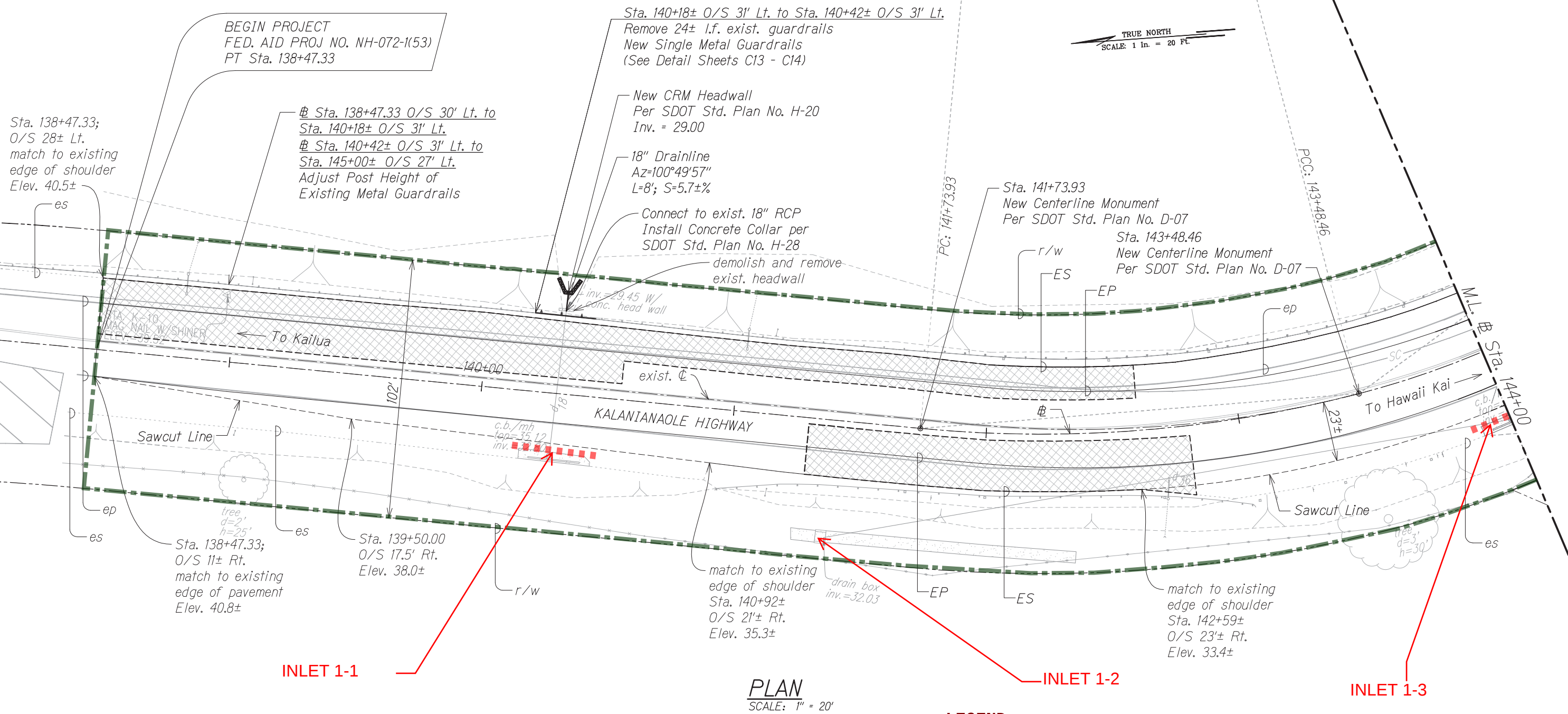
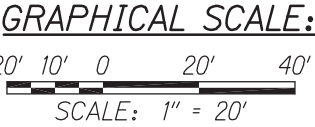


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	21	103



BENCHMARK
Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station



LEGEND:

Limits Pavement Reconstruction

NOTE:
For Pavement Safety Edge Detail, see Sheet C30.

BMP PLAN - ROADWAY CONSTRUCTION
PAVEMENT RECONSTRUCTION
SURFACE MILL
GUARDRAIL INSTALLATION AND ADJUSTMENTS

LEGEND:

CONSTRUCTION LIMITS
PROTECT INLET

THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION

SIGNATURE _____
EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED Date: MAR, 2013

SHEET No. C21 OF 69 SHEETS

ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
QUANTITIES BY	_____
DESIGNED BY	_____
TRACED BY	_____
DESIGNED BY	_____
DATE	_____

W:_CIVIL_3D PROJECTS\2008_008 DOT-HWY KAL HWY IMP WAIMANALO PH 1\C21-01 - ROADWAY PLAN.DWG 6/25/2013 11:14 AM

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	22	103

LEGEND:

CONSTRUCTION LIMITS

PROTECT INLET

INLET 1-3

Sta. 144+98± O/S 27' Lt. to Sta. 146+38± O/S 23' Lt.
Sta. 146+66± O/S 21' Lt. to Sta. 146+99± O/S 20' Lt.
Sta. 147+35± O/S 17' Lt. to Sta. 149+18± O/S 19' Lt.
New Single Metal Guardrails, See Detail Sheet C13 - C14

Sta. 146+38± O/S 23' Lt.
Sta. 146+66± O/S 21' Lt.
Sta. 146+99± O/S 21' Lt.
Sta. 147+35± O/S 17' Lt.
Modified Type "G" End Terminal
See Det. Sht. C17

Sta. 147+32± O/S 23' Lt. to
Sta. 148+22± O/S 17' Lt.
Remove 90± l.f. exist. guardrail.

Sta. 140+42± O/S 31' Lt. to
Sta. 145+00± O/S 31' Lt.
Adjust Post Height of
Existing Metal Guardrails
1'-9" to Center of W-Beam
(2"± Tolerance)

Sta. 146+37.82
O/S 22.5' Lt.
Elev. 29.25

Elev. 25.9± A
Sta. 146+98.83
O/S 20.0' Lt.
Elev. 29.12

A Elev. 25.3±
Sta. 147+35.00
O/S 17.0' Lt.
Elev. 29.07

New Ret. Wall A
See Sht. C56

New Wheelchair Ramp
See Det. Sht. C10
Sta. 148+50.00; O/S 19.00' Rt.
Begin New Conc. Curb & Gutter
(Type 2DG)
Per SDOT Std. Plan No. D-05
Sta. 148+33
New Centerline Monument
Per SDOT Std. Plan No. D-07

STA. 148+33±; O/S 20' Rt.
Hydrant Concrete Slab and
Guard Posts
(See Detail Sht. C29)
(Adjust Fire Hydrant As Required)

BENCHMARK

Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station

CURVE DATA:

CURVE	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Δ	92°04'01"	89°02'06"	90°57'54"	90°00'00"	88°49'01"	86°49'13"	90°44'17"	90°30'25"	88°45'18"	180°00'00"	91°14'42"
Δ/2	46°02'00.7"	44°43'03.2"	45°28'56.8"	45°00'00.0"	44°24'30.4"	43°24'36.6"	45°22'08.5"	45°15'12.3"	44°22'39.2"	90°00'00"	45°37'20.8"
R	5.00'	5.00'	10.00'	10.00'	8.00'	8.00'	5.00'	5.00'	8.00'	2.50'	8.00'
Tan.	5.184'	4.92'	10.17'	10.00'	7.84'	7.57'	5.07'	5.04'	7.83'	INFINITY	8.18'
C	7.20'	7.01'	14.26'	14.14'	11.20'	11.00'	7.12'	7.10'	11.19'	5.00'	11.44'
Lc	8.03'	7.77'	15.88'	15.71'	12.40'	12.12'	7.92'	7.90'	12.39'	7.85'	12.74'

GRAPHICAL SCALE:



LEGEND:

Limits Pavement Reconstruction

NOTE:

For Pavement Safety Edge Detail, see Sheet C30.

PLAN

SCALE: 1" = 20'

LINE DATA:

LINE	①	②	③	④	⑤	⑥	⑦	⑧
Az	215°53'43"	215°57'43"	215°57'43"	215°57'43"	36°42'00"	36°42'00"	35°57'43"	35°57'43"
Distance	10.50'	12.49'	17.04'	20.00'	2.97'	3.05'	14.63'	13.72'

BMP PLAN - ROADWAY CONSTRUCTION
PAVEMENT RECONSTRUCTION
CONCRETE CURB AND GUTTER INSTALLATION
GUARDRAIL INSTALLATION AND ADJUSTMENTS
DRIVEWAY RECONSTRUCTION
UTILITY ADJUSTMENT
RETAINING WALL CONSTRUCTION
WHEELCHAIR RAMP CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)
Scale: AS NOTED Date: MAR, 2013
SHEET No. C22 OF 69 SHEETS

BMP PLAN - ROADWAY CONSTRUCTION
PAVEMENT RECONSTRUCTION
SURFACE MILL
CONCRETE CURB AND GUTTER INSTALLATION
GUARDRAIL INSTALLATION AND ADJUSTMENTS
DRIVEWAY RECONSTRUCTION
UTILITY ADJUSTMENT
NEW DRAIN UTILITY INSTALLATION
RETAINING WALL CONSTRUCTION
WHEELCHAIR RAMP CONSTRUCTION

LEGEND:

- CONSTRUCTION LIMITS
- PROTECT INLET
- SILT FENCE

Sta. 5+08± O/S 22' Lt.
Sta. 6+00± O/S 22' Lt.
Modified Type "G" End Terminal,
(See Detail Sheet C17)

Sta. 150+50± O/S 22' Lt.
Sta. 4+29± O/S 23' Lt.
End Guardrail Section Per
Detail Sheet C15

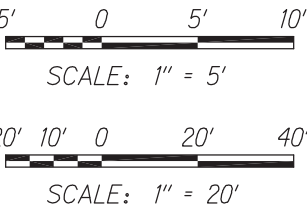
NOTE:

The Contractor shall restore the existing deck drains on Waimanalo Stream Bridge to provide positive drainage from roadway.

CURVE DATA:

CURVE	①	②	③	④	⑤	⑥	⑦	⑧
Δ	89°30'15"	90°29'45"	89°30'10"	90°29'45"	89°30'15"	90°29'45"	47°14'39"	55°08'42"
Δ/2	44°45'07.3"	45°14'52.7"	44°45'05.0"	45°14'52.7"	44°45'07.3"	45°14'52.7"	23°37'19.4"	27°34'21.2"
R	7.00'	7.00'	7.00'	7.00'	5.00'	5.00'	18.00'	14.53'
Tan.	6.94'	7.06'	6.94'	7.06'	4.96'	5.04'	7.87'	7.59'
C	9.86'	9.94'	9.86'	9.94'	7.04'	7.10'	14.42'	13.45'
Lc	10.93'	11.06'	10.93'	11.06'	7.81'	7.90'	14.84'	13.98'

GRAPHICAL SCALE:



BENCHMARK

Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

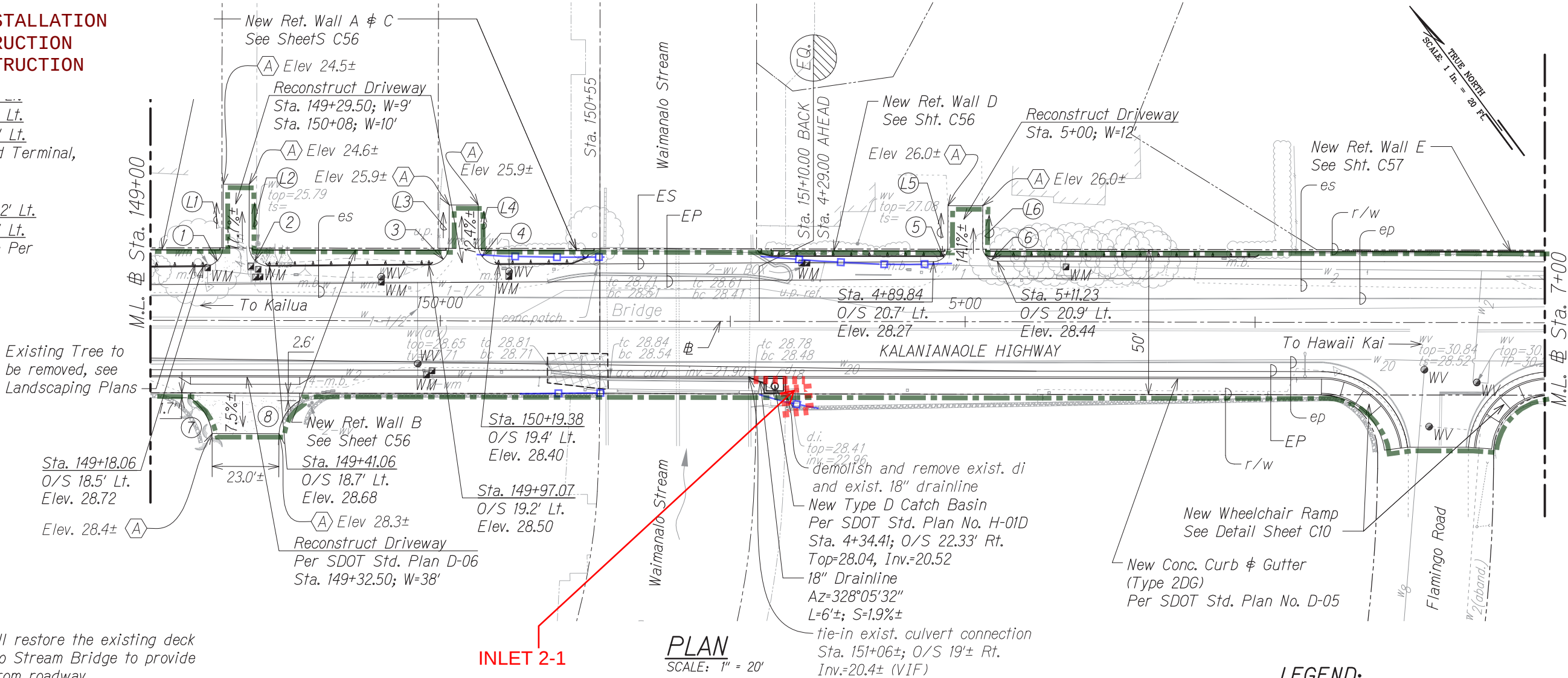
Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station

NOTE:
For Pavement Safety Edge Detail, see Sheet C30.

LINE DATA:

LINE	①	②	③	④	⑤	⑥
Az	216°42'00"	216°42'00"	216°42'00"	216°42'00"	216°42'00"	216°42'00"
Distance	21.49'	21.29'	13.81'	13.61'	14.31'	14.12'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	23	103



PLAN

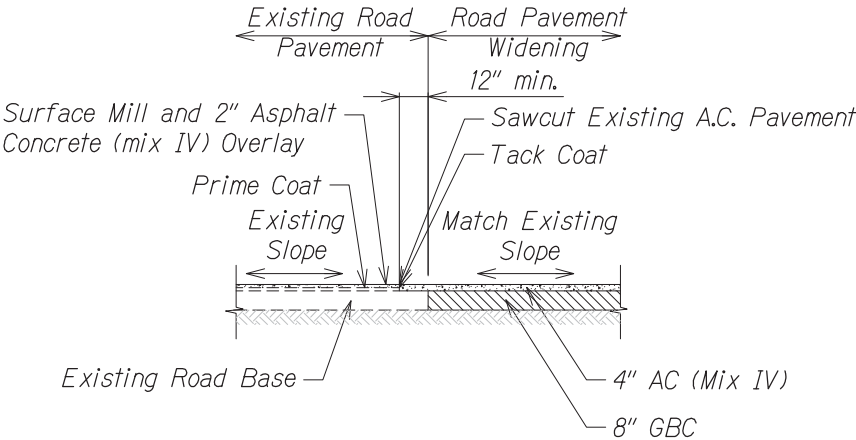
SCALE: 1" = 20'

LEGEND:

Limits Pavement Reconstruction

NOTE:

match to existing driveway



PAVEMENT CONNECTION DETAIL

SCALE: 1" = 5'

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)

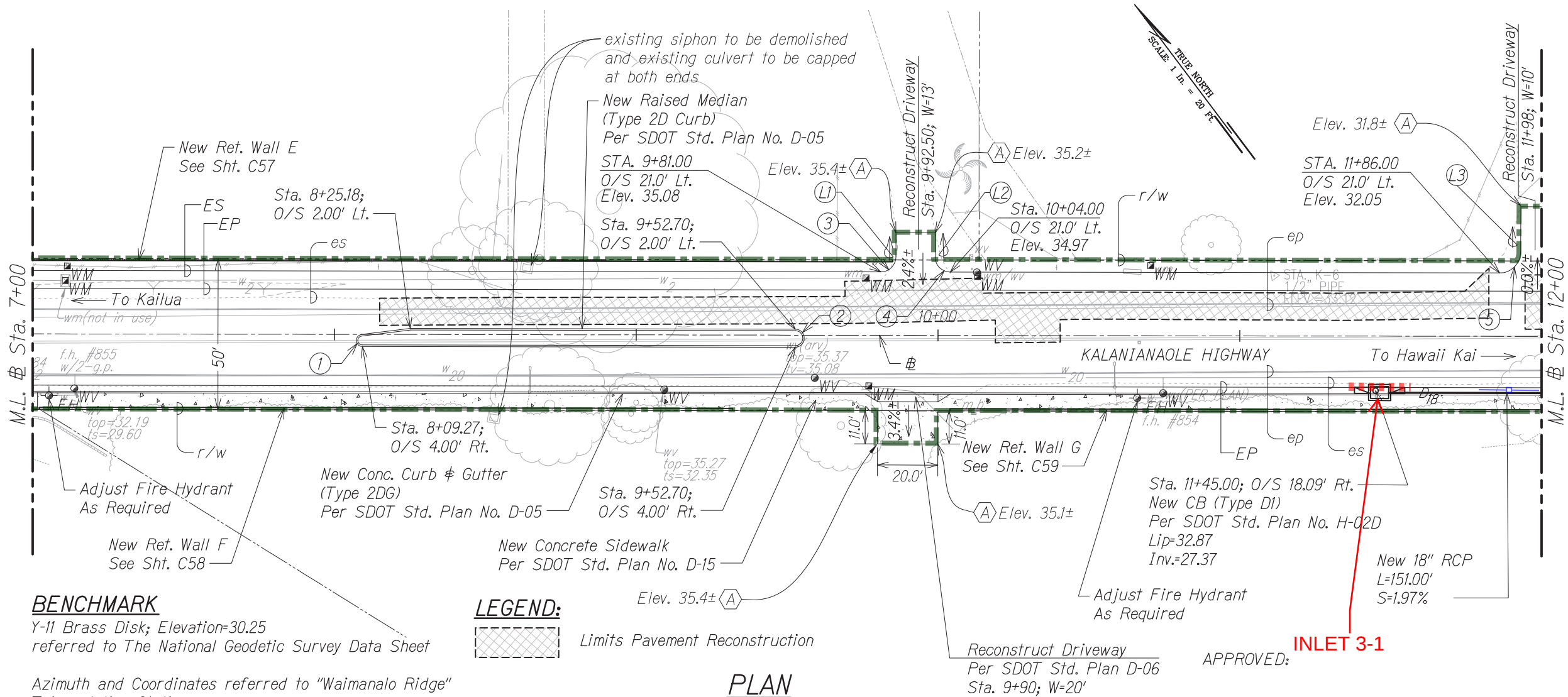
Scale: AS NOTED Date: MAR, 2013

SHEET No. C23 OF 69 SHEETS

BMP PLAN - ROADWAY CONSTRUCTION
PAVEMENT RECONSTRUCTION
SURFACE MILL
CONCRETE CURB AND GUTTER INSTALLATION
CONCRETE SIDEWALK CONSTRUCTION
RAISED MEDIAN INSTALLATION
DRIVEWAY RECONSTRUCTION
UTILITY ADJUSTMENT
NEW DRAIN UTILITY INSTALLATION
RETAINING WALL CONSTRUCTION

LEGEND:
CONSTRUCTION LIMITS
PROTECT INLET
SILT FENCE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	24	103



BENCHMARK
Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station

CURVE DATA:

CURVE	(1)	(2)	(3)	(4)	(5)
Δ	172°53'23"	180°00'00"	90°00'00"	90°00'00"	90°00'00"
$\Delta/2$	86°26'41.5"	90°00'00.0"	45°00'00.0"	45°00'00.0"	45°00'00.0"
R	2.00'	3.00'	5.00'	5.00'	7.00'
Tan.	32.19'	INFINITY	5.00'	5.00'	7.00'
C	3.99'	6.00'	7.07'	7.07'	9.90'
Lc	6.03'	9.42'	7.85'	7.85'	11.00'

LEGEND:
Limits Pavement Reconstruction

PLAN
SCALE: 1" = 20'

LINE DATA:

LINE	(L1)	(L2)	(L3)
Az	216°42'00"	216°42'00"	216°42'00"
Distance	8.00'	8.00'	15.00'

NOTE:
For Pavement Safety Edge Detail, see Sheet C30.

NOTE:
(A) match to existing driveway

APPROVED: **INLET 3-1**

MANAGER AND CHIEF ENGINEER, BWS
(For work affecting BWS Facilities in
State R/W and BWS Easements only) DATE

GRAPHICAL SCALE:
20' 10' 0 20' 40'
SCALE: 1" = 20'

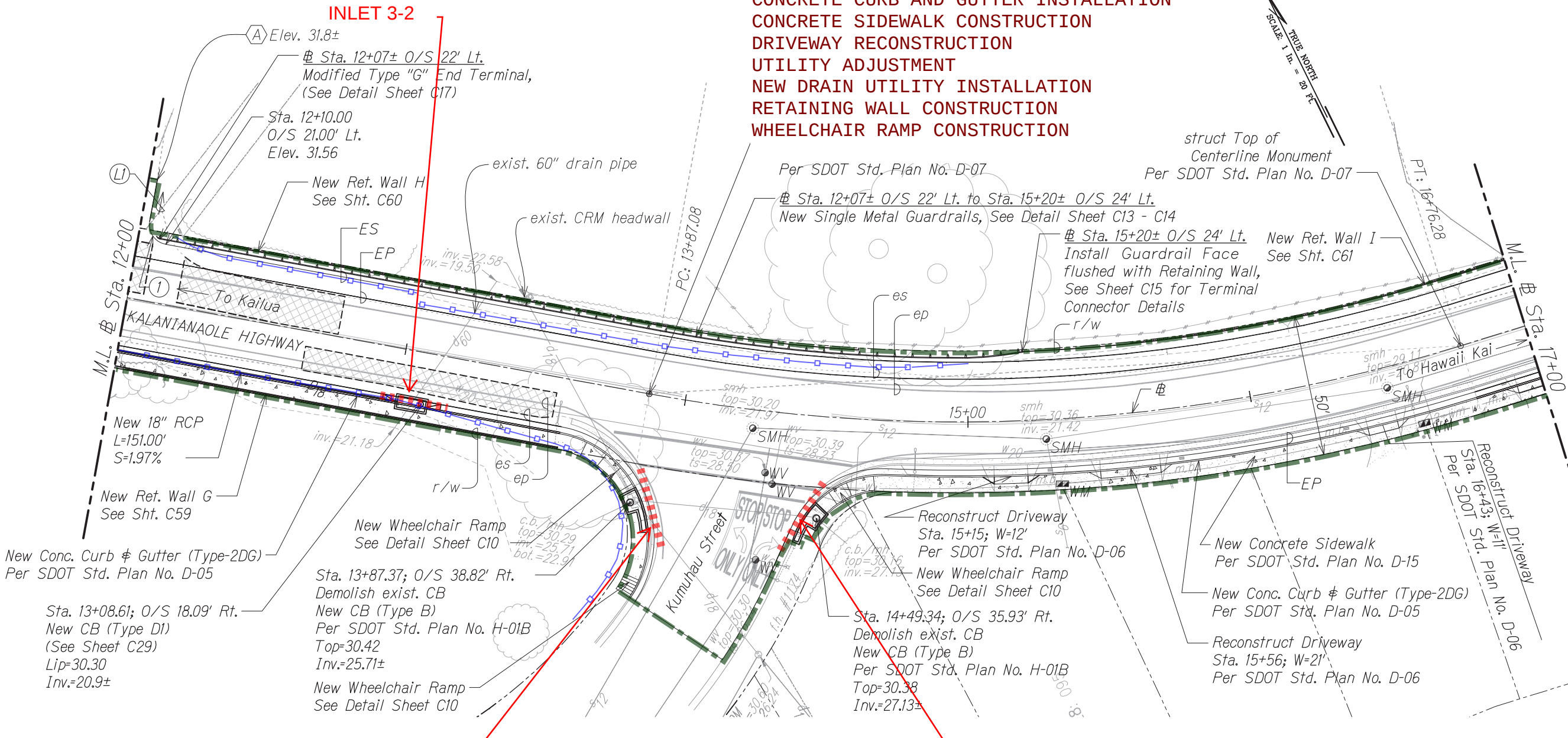
THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION

SIGNATURE EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)
Scale: AS NOTED Date: MAR, 2013
SHEET No. C24 OF 69 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	25	103

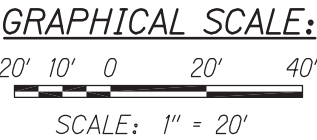
BMP PLAN - ROADWAY CONSTRUCTION
PAVEMENT RECONSTRUCTION
SURFACE MILL
CONCRETE CURB AND GUTTER INSTALLATION
CONCRETE SIDEWALK CONSTRUCTION
DRIVEWAY RECONSTRUCTION
UTILITY ADJUSTMENT
NEW DRAIN UTILITY INSTALLATION
RETAINING WALL CONSTRUCTION
WHEELCHAIR RAMP CONSTRUCTION



BENCHMARK

Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station



LEGEND:

Limits Pavement Reconstruction

CURVE DATA:

CURVE	①
Δ	90°00'00"
Δ/2	45°00'00.0"
R	7.00'
Tan.	7.00'
C	9.90'
Lc	11.00'

PLAN

SCALE: 1" = 20'

LINE DATA:

LINE	①
Az	216°42'00"
Distance	15.00'

NOTE:

For Pavement Safety Edge Detail, see Sheet C30.

NOTE:

match to existing driveway

LEGEND:

- CONSTRUCTION LIMITS
- PROTECT INLET
- SILT FENCE

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UNDER MY SUPERVISION

SIGNATURE

EXPIRATION DATE
OF THE LICENSE

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED Date: MAR, 2013

SHEET No. C25 OF 69 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	26	103

LEGEND:

--- CONSTRUCTION LIMITS

■■■■■ PROTECT INLET

BMP PLAN - ROADWAY CONSTRUCTION

PAVEMENT RECONSTRUCTION

SURFACE MILL

CONCRETE CURB AND GUTTER INSTALLATION

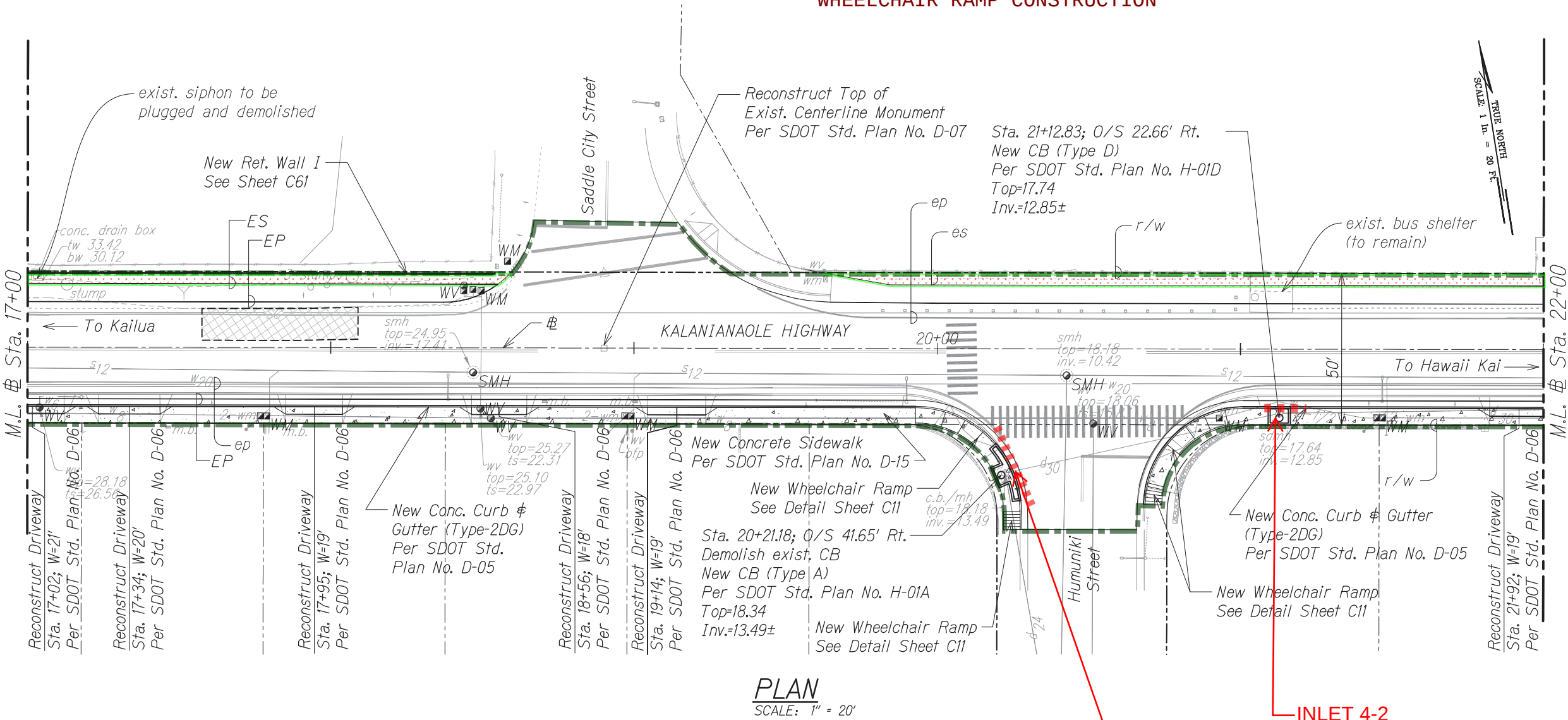
CONCRETE SIDEWALK CONSTRUCTION

DRIVEWAY RECONSTRUCTION

NEW DRAIN UTILITY INSTALLATION

RETAINING WALL CONSTRUCTION

WHEELCHAIR RAMP CONSTRUCTION



PLAN
SCALE: 1" = 20'

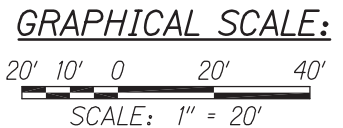
BENCHMARK
Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge" Triangulation Station

LEGEND:

▨ Limits Pavement Reconstruction

NOTE:
For Pavement Safety Edge Detail, see Sheet C30.



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED Date: MAR, 2013

SHEET No. C26 OF 69 SHEETS

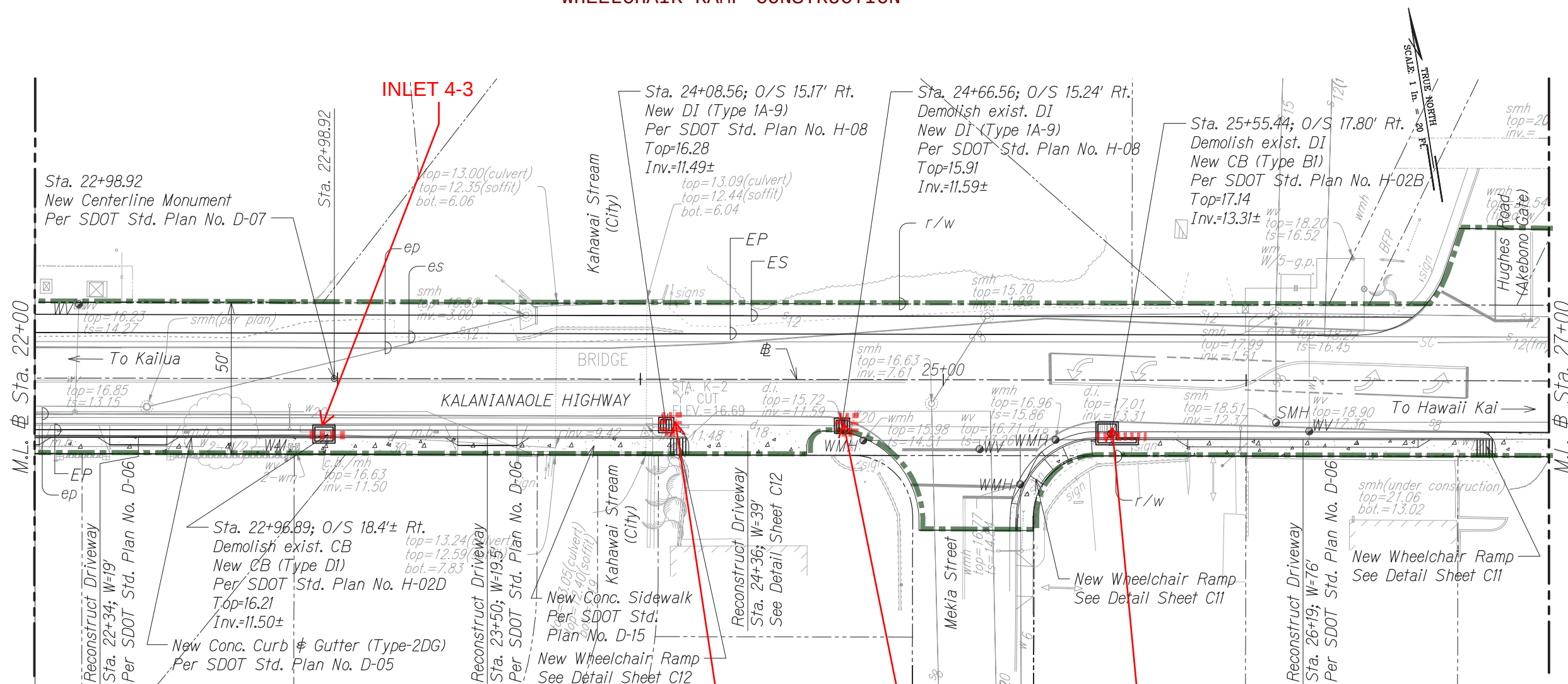
LEGEND:

CONSTRUCTION LIMITS

PROTECT INLET

BMP PLAN - ROADWAY CONSTRUCTION
CONCRETE CURB AND GUTTER INSTALLATION
CONCRETE SIDEWALK CONSTRUCTION
DRIVEWAY RECONSTRUCTION
NEW DRAIN UTILITY INSTALLATION
RETAINING WALL CONSTRUCTION
WHEELCHAIR RAMP CONSTRUCTION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	27	103



BENCHMARK

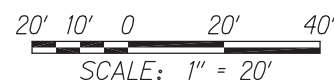
Y-11 Brass Disk; Elevation=30.25
 referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
 Triangulation Station

NOTES:

- The Contractor shall restore the existing deck drains on Kahawai Stream Bridge to provide positive drainage from roadway.
- For Pavement Safety Edge Detail, see Sheet C30.

GRAPHICAL SCALE:



PLAN

SCALE: 1" = 20'

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

W:_CIVIL_3D_PROJECTS\2008_008_000_DOT-HWY KAL HWY IMP WAIMANALO PH 1\C27-07 - ROADWAY PLAN.DWG 6/24/2013 6:18 PM

THIS WORK WAS PREPARED BY ME OR
 UNDER MY SUPERVISION

SIGNATURE

EXPIRATION DATE
 OF THE LICENSE

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1

Olomana Golf Course To Poalima Street

Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED

Date: MAR, 2013

SHEET No. C27 OF 69 SHEETS

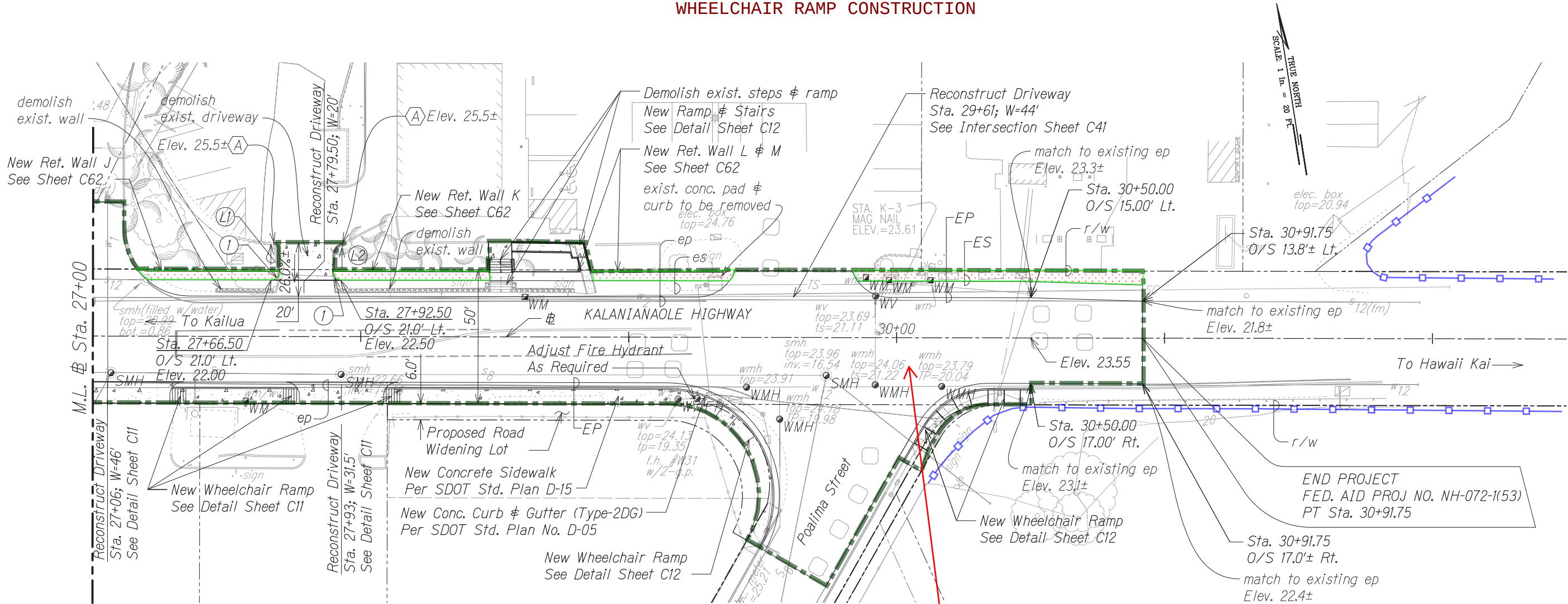
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2014	28	103

LEGEND:

CONSTRUCTION LIMITS

SILT FENCE

BMP PLAN - ROADWAY CONSTRUCTION
CONCRETE CURB AND GUTTER INSTALLATION
CONCRETE SIDEWALK CONSTRUCTION
DRIVEWAY RECONSTRUCTION
RETAINING WALL CONSTRUCTION
WHEELCHAIR RAMP CONSTRUCTION



PLAN
SCALE: 1" = 20'

SEQUENCE 4

APPROVED:

BENCHMARK

Y-11 Brass Disk; Elevation=30.25
referred to The National Geodetic Survey Data Sheet

Azimuth and Coordinates referred to "Waimanalo Ridge"
Triangulation Station

CURVE DATA:

CURVE	①
Δ	90°00'00"
$\Delta/2$	45°00'00.0"
R	5.00'
Tan.	5.00'
C	7.07'
Lc	7.85'

LINE DATA:

LINE	①	②
Az	189°06'00"	189°06'00"
Distance	8.00'	5.09'

NOTE:

For Pavement Safety Edge Detail, see Sheet C30.

NOTE:

(A) match to existing driveway

MANAGER AND CHIEF ENGINEER, BWS
(For work affecting BWS Facilities in
State R/W and BWS Easements only)

DATE

THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION

SIGNATURE

EXPIRATION DATE
OF THE LICENSE

ROADWAY PLAN

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1
Olomana Golf Course To Poalima Street
Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED Date: MAR, 2013

SHEET No. C28 OF 69 SHEETS

GRAPHICAL SCALE:



SCALE: 1" = 20'

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	

W:\CIVIL_3D\PROJECTS\2008_008_000 DOT-HWY KAL HWY IMP WAIMANALO PH 1\C28-08 - ROADWAY PLAN.DWG 6/24/2013 6:26 PM