

GENERAL DESIGN GUIDELINES

20-1 ALIGNMENT SHEET

- 1 SHOW CURVE DATA.
- 2 SHOW ALIGNMENT OF RAMPS, FREEWAY AND PARKING LOTS.

20-2 TYPICAL CROSS SECTIONS

- 1 SHOW TYPICAL CROSS SECTION FOR CAR PARKING.

20-3 TYPICAL CROSS SECTION

- 1 SHOW TYPICAL CROSS SECTION FOR TRUCK PARKING.

20-4 RAMP AND PARKING LOT CONSTRUCTION SHEET

- 1 SHOW PROPOSED PARKING LOT LAYOUT.
- 2 SHOW QUANTITIES THIS SHEET.
- 3 SHOW PARKING LOT REMOVAL HATCHING.

20-5 PARKING PROFILE SHEET

- 1 SHOW EXISTING AND PROPOSED PLAN GRADE PROFILES.

20-6 SITE LAYOUT REMOVAL SHEET

- 1 SHOW QUANTITIES THIS SHEET.
- 2 REMOVAL ITEMS FOR THE SITE ARE SHOWN ON THIS SHEET.

20-7 REST AREA SITE SHEET

- 1 SHOW QUANTITIES THIS SHEET - NOTE PARKING LOT CONSTRUCTION QUANTITIES SHOW ON SHEET 20-4.
- 2 SHOW PROPOSED SITE LAYOUT.

ADDITIONAL SHEETS REQUIRED FOR A REST AREA PACKAGE ARE:

- 1 TITLE SHEET
 - 2 NOTE SHEET
 - 3 LEGEND SHEET
 - 4 PLANS AS DETAILED:
(ALIGNMENT SHEET, TYPICAL CROSS SECTIONS, RAMP AND PARKING LOT SHEET,
PROFILE SHEET, SITE LAYOUT REMOVAL AND SITE LAYOUT SHEET)
 - 5 PICNIC TABLE DETAILS
 - 6 SITE SHEET DETAILS
 - 7 SOIL BORINGS
 - 8 BUILDING PLANS
 - 9 BUILDING ELECTRICAL PLANS
 - 10 BUILDING VENTILATION PLANS
 - 11 SITE ELECTRICAL PLANS
 - 12 WATER SUPPLY AND SANITARY DISPOSAL PLANS
 - 13 PAVEMENT MARKINGS
 - 14 SPECIAL DETAILS
- FOR ADDITIONAL INFORMATION CONTACT DESIGN SUPPORT AREA -
UTILITIES, ROADSIDE, DRAINAGE SECTION

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

REF LINE "A"
STA 1+00.00, 30' LT =
STA 570+111.82 WB I-96

REF LINE "A"
STA 6+62.94 =
REF LINE "B" STA 20+00.00

REF LINE B STA 26+03.78 =
REF LINE A STA 13+93.02

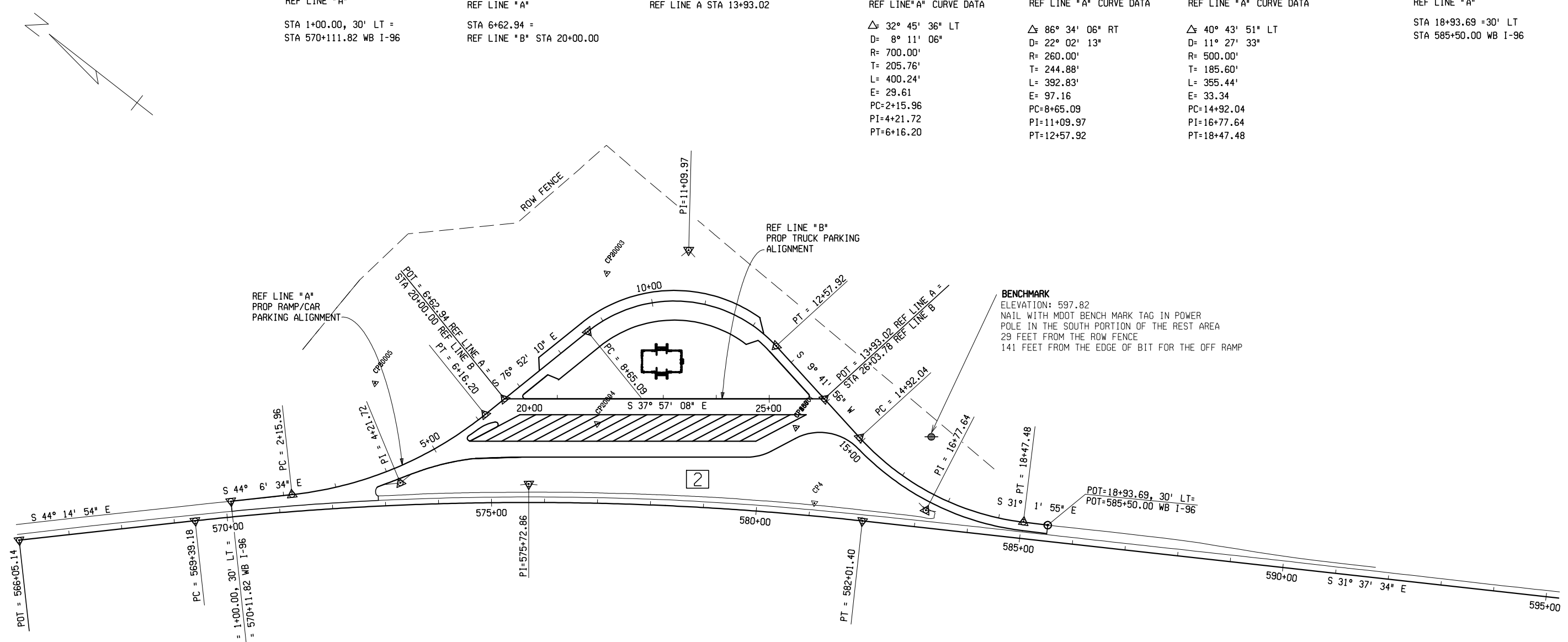
REF LINE "A" CURVE DATA
 $\Delta = 32^\circ 45' 36''$ LT
 D= 8° 11' 06"
 R= 700.00'
 T= 205.76'
 L= 400.24'
 E= 29.61
 PC=2+15.96
 PI=4+21.72
 PT=6+16.20

REF LINE "A" CURVE DATA
 $\Delta = 86^\circ 34' 06''$ RT
 D= 22° 02' 13"
 R= 260.00'
 T= 244.88'
 L= 392.83'
 E= 97.16
 PC=8+65.09
 PI=11+09.97
 PT=12+57.92

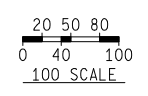
REF LINE "A" CURVE DATA
 $\Delta = 40^\circ 43' 51''$ LT
 D= 11° 27' 33"
 R= 500.00'
 T= 185.60'
 L= 355.44'
 E= 33.34
 PC=14+92.04
 PI=16+77.64
 PT=18+47.48

REF LINE "A"
STA 18+93.69 =30' LT
STA 585+50.00 WB I-96

1



WB I-96 CURVE DATA
 $\Delta = 12^\circ 37' 20''$ RT
 D= 1° 0' 0"
 R= 5729.58'
 T= 633.68'
 L= 1262.22'
 E= 34.94
 PC=569+39.18
 PI=575+72.86
 PT=582+01.40



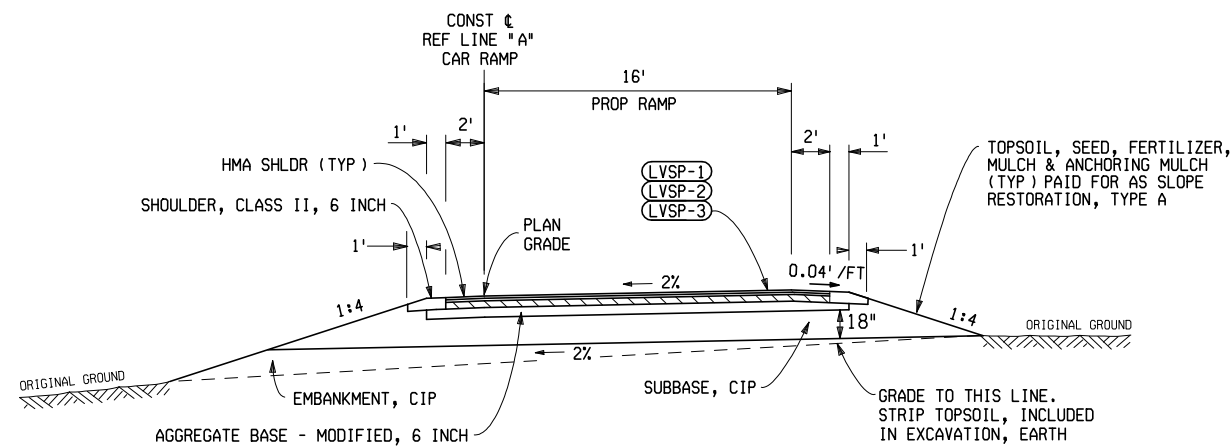
FRUITPORT REST AREA ALIGN SHEET

20-1

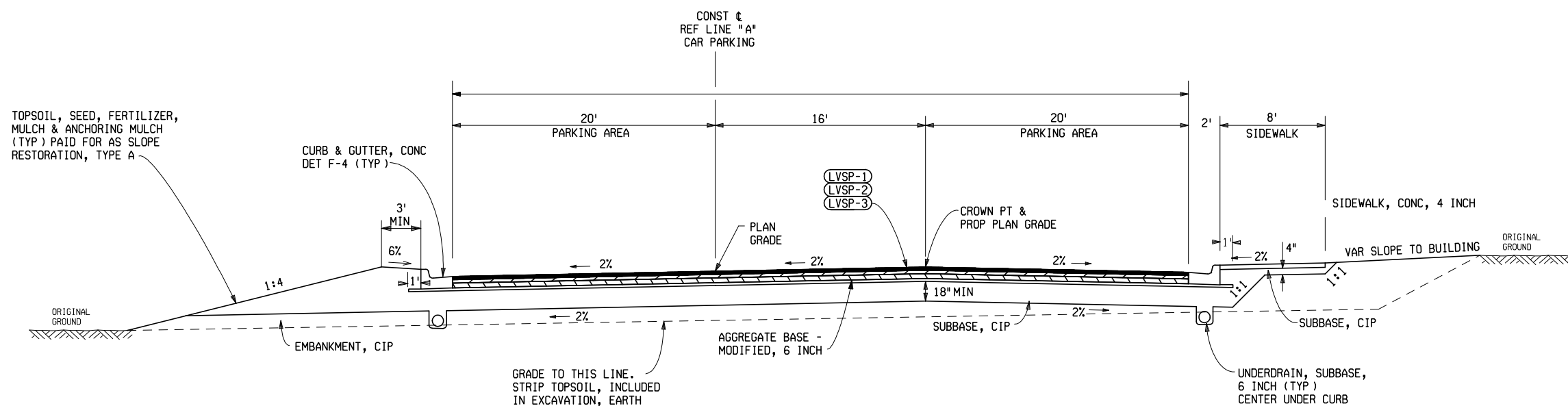
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
04/12/07				R.O.W CONST.

FILE NAME: _____
 CHECKED BY: _____
 WORKED ON BY: _____
 DATE: _____

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**CAR RAMP
TYPICAL SECTION
TO APPLY:**
STA 1+00.00 TO STA 7+50.00
STA 12+25.00 TO STA 18+93.69



**TYPICAL SECTION
TO APPLY (CAR PARKING):**
STA 7+50.00 TO STA 12+25.00

HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
LVSP-1	HMA, LVSP	170*	58-28	TOP COURSE AWI = 260
LVSP-2	HMA, LVSP	220*	58-28	LEVELING COURSE
LVSP-3	HMA, LVSP	330*	58-28	BASE COURSE
	* HMA BOND COAT	0.05-0.15 GAL		

*FOR INFORMATION ONLY

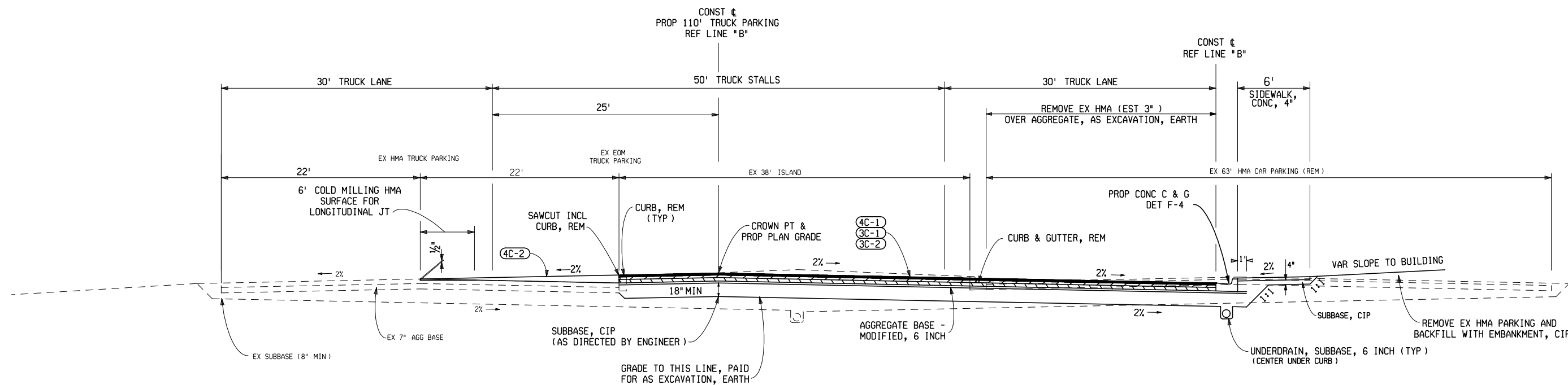


TYPICAL CROSS SECTIONS				
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
04/12/07				R.O.W CONST.

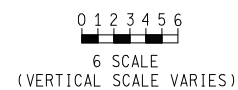
20-2

DATE: WORKED ON BY: DATE: WORKED ON BY: DATE: WORKED ON BY: FILE NAME:

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TYPICAL SECTION
TO APPLY (TRUCK PARKING):
STA 20+00.00 TO STA 26+03.77



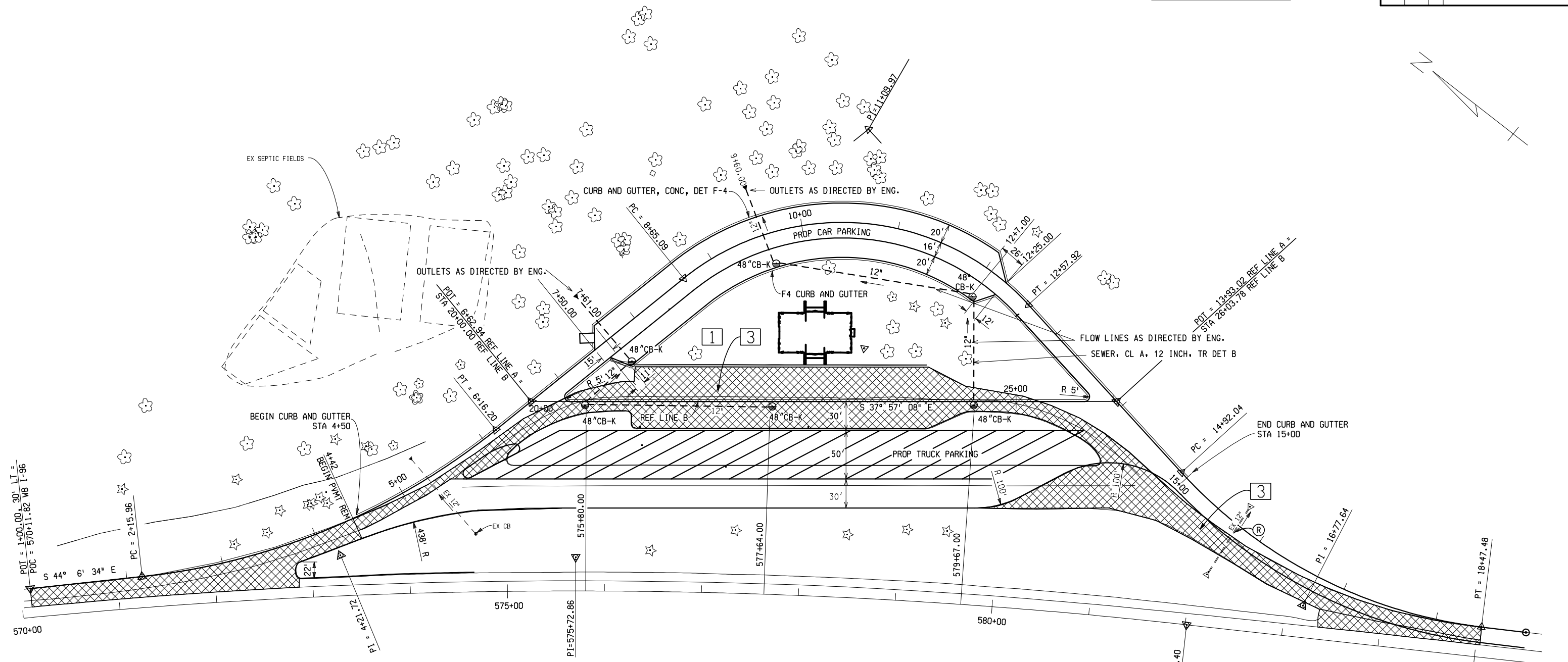
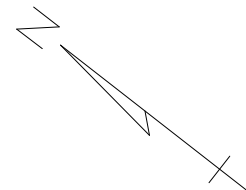
TYPICAL CROSS SECTIONS				
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
04/12/07				R.O.W CONST.

20-3

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FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

T8N R12N

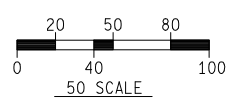


QUANTITIES THIS SHEET 2

78 Ft	Sewer, Rem, Less than 24 inch
4820 Syd	Pavt, Rem
7130 Cyd	Excavation, Earth
9433 Cyd	Embankment, CIP
7522 Cyd	Subbase, CIP
12381 Syd	Aggregate Base - Modified, 6 inch
3230 Ton	HMA, 3C
1000 Ton	HMA, 4C
244 Syd	Shoulder, CI I, 6 inch
6 Ea	Dr Structure, 48 inch dia *
3000 Lb	Dr Structure Cover
700 Ft	Sewer, CI A, 12 inch, Tr Det B
5 Ea	Sewer Tap, 12 inch
3100 Ft	Underdrain, Subbase, 4 inch
417 Ft	Underdrain Outlet, 4 inch
4 Ea	Culv End Section, Conc, 12 inch

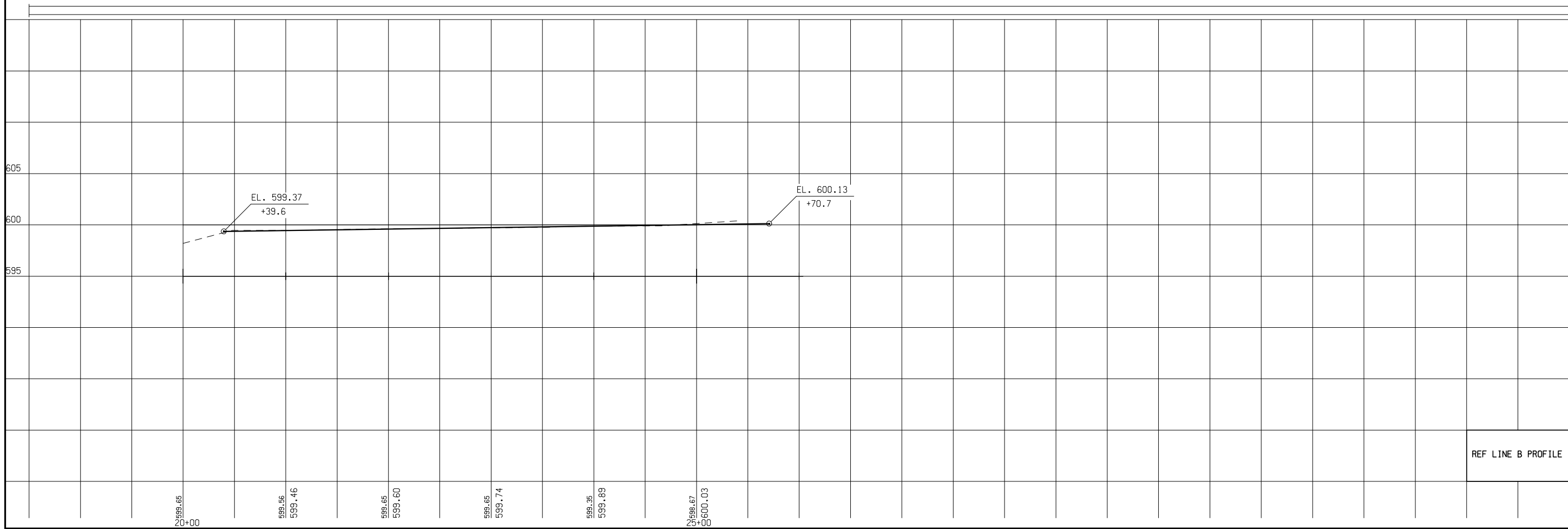
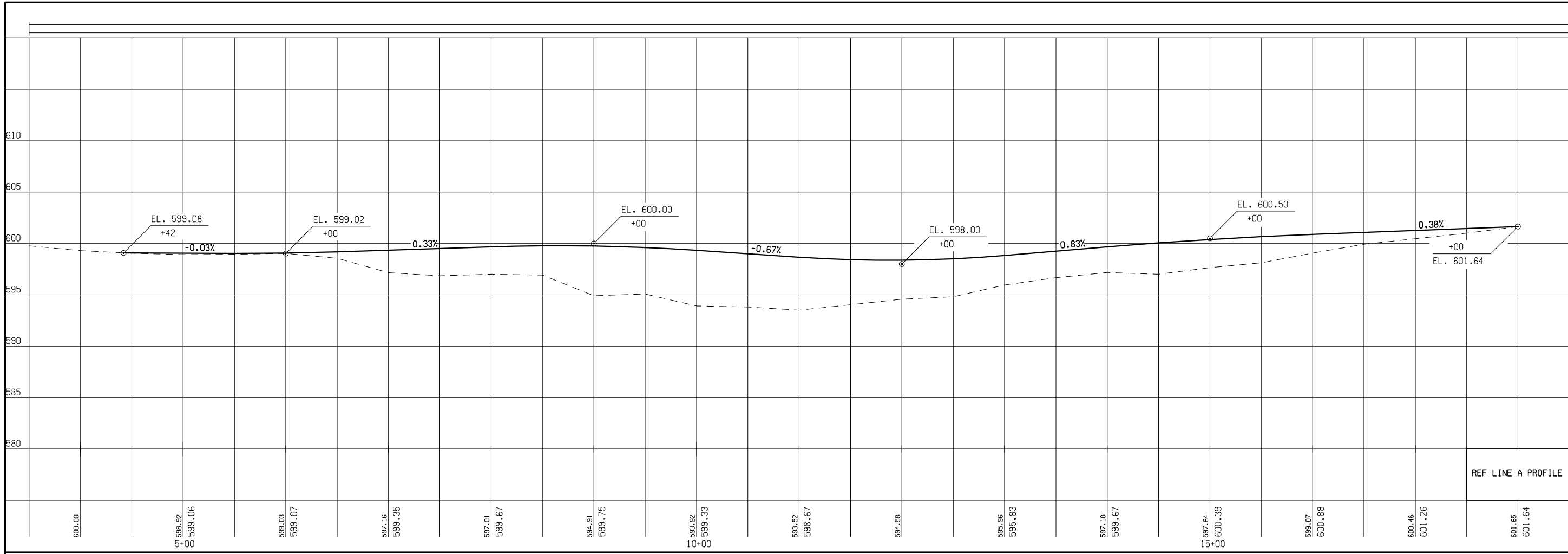
* CATCH BASIN

RAMP AND PARKING LOT CONSTRUCTION SHEET 20-4

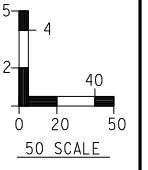


FRUITPORT REST AREA				
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
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CHECKED BY: FILE NAME: WORKED ON BY: DATE:



EX CENTER LINE PROFILE
PROPOSED PLAN GRADE PROFILE



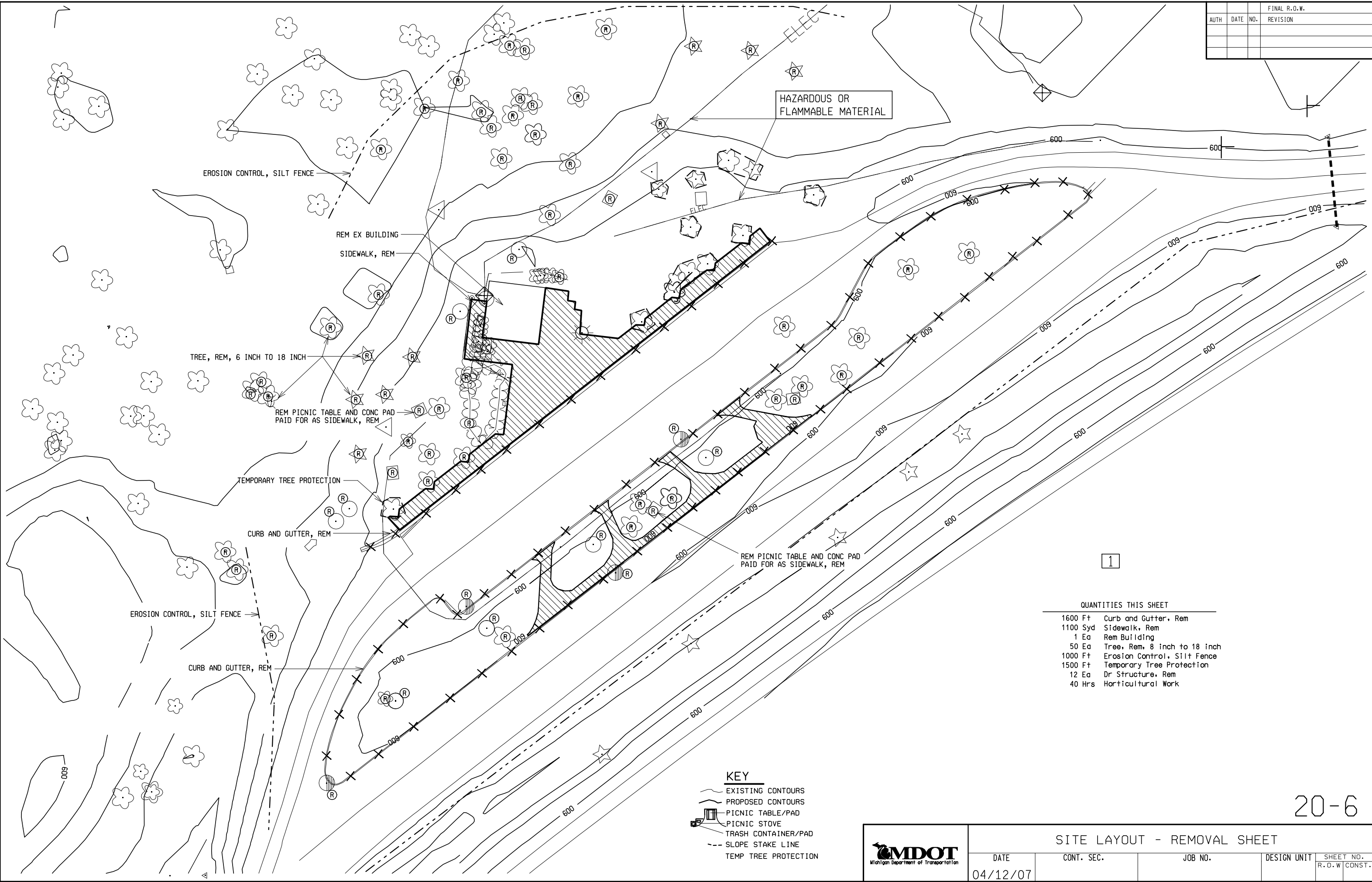
20-5

PARKING PROFILES - FRUITPORT REST AREA
DATE: 04/12/07
JOB NO.
CONT. SEC.
DESIGN UNIT

MDOT
Michigan Department of Transportation
SHEET NO.
R.O.W CONST.

FILE NAME: _____ DATE: _____ WORKED ON BY: _____ AUTH: _____ DATE NO. _____ REVISION _____ FINAL R.O.W. _____

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EROSION CONTROL, SILT FENCE

REM EX BUILDING

SIDEWALK, REM

TREE, REM, 6 INCH TO 18 INCH

REM PICNIC TABLE AND CONC PAD PAID FOR AS SIDEWALK, REM

TEMPORARY TREE PROTECTION

CURB AND GUTTER, REM

EROSION CONTROL, SILT FENCE

CURB AND GUTTER, REM

HAZARDOUS OR FLAMMABLE MATERIAL

REM PICNIC TABLE AND CONC PAD PAID FOR AS SIDEWALK, REM

1

QUANTITIES THIS SHEET

1600 Ft	Curb and Gutter, Rem
1100 Syd	Sidewalk, Rem
1 Ea	Rem Building
50 Ea	Tree, Rem, 8 inch to 18 inch
1000 Ft	Erosion Control, Silt Fence
1500 Ft	Temporary Tree Protection
12 Ea	Dr Structure, Rem
40 Hrs	Horticultural Work

KEY

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PICNIC TABLE/PAD
- PICNIC STOVE
- TRASH CONTAINER/PAD
- SLOPE STAKE LINE
- TEMP TREE PROTECTION



SITE LAYOUT - REMOVAL SHEET

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
04/12/07				R.O.W CONST.

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