50" TOLERANCE WHERE H/K = HIP TO KNEE

3) REFER TO CUSTOMER SPEC DWG P/N 265402-XXXX, WHERE XXXX IS THE SR#, FOR THE TYPE OF ARMREST & THE TYPE OF CLOSEOUT.

DO NOT SCALE DRAWING	
IMENSIONS IN [ ] RE IN m.m.	
THD ANGLE	
DRAWN BY	JOHN SLIPEC
DATE (DD-MMM-YY)	06-DEC-13

REV	DESCRIPTION	ECO
B	SEE SHEET 1	ECN-027983

MATERIAL	UNSPEC'D TOLS.	DEC. IN.
WEIGHT N/A	.X .XX .XXX HOLE DIA. BEND RADII ANGLE TOL.	±.12 ±.06 ±.03 ±.015 ±.03 ±1°
TREATMENT NONE	SIMILAR TO -	

TITLE
TMPLT-SEATING C/D INSIGHT

NEW FLYER

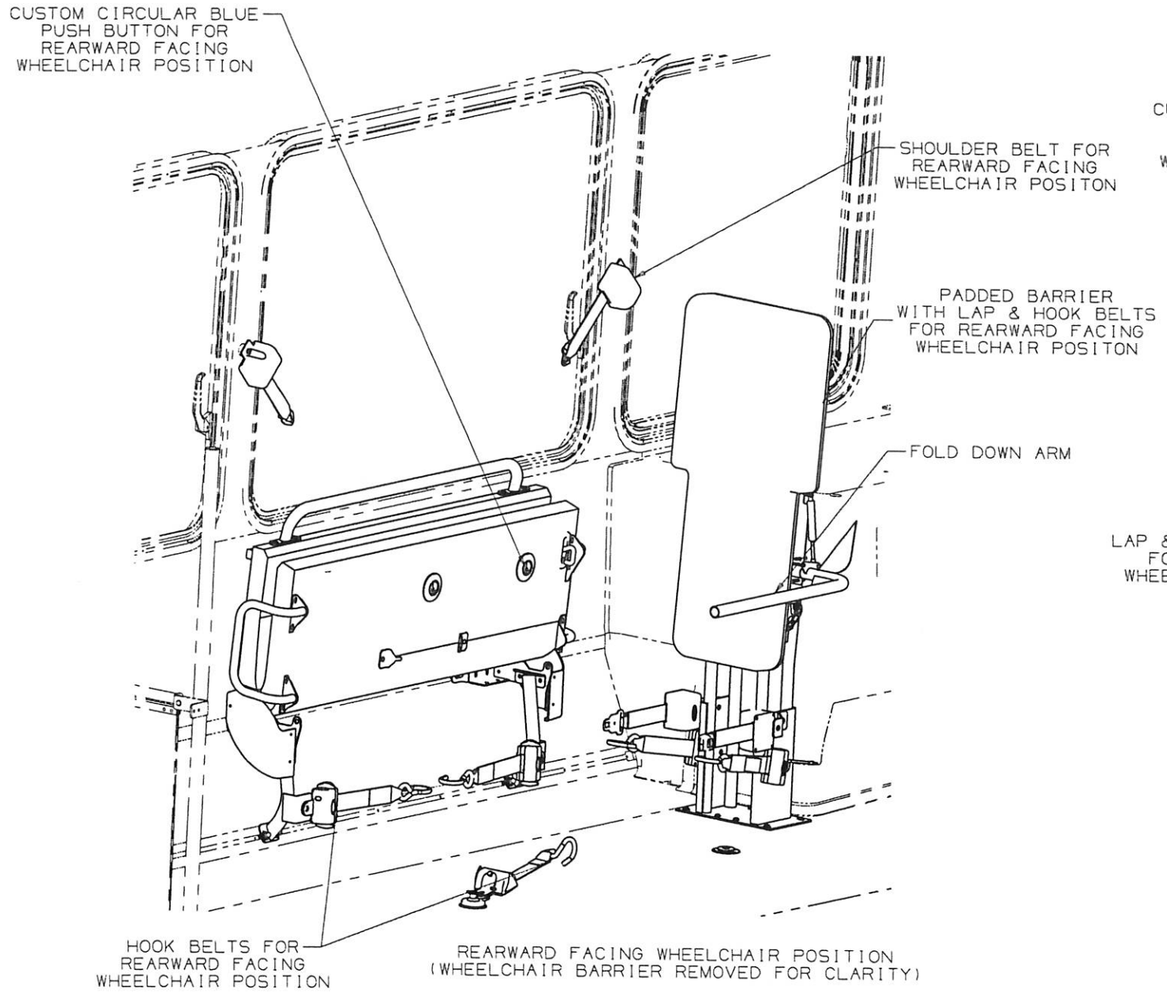
PART N°
490270
(NX)

SCALE 1:20 | D | SHEET 2 OF 3

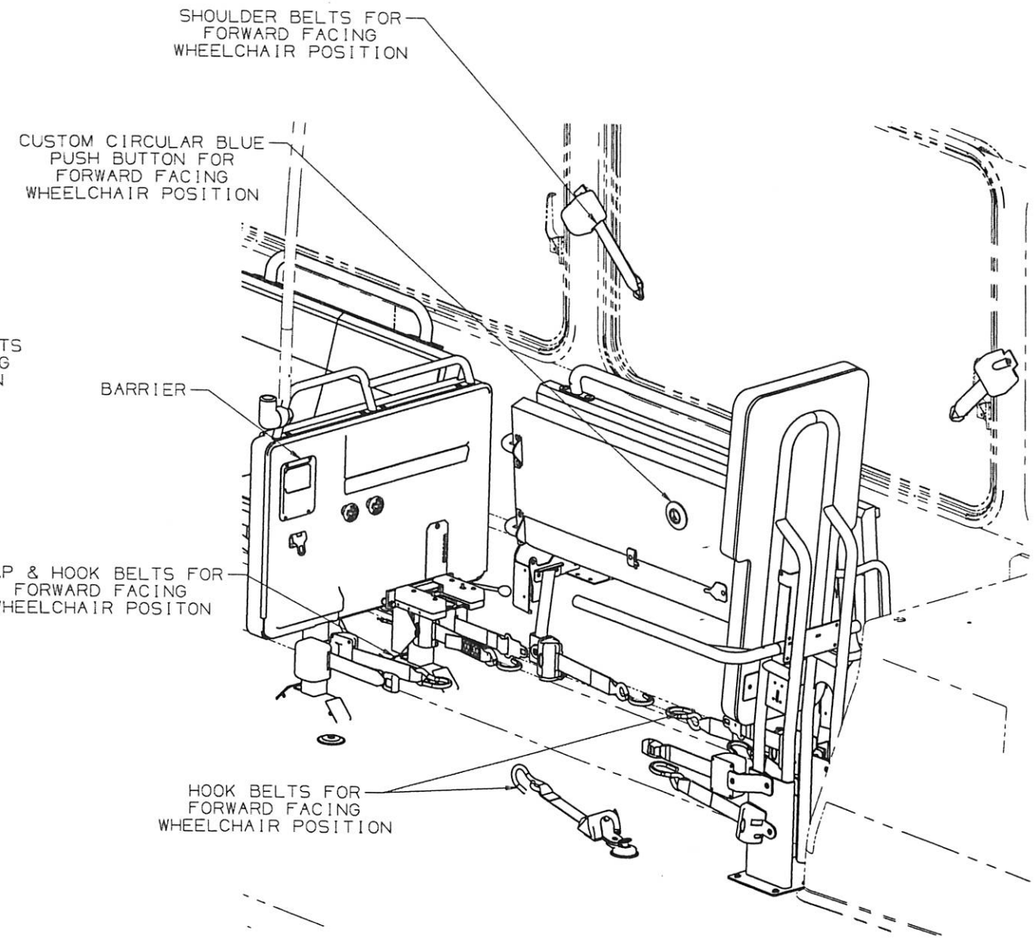
REPORT ALL ERRORS TO ENG. DEPT.

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N°
525277



REARWARD FACING WHEELCHAIR POSITION
(WHEELCHAIR BARRIER REMOVED FOR CLARITY)



FORWARD FACING WHEELCHAIR POSITION
(PADDED BARRIER REMOVED FOR CLARITY)

DO NOT SCALE DRAWING			
DIMENSIONS IN [ ] ARE IN m.m.			
THD ANGLE			
DRAWN BY			
YUN WEI			
DATE (DD-MMM-YY)	A	RELEASE TO PRODUCTION	ECN-022313
27-JUN-13	REV	DESCRIPTION	ECO

MATERIAL	UNSPEC'D TOLS.	DEC. IN.	TITLE
	.X	±.12	TMPLT-SEATING L/D 6468
WEIGHT -	.XX	±.06	
	.XXX	±.03	
	HOLE DIA.	±.015	
	BEND RADII.	±.03	
	ANGLE TOL.	±1°	
TREATMENT NONE	SIMILAR TO 498337		NEW FLYER
			PART N° 525277 (NX)
			SCALE 1:10 | D | SHEET 4 OF 4

REPORT ALL ERRORS

NEW FLYER

XCELSIOR
BETTER BY DESIGN

SALES INFORMATION BULLETIN

#580-001 | **Model:** Xcelsior | **Lengths:** All | **Propulsions:** All

Genuine New Flyer Wheelchair Ramp

Product Features

New Flyer's patented wheelchair ramp design is a flip-out, aluminum, non-slip platform located at the entrance door of the bus. While this ramp is based on our reliable New Flyer ramp that has been in revenue service since 1993, it has been improved to now be a self-contained modular system.

The ramp system consists primarily of four components:

- Stainless steel ramp box and aluminum cover
- Hydraulic pump, reservoir and integrated manifold block
- Ramp mechanism assembly (operates entirely within stainless ramp box)
- Aluminum light-weight non-slip ramp platform

All four components operate to articulate the ramp from the stowed position in the floor to the curb or street level.

Ramp deployed at ride height street level

Benefits

- Industry-leading 1:7 slope that significantly exceeds ADA regulations
- Designed with the manual operation feature to ensure that the bus will remain in revenue service during an electrical or hydraulic ramp failure

Ramp deployed kneeled (1:7) street level

Operations

The ramp is hydraulically operated. It is completely installed within the vehicle floor and structure and is not subjected to road damage. Brake and accelerator interlocks are provided through the opening of any door. A flashing LED light and audible signal at the entrance door serve as a warning to passengers that the ramp is operating. The ramp can also be manually deployed or raised by a pull strap. The wheelchair ramp is powered by its own self-contained hydraulic power source.

NEW FLYER

XCELSIOR
BETTER BY DESIGN

SALES INFORMATION BULLETIN

Operating Procedures

Operator's control is located on the lower right side of the driver's instrument panel. A guarded three-position switch performs the following functions:

1. Deploy
This position turns the pump on and sends a flow of oil through the manifold block to the ramp mechanism assembly. The ramp then moves from the stowed position and starts through its arc until fully deployed.

2. Float
This is the normal position of the switch and, in this position, the hydraulic pump is inoperative. The ramp will float to either the DEPLOY or STOW position. Manual operation is possible in the FLOAT position.

3. Stow
This position turns the pump on and sends a flow of oil through the manifold block to the ramp mechanism assembly to move the wheelchair ramp into the stowed position (flush with the floor).

Service / Repair

The self-contained, modular design of this ramp allows for quick removal and installation of the ramp via eight mounting bolts and one electrical connector. The harness removal can only be done at the front of the bus through the service panel (or defrost service panel). To remove the harness, two ty straps need to be cut off and then the two connectors need to be disconnected. The harness conduit retaining nut needs to be removed and each of the two connectors need to be pulled through the retaining nut separately. Two p-clips will need to be removed from under the bus structure to free the harness. This allows bench servicing if a ramp system requires repair.

The stainless steel box protects the inner components from the damaging effects of being exposed to the elements.

Testing

Durability testing: This new design has been cycled 50,000 times which equates to a 12 year life span.

Warranty

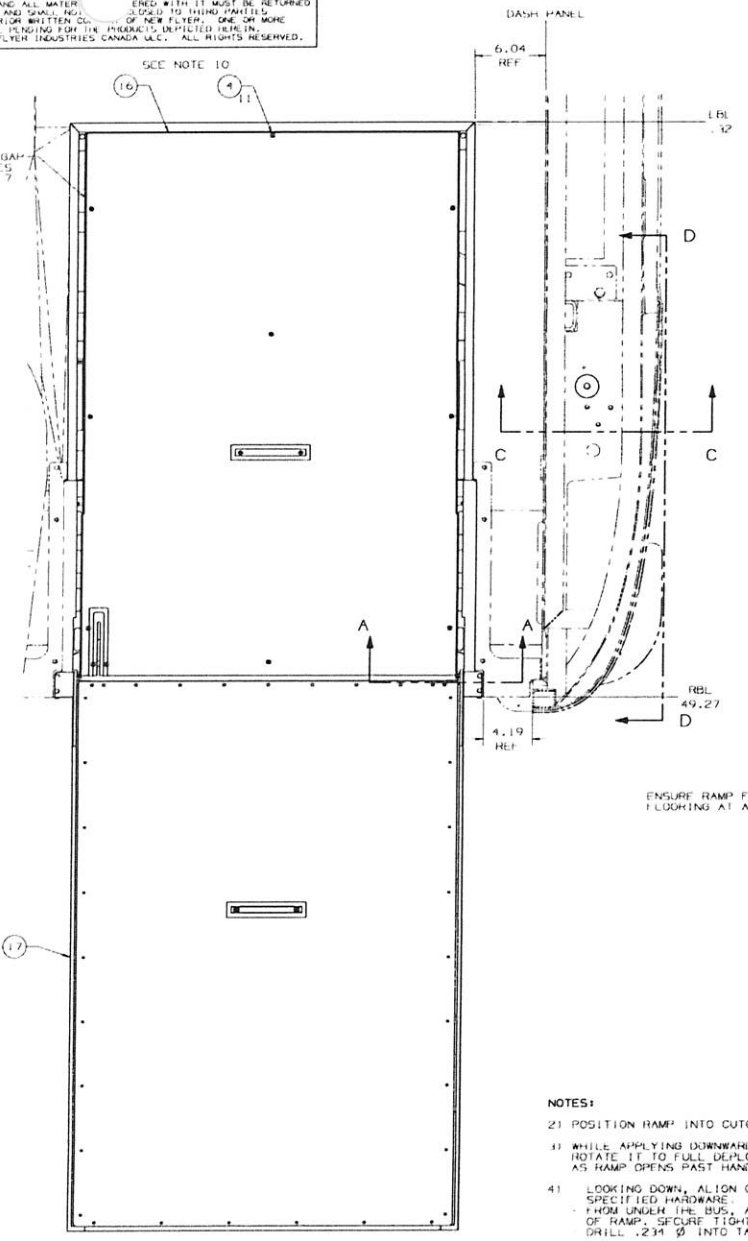
Genuine New Flyer wheelchair ramps have a warranty of one year or 50,000 miles (80,467 km).

SPECIFICATIONS

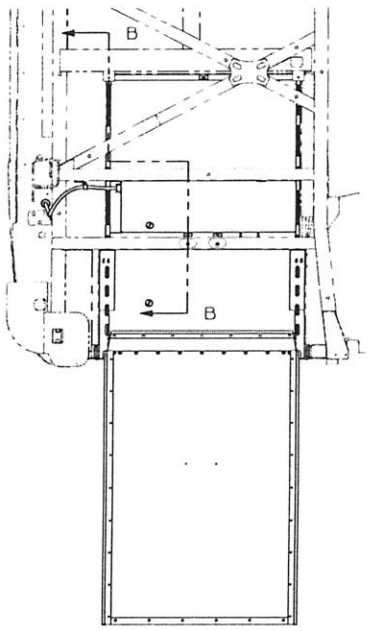
Width	32.00 inches (81.28 cm)
Length	47.50 inches (120.65 cm)
Length Beyond Bus Body	44.73 inches (113.61 cm)
Supporting Load	660 lbs. (299.40 kg)
Degree of Slope kneeling position	8° degrees to grade
Degree of Slope kneeling position (to a 6 inch curb)	2° degrees to curb
Operation Switch (3-Pole Toggle)	1. "Deploy 2. "Float" 3. "Stow"
Type	Hydraulic (electrically powered)
Cycle Times 1. Deploy 2. Stow 3. Total	 10 seconds 10 seconds 20 seconds
System Fluid Capacity	1 quart (946.35 ml)
Hydraulic System	Independent Hydraulic Power pack w/ Integrated Manifold
Hydraulic Fluid	ATF
Operating Hydraulic Pressure	1800 psi
Hydraulic Cylinder	One (deploy & stow)
Hydraulic Cylinder Size	1.5" (38.1 mm)dia. Bore x 3.5" (88.9 mm) Stroke 0.75" (19.05 mm) dia. Rod Double acting welded construction 2500 psi (working pressure rated)
Weight of Complete Lift Assembly	130 lbs (58.97 kg)

NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MP BOM SHEET FOR PARTS LISTING

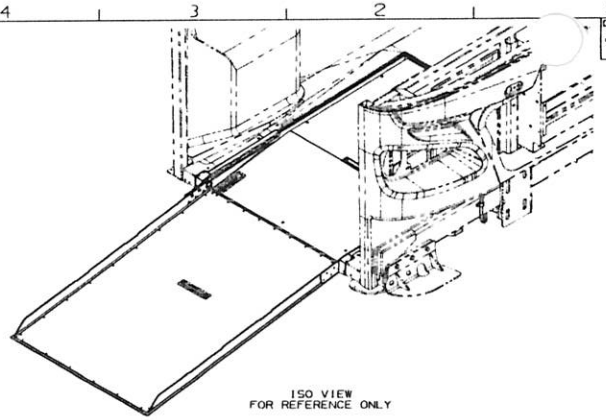
DRAWING N° 523319



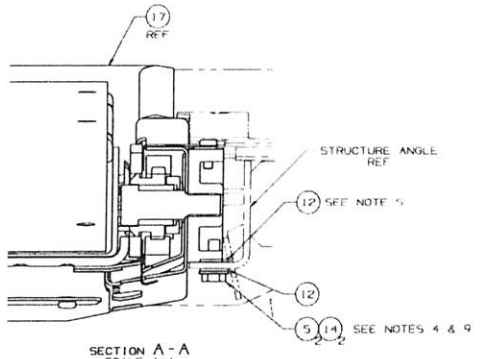
TOP VIEW
(WITH RAMP OPEN 180°)



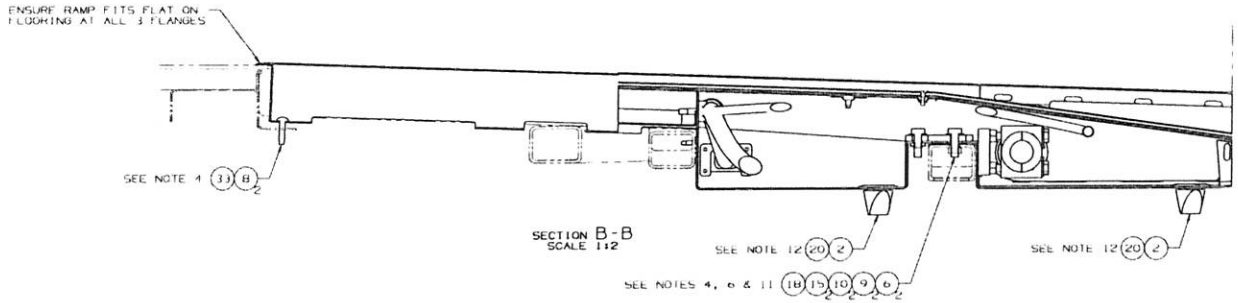
BOTTOM VIEW
(WITH RAMP OPEN 180°)
SCALE 1:8



ISO VIEW
FOR REFERENCE ONLY



SECTION A-A
SCALE 1:1
LH SHOWN, RH OPPOSITE



SECTION B-B
SCALE 1:2

NOTES:

2) POSITION RAMP INTO CUTOUT IN FLOORING AT COACH ENTRANCE DOOR.

3) WHILE APPLYING DOWNWARD PRESSURE ON THE PERIMETER FLANGE FACING DRIVER'S PLATFORM, LIFT RAMP AND ROTATE IT TO FULL DEPLOY POSITION. MAKE NOTE OF RAMP TO DOOR HANDLE CLEARANCE AS RAMP OPENS PAST HANDLES.

4) LOOKING DOWN, ALIGN OPEN SLOTS AT CENTER OF MECHANISM WITH WELD NUTS IN STRUCTURE. INSTALL SPECIFIED HARDWARE.
- FROM UNDER THE BUS, ALIGN RAMP (ITEM 17) TO STRUCTURE ANGLE USING BOTTOM OUTER CORNERS OF RAMP. SECURE TIGHTLY WITH SPECIFIED HARDWARE.
- DRILL .234 Ø INTO TABS IN STRUCTURE 2 PLCS FOR ITEM 8.

5) USE SPACERS (ITEM 12) AS NECESSARY TO CLOSE GAP BETWEEN RAMP (ITEM 17) AND STRUCTURE. RETURN EXCESS TO STOCK.

6) TORQUE ALL 5/16 BOLTS (ITEM 6) TO 17-19 FT LBS (DO NOT EXCEED).

7) MAINTAIN MAXIMUM 5/8" GAP, COVER PLATE TO BOX OUTER CHANNEL WALL TO MEET ADA SPECIFICATION. RETURN RAMP TO STOWED POSITION.

8) INSTALL GROMMET (ITEM 1) INTO EXISTING HOLE IN FRT MASK AS SHOWN. SECURE HARNESS USING P CLAMPS AND BRKT SEE SECTIONS C C AND D D ON SHEET 2.

9) TORQUE 1/4 BOLTS (ITEM 5) TO 5-6 FT-LBS DRY.

10) WITH THE RAMP IN THE DEPLOYED POSITION, INSTALL COVER PLATE (ITEM 16) WITH SPECIFIED HARDWARE (ITEM 4) ONCE RAMP HAS BEEN SECURED INTO STRUCTURE.

11) USE SPACERS (ITEM 9 & 10) AS NECESSARY TO CLOSE GAP BETWEEN RAMP (ITEM 17) AND STRUCTURE. RETURN EXCESS TO STOCK.

12) APPLY BLACK SIKA (ITEM 20) TO UNDERSIDE OF W/C BOX TO SEAL ANY GAPS BETWEEN W/C BOX AND WATER EJECTOR (ITEM 21).

QTY	U/M	ITEM	PART NO.	DESCRIPTION	WEIGHT
0.010	EA	20	055700	ADHESIVE SIKA 221 BLACK	
0.010	EA	19	081034	LOCTITE-243 MEDIUM 10ML	
0.010	EA	18	531955	LOCTITE-263 (RED) THREADLOCKER	
1	EA	17	521185	ASSY-W/C RAMP ENTR 32"	132.1 LBS
1	EA	16	510169	ASSY-COVER 32IN PMJ	21.45 LBS
2	EA	15	50805000	WASHER FLAT SS 5/16 NOM	
4	EA	14	50804000	WASHER-FLAT 1/4 NOM	
4	EA	13	50806000	WASHER FLAT SS 10	
4	EA	12	401975	SPACER-W/C RAMP .063-THK	0.02 LBS
1	EA	11	377314	BRKT-MTG, P-CLAMP	0.04 LBS
2	EA	10	511424	SPACER W/C RAMP INSTALL .037 THK	.1 LBS
2	EA	9	13342	SPACER-W/C RAMP INSTALL .050-THK	.1 LBS
2	EA	8	241590	SCREW-1/4-20 X 1.0 SS	
4	EA	7	23713	SCREW-SS PAN HD TAPPING	
2	EA	6	20805016	BOLT-SET 5/16 X 1.00 LG	
4	EA	5	20804012	BOLT-HEX 1/4 UNC X 0.75	
11	EA	4	10500012	SCREW-FL HD 10-24 X .75	
2	EA	3	092582	CLAMP-P 0.500	
2	EA	2	426364	EJECTOR-DUST, WATER	
1	EA	1	001081	GROMMET .5 X 1.510	

	REV	DESCRIPTION	ECN
17-MAR-14	6	11 ITEM 2 WAS P/N 072118 QTY 3 21 ADDED ITEM 20 ISO SHT 1 (1/2) 11 ADDED ORIGINAL NOTE 12	ECN-531847

DO NOT SCALE DRAWING
DIMENSIONS IN [ ] ARE IN m.m.
THD ANGLE 60°
DRAWN BY DAN TANG
DATE (DD-MMM-YY)

UNSPECIFIED TOLS.	DEC. IN.
.X ±.12	.12
.XX ±.05	.05
.XXX ±.03	.03
HOLE DIA. ±.013	.013
BEND RADII ±.03	.03
ANGLE TOL. ±1°	1°

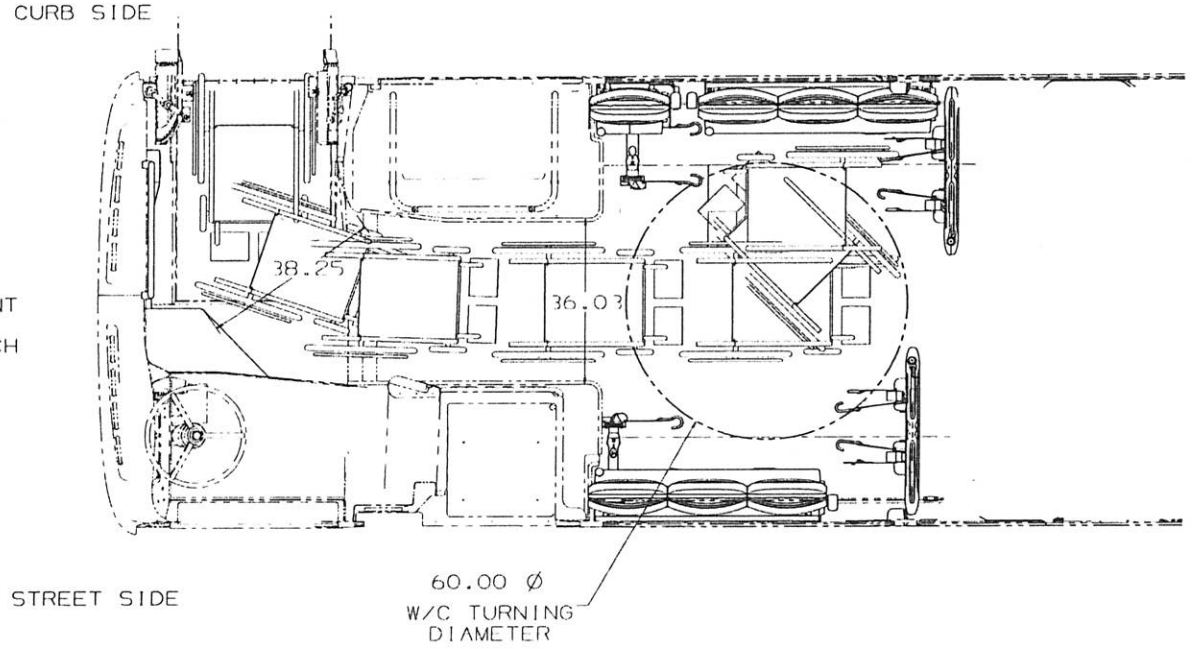
MATERIAL
WEIGHT 154 LBS
TREATMENT NONE
SIMILAR TO 519996

TITLE: INSTL-W/C RAMP ENTR 32"
PART N° 523319
NEW FLYER
SCALE 1:4
SHEET 1 OF 2
REPORT ALL ERRORS TO ENG. DEPT.

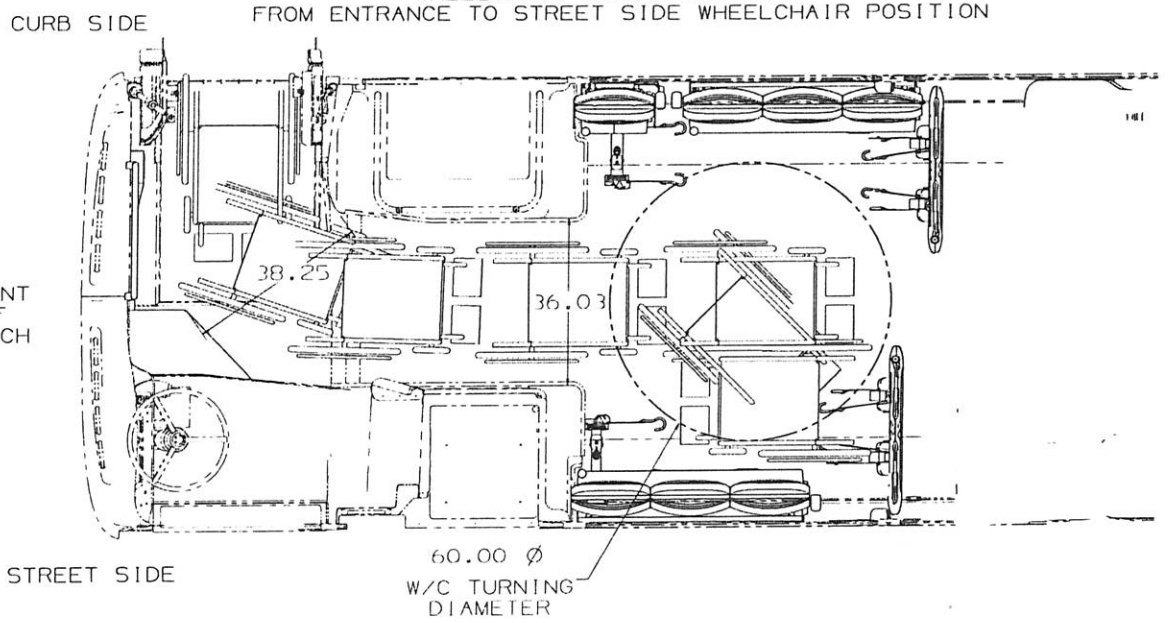
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING

DRAWING N° 440324

WHEELCHAIR MANEUVERABILITY
FROM ENTRANCE TO CURB SIDE WHEELCHAIR POSITION



WHEELCHAIR MANEUVERABILITY
FROM ENTRANCE TO STREET SIDE WHEELCHAIR POSITION



NOTE: LAYOUT BASED ON
ING LAYOUT P/N 440123

REV	DESCRIPTION	ECO
A	RELEASE FOR BID	XXXXXX

DO NOT SCALE DRAWING
DIMENSIONS IN [ ] ARE IN m.m.
THD ANGLE

	NAME	DD-MMM-YY
DRAWN	T.H.	23-MAR-11
CHK'D		
APP'D		

MATERIAL	UNSPEC'D TOLS.	DEC. IN.
-	.X	± .12
-	.XX	± .05
WEIGHT	.XXX	± .01
-	HOLE DIA.	+ .015 - .03
	BEND RADII	± .03
	ANGLE TOL.	± 1°
TREATMENT	SIMILAR TO	
NONE	-	

TITLE
BID-WHEELCHAIR MANEUVERABILITY

NEW FLYER

PART N° 440324

SCALE 1:10

E

SHEET 1 OF 1

REPORT ALL ERRORS TO ENG. DEPT.