| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 2 | 65 |

# STANDARD PLANS SUMMARY

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| B-01 ● | NOTES & MISCELLANEOUS DETAILS | 05/31/07 |
| B-03 | BACKFILL DETAILS AT EARTH RETAINING STRUCTURES | 05/31/07 |
| B-12 | PRESTRESSED CONCRETE PILES & COMPRESSION SPLICE | 05/31/07 |
| | CAN DETAILS | |
| B-12A | PRESTRESSED CONCRETE PILES, PILE & COMPRESSION | 05/31/07 |
| | SPLICE CAN DETAILS & NOTES | |
| B-12B | PILE INTERACTION DIAGRAM | 05/31/07 |
| B-13 | PRESTRESSED CONCRETE PILE BUILD-UP DETAILS | 05/31/07 |
| | | |
| | | |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| D-01 | CATTLE GATE | 05/31/07 |
| D-02 | CHAIN LINK FENCE WITH TOPRAIL | 05/31/07 |
| D-03 | CHAIN LINK FENCE WITHOUT TOPRAIL | 05/31/07 |
| D-04 | WIRE FENCE WITH METAL POSTS | 05/31/07 |
| D-05 | TYPICAL DETAILS OF CURBS AND/OR GUTTERS | 05/31/07 |
| D-06 | TYPICAL DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY | 05/31/07 |
| D-07 | CENTERLINE AND REFERENCE SURVEY MONUMENTS | 05/31/07 |
| D-08 | STREET SURVEY MONUMENT | 05/31/07 |
| D-15 | CONCRETE SIDEWALK | 05/31/07 |
| D-16 | P.C.C. BUS PAD | 05/31/07 |
| D-17 | P.C.C. BUS PAD | 05/31/07 |
| D-18 | P.C.C. PAVEMENT LAYOUT | 05/31/07 |
| D-19 | P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS | 05/31/07 |
| D-20 | P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS | 05/31/07 |
| D-21 | P.C.C. LONGITUDINAL JOINT DETAILS | 05/31/07 |
| D-22 | P.C.C. CONNECTION TO CURBS AND GUTTERS | 05/31/07 |
| D-23 | JOINTS | 05/31/07 |
| | | |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| L-01 | TREE PLANTING | 08/16/06 |
| L-02 | TREE PLANTING | 08/16/06 |
| L-03 | TREE TRANSPLANTING | 08/16/06 |
| L-04 | PALM PLANTING | 08/16/06 |
| L-05 | SHRUB PLANTING | 08/16/06 |
| L-06 | LANDSCAPE DETAILS | 08/16/06 |
| L-07 | LANDSCAPE DETAILS | 08/16/06 |
| L-08 | LANDSCAPE DETAILS | 08/16/06 |
| L-09 | LANDSCAPE DETAILS | 08/16/06 |
| L-10 | LANDSCAPE DETAILS | 08/16/06 |
| L-11 | PLANTING NOTES | 08/16/06 |
| L-12 | IRRIGATION DETAILS | 08/16/06 |
| L-13 | IRRIGATION DETAILS | 08/16/06 |
| L-14 | IRRIGATION DETAILS | 08/16/06 |
| L-15 | IRRIGATION DETAILS | 08/16/06 |
| L-16 | IRRIGATION DETAILS | 08/16/06 |
| L-17 | IRRIGATION DETAILS | 08/16/06 |
| L-18 | IRRIGATION DETAILS | 08/16/06 |
| L-19 | IRRIGATION DETAILS | 08/16/06 |
| L-20 | IRRIGATION DETAILS | 08/16/06 |
| L-21 | IRRIGATION DETAILS | 08/16/06 |
| L-22 | IRRIGATION DETAILS | 08/16/06 |
| L-23 | IRRIGATION DETAILS | 08/16/06 |
| L-24 | IRRIGATION NOTES | 08/16/06 |
| | | |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| H-01A | TYPE A CATCH BASIN | 05/31/07 |
| H-01B | TYPE B CATCH BASIN | 05/31/07 |
| H-01C | TYPE C CATCH BASIN | 05/31/07 |
| H-01D | TYPE D CATCH BASIN | 05/31/07 |
| H-01E | CATCH BASIN SECTIONS | 05/31/07 |
| H-02A | TYPE A1 CATCH BASIN | 05/31/07 |
| H-02B | TYPE B2 CATCH BASIN | 05/31/07 |
| H-02C | TYPE C1 CATCH BASIN | 05/31/07 |
| H-02D | TYPE D1 CATCH BASIN | 05/31/07 |
| H-02E | CATCH BASIN SECTION | 05/31/07 |
| H-03 | TYPE A,B, AND C STORM DRAIN MANHOLE | 05/31/07 |
| H-04 | TYPE D STORM DRAIN MANHOLE | 05/31/07 |
| H-05 | TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES | 05/31/07 |
| H-06 | TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES | 05/31/07 |
| H-07 | CATCH BASIN AND MANHOLE CASTINGS | 05/31/07 |
| H-08 | TYPE 1A-9 AND 1A-9P GRATED DROP INLET | 05/31/07 |
| H-09 | TYPE 2A-9 AND 2A-9P GRATED DROP INLET | 05/31/07 |
| H-10 | TYPE A-9 OR A-9P STEEL FRAMES | 05/31/07 |
| H-11 | TYPE A-9 AND A-9P STEEL GRATES | 05/31/07 |
| H-12 | TYPE 61614P AND 1211214P GRATED DROP INLET | 05/31/07 |
| H-13 | TYPE 61616P AND 1211216P GRATED DROP INLET | 05/31/07 |
| H-14 | TYPE 61214P GRATED DROP INLET | 05/31/07 |
| H-15 | TYPE 1211214, 1211214P, 1211216, 1211216P STEEL | 05/31/07 |
| | FRAME AND GRATES | |
| H-16 | TYPE 61614, 61614P, 61616, 61616P STEEL FRAME | 05/31/07 |
| | AND GRATES | |
| H-17 | TYPE 61214 STEEL FRAMES AND GRATES | 05/31/07 |
| H-18 | TYPE 61214P STEEL GRATES | 05/31/07 |
| H-19 | TYPE 61614B STEEL FRAME AND GRATES | 05/31/07 |
| H-20 | CEMENT RUBBLE MASONRY STRUCTURES | 05/31/07 |
| H-21 | CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES | 05/31/07 |
| H-22 | INLET/OUTLET STRUCTURE | 05/31/07 |
| H-23 | INLET/OUTLET STRUCTURE | 05/31/07 |
| H-24 | FLARED END SECTION FOR CULVERTS | 05/31/07 |
| H-25 | FLARED END SECTION FOR CULVERTS | 05/31/07 |
| H-26 | CONCRETE SPILLWAY INLET | 05/31/07 |
| H-27 | CAP COUPLING DETAILS STANDARD JOINT | 05/31/07 |
| H-28 | REINFORCED CONCRETE COLLAR & JACKET | 05/31/07 |
| H-29 | UNDERDRAIN CLEANOUT STEEL FRAME AND COVER | 05/31/07 |
| H-30 | UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE | 05/31/07 |
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| | | |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| TE-01 ● | SIGN HEIGHT AND LOCATION | 07/11/08 |
| TE-1A ● | SIGN INSTALLATION | 07/11/08 |
| TE-02A | GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING | 05/31/07 |
| TE-02B | GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING | 05/31/07 |
| TE-02C | GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING | 05/31/07 |
| TE-03A | GALVANIZED SQUARE TUBE SIGN POST MOUNTING | 05/31/07 |
| TE-03B ● | GALVANIZED SQUARE TUBE SIGN POST MOUNTING | 05/31/07 |
| TE-04 ● | REGULATORY SIGNS | 07/11/08 |
| TE-05 ● | WARNING SIGNS | 07/11/08 |
| TE-06 ● | MISCELLANEOUS SIGNS | 07/11/08 |
| TE-07 ● | CONSTRUCTION SIGNS | 07/11/08 |
| TE-08 | MISCELLANEOUS INTERSECTION SIGNS | 07/11/08 |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| TE-09 | BIKE ROUTE SIGN & SUPPLEMENTARY PLATES | 07/11/08 |
| TE-10 | INTERSTATE ROUTE MARKER | 07/11/08 |
| TE-11 ● | STATE ROUTE MARKER AND AUXILIARY MARKERS | 07/11/08 |
| TE-12 | STATE ROUTE MARKER AND BORDER DETAIL FOR | 07/11/08 |
| | GUIDE SIGNS | |
| TE-12A | ROUTE SIGN ASSEMBLIES | 07/11/08 |
| TE-13 | STREET NAME SIGN ON MAST ARM | 07/11/08 |
| TE-14 ● | MISCELLANEOUS REFLECTOR MARKERS | 07/11/08 |
| TE-15 | OBJECT MARKERS | 07/11/08 |
| TE-16 ● | MILE POSTS | 07/11/08 |
| TE-17A | CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS | 05/31/07 |
| TE-17B | CANTILEVER SIGN FRAME DETAIL AND SECTION | 05/31/07 |
| TE-17C | CANTILEVER SIGN FRAME DETAIL | 05/31/07 |
| TE-17D | CANTILEVER SIGN FRAME SECTION | 05/31/07 |
| TE-17E | CANTILEVER SIGN FRAME DETAILS | 05/31/07 |
| TE-18A | TWO POST OVERHEAD SIGN FRAME ELEVATIONS | 05/31/07 |
| TE-18B | TWO POST SIGN FRAMING PLAN SECTION | 05/31/07 |
| TE-18C | TWO POST SIGN FRAMING SECTIONS AND DETAILS | 05/31/07 |
| TE-18D | TWO POST SIGN FRAME DETAILS | 05/31/07 |
| TE-18E | TWO POST SIGN FRAME DETAILS | 05/31/07 |
| TE-19A | OVERHEAD SIGN FRAMING SCHEDULE | 05/31/07 |
| TE-19B | SIGN POST DRILLED SHAFT FOUNDATION | 05/31/07 |
| TE-19C | SPREAD FOOTING | 05/31/07 |
| TE-19D | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19D.1 | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19D.2 | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19D.3 | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19D.4 | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19D.5 | SIGN FRAME FOUNDATION SCHEDULE | 05/31/07 |
| TE-19E | ANCHORAGE DETAILS | 05/31/07 |
| TE-19F | ANCHORAGE DETAILS | 05/31/07 |
| TE-19G | MISCELLANEOUS SIGN FRAME DETAILS | 05/31/07 |
| TE-19H | LUMINAIRE WALKWAY SUPPORT | 05/31/07 |
| TE-19J | FIXED MESSAGE LUMINAIRE SUPPORT | 05/31/07 |
| TE-19K | MISCELLANEOUS SIGN DETAILS | 05/31/07 |
| TE-19L | MISCELLANEOUS SIGN DETAILS | 05/31/07 |
| TE-19M | MISCELLANEOUS SIGN FRAME DETAILS | 05/31/07 |
| TE-20 | SUPPORTS FOR GROUND MOUNTED GUIDE SIGN | 05/31/07 |
| TE-20A | SUPPORTS FOR GROUND MOUNTED GUIDE SIGN | 05/31/07 |
| TE-20B | SUPPORTS FOR GROUND MOUNTED GUIDE SIGN | 05/31/07 |
| TE-20C | SUPPORTS FOR GROUND MOUNTED GUIDE SIGN | 05/31/07 |
| TE-21A | SIGN BREAKAWAY MOUNTS | 05/31/07 |
| TE-21B | SIGN BREAKAWAY MOUNTS | 05/31/07 |
| TE-22 | LAMINATED ALUMINUM SIGN PANELS (OVERHEAD) | 05/31/07 |
| TE-23 | LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED) | 07/11/08 |
| TE-24 | SOLID ALUMINUM EXTRUDED SIGN PANEL AND | 05/31/07 |
| | ACCESSORY DETAILS | |
| TE-25 | GUIDE SIGNS LUMINAIRE MOUNTINGS | 05/31/07 |
| TE-26 ● | RAISED PAVEMENT MARKERS AND STRIPING | 07/11/08 |
| TE-27 ● | RAISED PAVEMENT MARKERS AND STRIPING | 07/11/08 |
| TE-28 ● | ENTRANCE AND EXIT PAVEMENT MARKINGS | 07/11/08 |
| TE-28A | MISCELLANEOUS PAVEMENT MARKINGS | 07/11/08 |
| TE-29 ● | PAVEMENT ARROWS AND SYMBOLS | 07/11/08 |
| TE-30 ● | PAVEMENT ALPHABETS, NUMBERS & SYMBOLS | 07/11/08 |
| TE-31 ● | PAVEMENT ALPHABETS, NUMBERS & SYMBOLS | 07/11/08 |

| STANDARD PLAN NO. | TITLE | DATE |
|---|---|---|
| TE-32 | TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS | 05/31/07 |
| TE-33 | TYPE II TRAFFIC SIGNAL SYSTEM | 08/16/06 |
| TE-33A.1 | TYPE II TRAFFIC SIGNAL STANDARD | 05/31/07 |
| TE-33A.2 | TYPE II TRAFFIC SIGNAL STANDARD | 05/31/07 |
| TE-34 | LOOP DETECTOR DETAILS | 07/11/08 |
| △1 TE-35 ● | LOOP DETECTORS & DUCT DETAILS | 07/11/08 |
| △1 TE-36 ● | TRAFFIC SIGNAL DETAILS | 07/11/08 |
| TE-37 | PULLBOX & COVER DETAILS | 07/11/08 |
| TE-37A | TYPE "A" TRAFFIC PULLBOX | 05/31/07 |
| TE-37B | TYPE "A" TRAFFIC PULLBOX REINFORCING | 05/31/07 |
| TE-37C | TYPE "B" TRAFFIC PULLBOX | 05/31/07 |
| TE-37D | TYPE "B" TRAFFIC PULLBOX REINFORCING | 05/31/07 |
| TE-37E | TYPE "B" TRAFFIC PULLBOX FOUNDATION | 05/31/07 |
| TE-37F | TYPE "C" TRAFFIC PULLBOX | 05/31/07 |
| TE-37G | TYPE "C" TRAFFIC PULLBOX REINFORCING | 05/31/07 |
| TE-37H | TYPE "C" TRAFFIC PULLBOX FOUNDATION | 05/31/07 |
| TE-37J | TRAFFIC PULLBOX COVER AND DETAILS | 05/31/07 |
| TE-38 | TYPE III TRAFFIC SIGNAL STANDARD | 05/31/07 |
| TE-38A.1 | TYPE III TRAFFIC SIGNAL STANDARD | 05/31/07 |
| TE-38A.2 | TYPE III TRAFFIC SIGNAL STANDARD | 05/31/07 |
| TE-39 | METAL GUARDRAIL CONNECTION TO CONCRETE BARRIER | 07/11/08 |
| TE-40 | CONCRETE BARRIER TRANSITION | 05/31/07 |
| TE-40A | CONCRETE BARRIER TRANSITION SECTIONS | 05/31/07 |
| TE-41 | GUARDRAIL TYPE 4 (RIGID BARRIER) | 05/31/07 |
| TE-42 | PORTABLE CONCRETE BARRIER | 05/31/07 |
| TE-43 | PORTABLE CONCRETE BARRIER | 05/31/07 |
| TE-44 | GUARDRAIL TYPE 4 MISCELLANEOUS DETAILS | 07/11/08 |
| TE-45 | BARRICADES | 07/11/08 |
| TE-46 | DELINEATION & PAVEMENT MARKINGS AT NARROW BRIDGES | 07/11/08 |
| TE-47 | HIGHWAY LIGHT STANDARD | 05/31/07 |
| | | |
| | | |
| | | |

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO. (FOR EXAMPLE: D-07 ● )

| △ | DATE | REVISION |
|---|---|---|
| 1 | 11/10/21 | Added TE-35<br>Added TE-36 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

## STANDARD PLANS SUMMARY

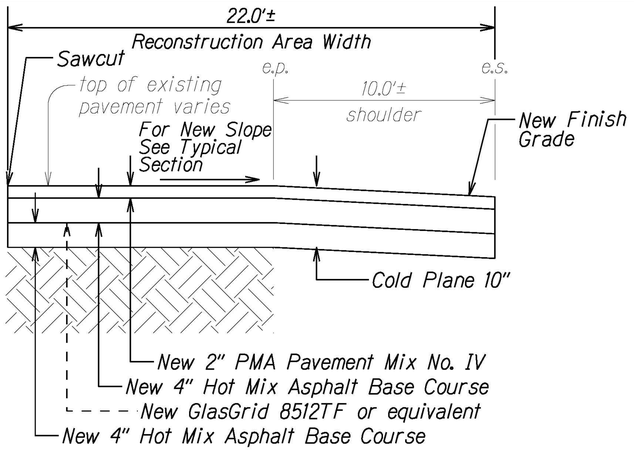
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Date: October, 2021

SHEET No. 1 OF 1 SHEETS

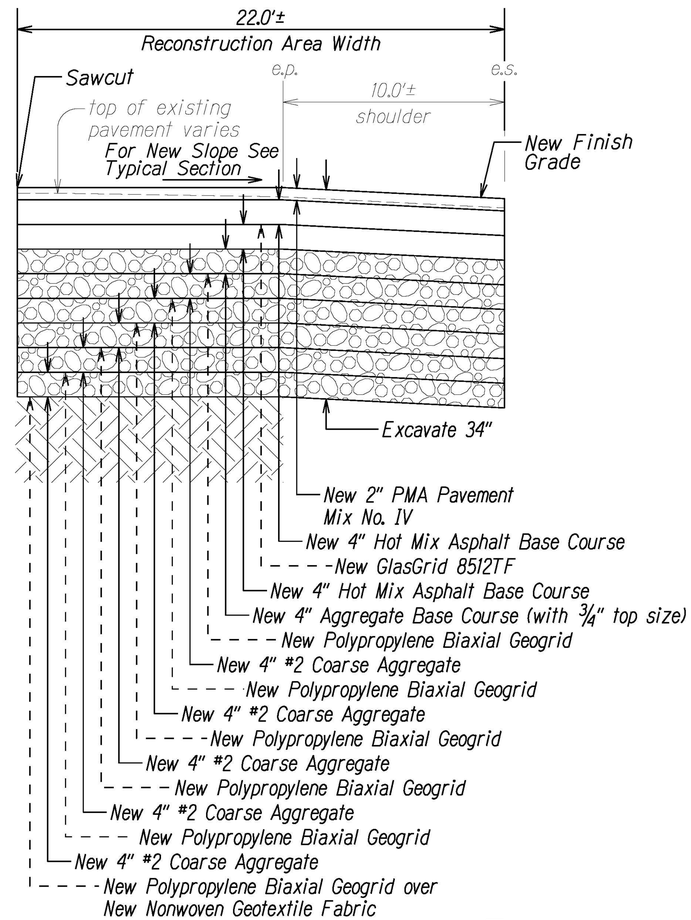
ORIGINAL PLAN
NOTE BOOK dd2.mf
No. plandir.dgn
SURVEY PLOTTED BY
DRAWN BY X
TRACED BY
DESIGNED BY X
QUANTITIES BY
CHECKED BY
DATE X

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 18 | 65 |



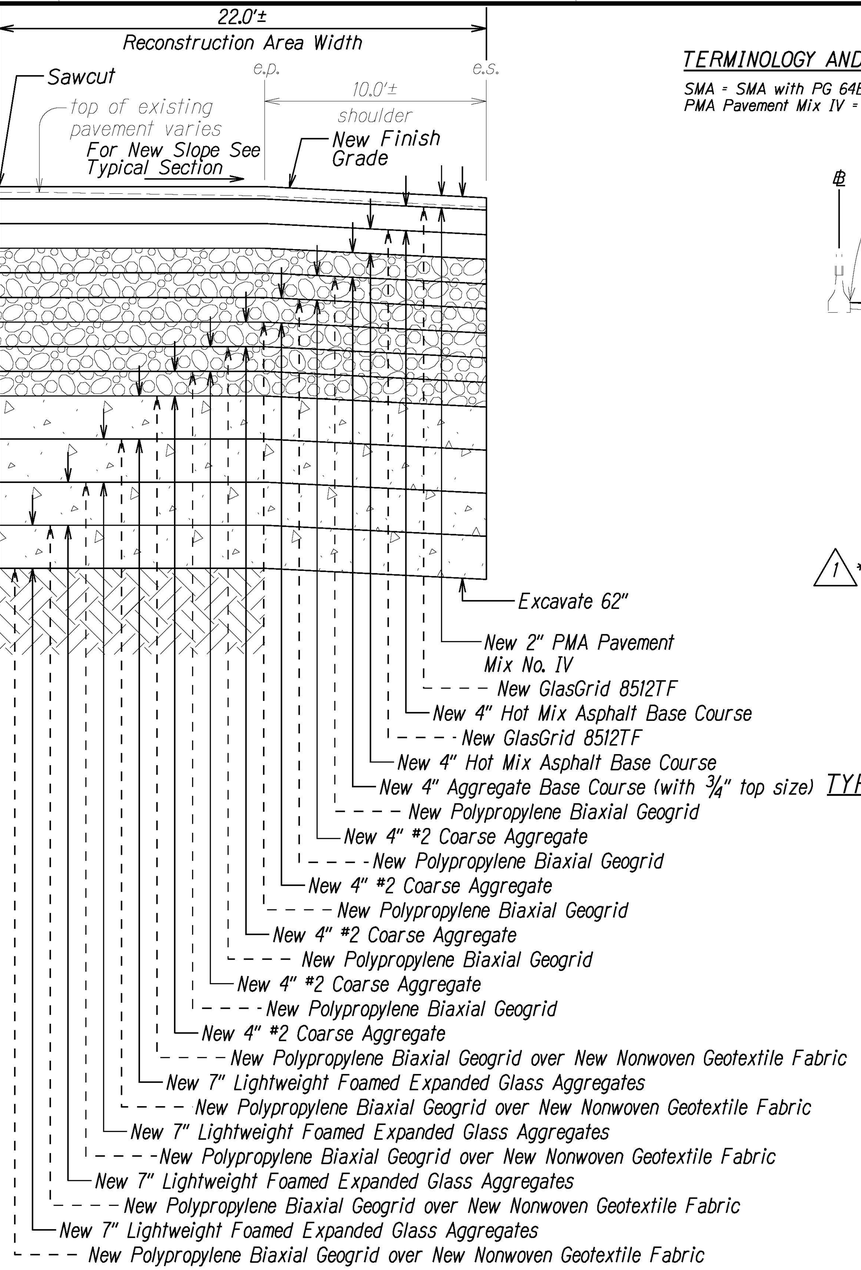

## RECONSTRUCTION AT SETTLED AREA (A)

Scale: N.T.S.




## RECONSTRUCTION AT SETTLED AREA (B)

Scale: N.T.S.

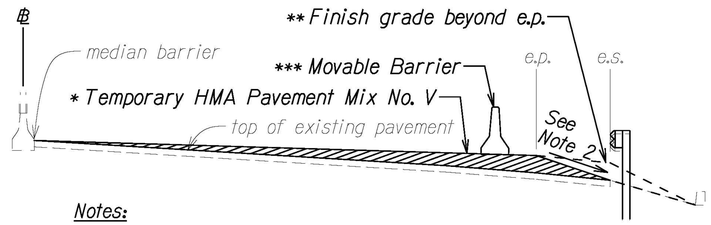



## RECONSTRUCTION AT SETTLED AREA (C)

Scale: N.T.S.

## TERMINOLOGY AND DEFINITIONS:

SMA = SMA with PG 64E-22
PMA Pavement Mix IV = Mix IV with PG 64E-22




Notes:

* 1. Prior to cold planing bring existing grade up to finish grade from median barrier to e.p. See Pavement Grade Plans Sheet ADD 1 of 10 for elevations at finish grade.

** 2. From finish grade at e.p. taper down to existing grade at e.s. using HMA Pavement Mix No. V. Grade beyond the e.p. shall be brought up to finish grade during reconstruction work.

1 *** 3. Movable Barrier shall be installed once temporary HMA Pavement Mix No. V is placed to finish grade. Deploy movable barrier to shield active Reconstruction Work Area. Movable Barrier shall be moved to stored position during periods of time when lane closure is not allowed. Do not remove Movable Barrier from site until the new MGS guardrails within the Reconstruction Work Area are completed in place. For Temporary Barrier Plans, See Sheets 29 - 30.

## TYPICAL SECTION TEMPORARY PRIOR TO COLD PLANING
## ℄ STA. 43+60.00± TO ℄ STA. 55+20.00± Lt.
## ℄ STA. 47+20.00± TO ℄ STA. 55+20.00± Rt.

Scale: N.T.S.

Notes:

1. See General notes #31 and #32.

2. For Reconstruction at Settled Area C, the following option can be implemented, in the case of unforeseen circumstances, upon approval by the Engineer at no additional cost to the State: The Hot Mix Asphalt Base Course can be paved 6" thick, then later cold plane the top 2" and place Tensar Road Repair PG100 or equivalent, then placement of 2" of PMA Mix IV as the top layer. See Special Provisions Section 417 - Paving Grid for Cold-Planed Surface. The 2nd layer of GlasGrid may be substituted with the Tensar Road Repair PG100 in this option. In this option, the costs for cold planing removal of the top layer and the asphalt base course that is removed will not be paid for. See General note #20 on Plan Sheet No. 3.

| DATE | REVISION |
|---|---|
| 1 11/10/21 | Revised Typical Section Temporary Prior to Cold Planing Note 3. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# TYPICAL SECTIONS & DETAILS

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

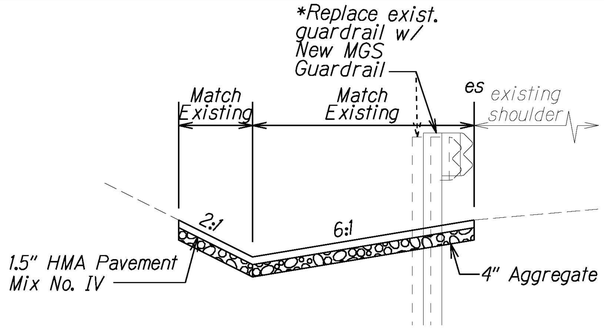
Scale: NTS Date: October, 2021

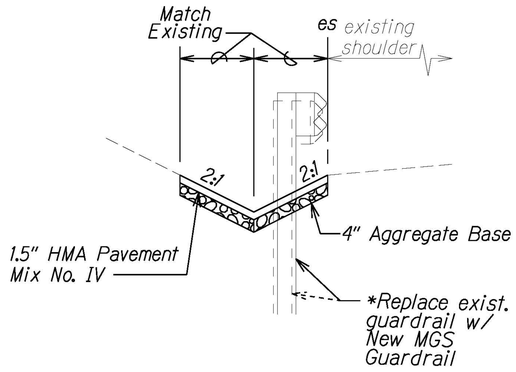
SHEET No. 1 OF 4 SHEETS

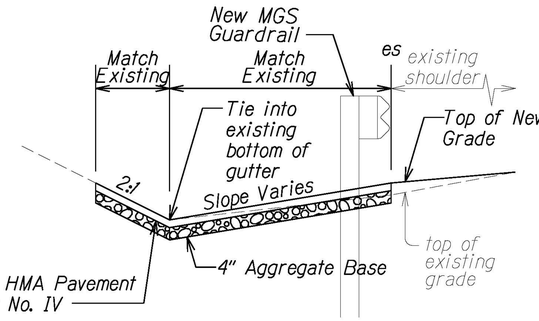
ADD. 18

ORIGINAL PLAN
SURVEY PLOTTED BY ..... DATE
DRAWN BY
TRACED BY
DESIGNED BY
NOTE BOOK
QUANTITIES BY
CHECKED BY
NO.

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 19 | 65 |




Reconstruction of Existing AC Gutter Notes:

* 1. Existing guardrail location varies. New guardrail shall be located adjacent to the edge of shoulder.
2. Removal and disposal of existing asphalt concrete gutter, new HMA Pavement, and Aggregate Base shall be paid under Items No. 639.1000 and 639.2000 - Reconstruct Existing Asphalt Concrete Gutter.
3. Clear existing vegetation to uncover existing gutter.

/1 4. From ℄ Sta. 53+04± to ℄ Sta. 55+22± Lt. and ℄ Sta. 59+54± to ℄ Sta. 66+25± Lt., payment shall be under Item No. 639.1000 - Reconstruct Existing Asphalt Concrete Gutter (6 to 8 Feet).
5. From ℄ Sta. 55+58± to ℄ Sta. 59+13± Lt., payment shall be under Item No. 639.2000 - Reconstruct Existing Asphalt Concrete Gutter (4 to 5.99 Feet).
6. From ℄ Sta. 55+22± to ℄ Sta. 55+58± Lt. and ℄ Sta. 59+13± to ℄ Sta. 59+54± Lt., payment shall be under Item No. 639.3000 - Reconstruct Existing Asphalt Concrete Gutter Transition.

## RECONSTRUCTION OF EXISTING ASPHALT CONCRETE GUTTER TYPE 7 (6' TO 8')

℄ STA. 26+00± TO ℄ STA. 27+75± Lt.
℄ STA. 37+20± TO ℄ STA. 37+93± Lt.
℄ STA. 80+25.00± TO ℄ STA. 84+75.00± Lt.
℄ STA. 23+17± TO ℄ STA. 23+90± Rt.
℄ STA. 30+75± TO ℄ STA. 33+27± Rt.
℄ STA. 52+63± TO ℄ STA. 55+55± Rt.
℄ STA. 61+20± TO ℄ STA. 64+18± Rt.
RAMP WN ℄ STA. 1+35± TO RAMP WN ℄ STA. 3+50± Rt.
℄ STA. 88+75± TO ℄ STA. 92+50± Rt.

Scale: N.T.S.

## RECONSTRUCTION OF EXISTING ASPHALT CONCRETE GUTTER TYPE 7 (4' TO 5.99')

℄ STA. 23+82± TO ℄ STA. 26+00± Lt.
℄ STA. 93+12± TO ℄ STA. 96+80± Lt.
℄ STA. 102+60± TO ℄ STA. 109+43± Lt.
℄ STA. 56+45± TO ℄ STA. 61+20± Rt.

Scale: N.T.S.

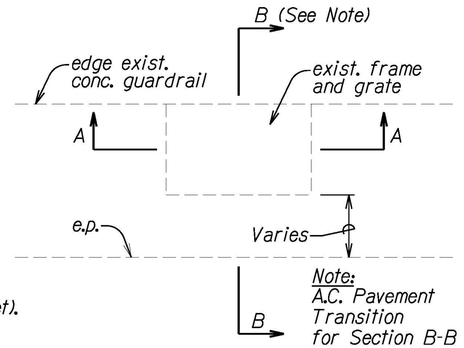
## RECONSTRUCTION OF EXISTING ASPHALT CONCRETE GUTTER TYPE 7 (VARIES)

℄ STA. 53+04± TO ℄ STA. 66+25± Lt.

Scale: N.T.S.

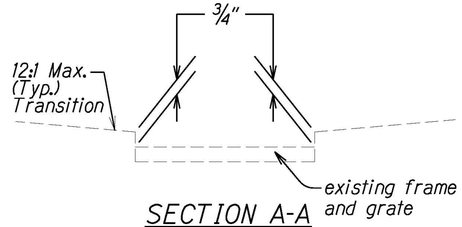
## TERMINOLOGY AND DEFINITIONS:

SMA = SMA with PG 64E-22




PLAN

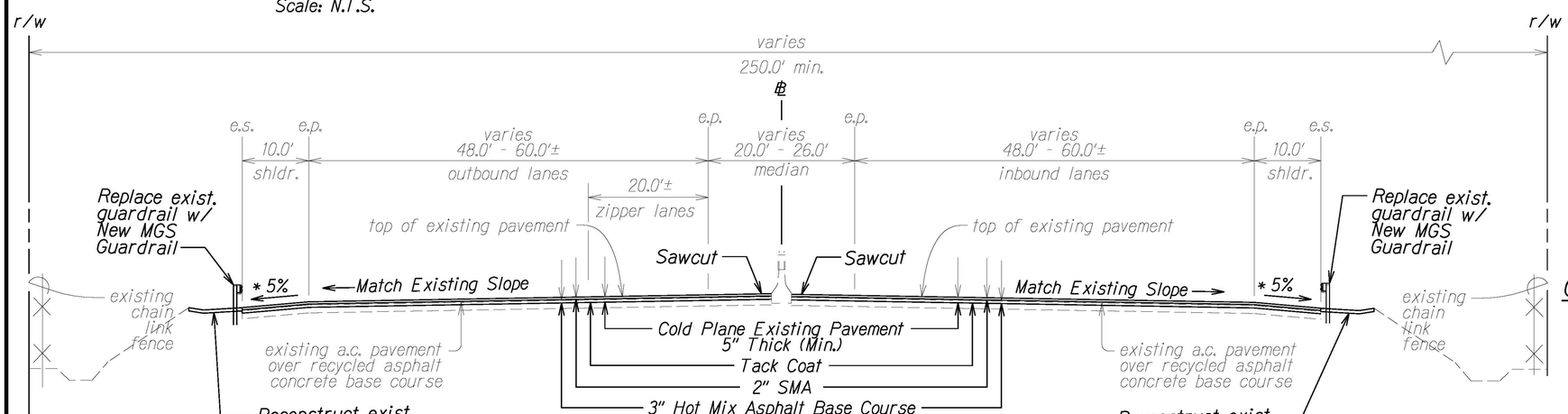
Note: A.C. Pavement Transition for Section B-B similar to Section A-A.




SECTION A-A

## A.C. PAVEMENT TRANSITION TO EXISTING DRAINAGE STRUCTURES

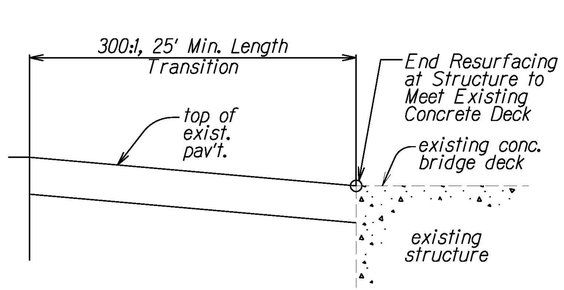
Not to Scale




## TYPICAL SECTION

℄ STA. 23+26.00± TO ℄ STA. 32+50.00±
℄ STA. 55+50.00± TO ℄ STA. 111+60.00±

Scale: N.T.S.




## COLD PLANED TRANSITION AT STRUCTURE

Not to Scale

Notes:

1. Recompact exposed base/subbase until firm and unyielding.
2. See Roadway Plans for limits of reconstruction, new guardrail, paving under new guardrail, and reconstruction of existing A.C. gutter.
3. From ℄ Sta. 55+50 to 66+25 Lt., see Pavement Grade Plans on Sheet no. ADD 19 for new elevations at finish grade on outbound shoulder.

| /1 | 11/10/21 | Added Asphalt Concrete Gutter Notes 4, 5, and 6. Rearranged detail positions on this sheet. |
|---|---|---|
| | DATE | REVISION |

ORIGINAL PLAN
SURVEY PLOTTED BY ..... DATE
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DESIGNED BY
NOTE BOOK
QUANTITIES BY
CHECKED BY
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

## TYPICAL SECTIONS & DETAILS

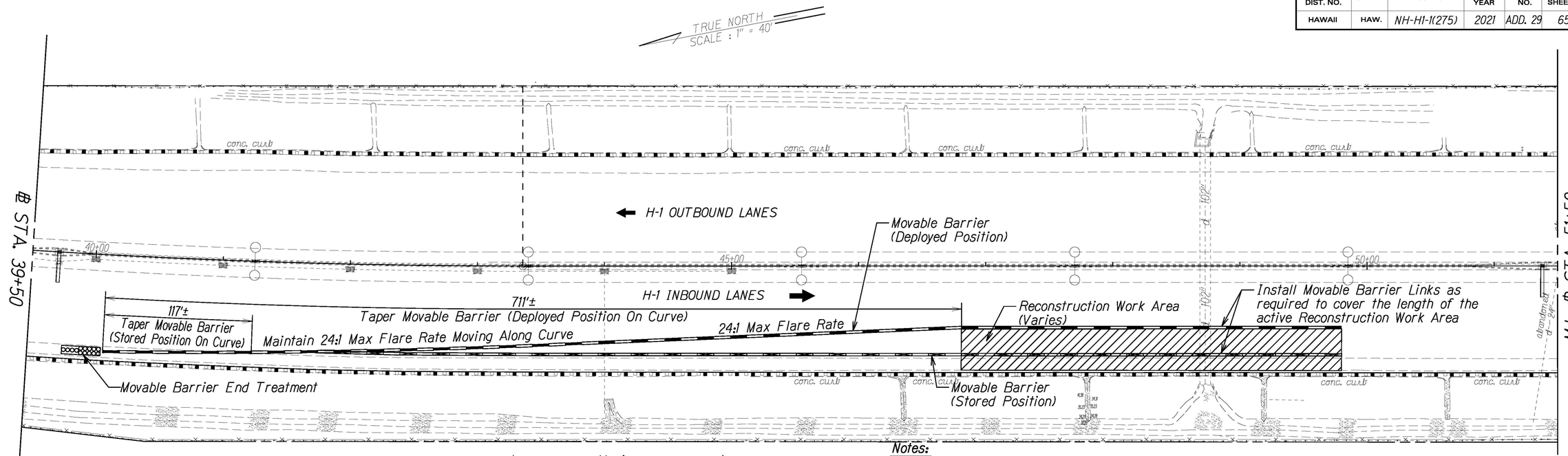
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: NTS Date: October, 2021

SHEET No. 2 OF 4 SHEETS

ADD. 19

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 29 | 65 |




Detail Notes:

* 1. Prior to cold planing bring existing grade up to finish grade from median barrier to e.p. See Pavement Grade Plans Sheet 40 for elevations at finish grade. For Typical Section Temporary Prior To Cold Planing, see Typical Section Sheet 18.

** 2. Movable Barrier at Stored Position shall be placed at the ep at the same cross slope as the travel lane as shown.

1 *** 3. Movable Barrier shall be installed once temporary HMA Pavement Mix No. V is placed to finish grade. Deploy movable barrier to shield active Reconstruction Work Area. Movable Barrier shall be moved to stored position during periods of time when lane closure is not allowed. Do not remove Movable Barrier from site until the new MGS guardrails within the Reconstruction Work Area are completed in place.

1 MOVABLE BARRIER POSITION FOR GRADE WORK DETAIL (INBOUND)
Scale: N.T.S.

Notes:

1. The Location of the Movable Barrier configurations shown are for example only. The Movable Barrier shall be located and relocated as necessary to protect the active and or unfinished Reconstruction Work Area between ℄ Sta. 32+50± and ℄ Sta. 55+50±, and shall meet all requirements shown and or mentioned on this sheet.

2. Movable Barriers shall be set to the Deployed Position for the duration of reconstruction and grade work, and returned to the Stored Position prior to opening lanes to traffic. Movable Barriers shall meet the strength and safety performance criteria of NCHRP 350 Test Level 3 (TL-3). The ends of the movable barriers must be anchored or extend past the area where work is to occur in accordance with manufacturer's recommendations. installation of the movable barriers must use the same configuration used in the crash test submitted to the FHWA to obtain an Eligibility Letter by FHWA.

3. Movable Barrier End Treatment (Inertial Barrier Systems, QuadGuard M10 or equivalent) shall comply with the manufacturer's recommendations/requirements and shall meet the strength and safety performance criteria of MASH TL-3. If used, Inertial Barrier Systems shall also comply with Section 621 and follow the specifications of Sheet 28.

4. Place Type II Barricade w/Lamp at spacings and positions that comply with part 6 of the MUTCD, Typical Application 5, and install steady burn amber lamps on Movable Barriers @ 20.0' o.c. Installing, maintaining and removing each steady burn amber lamp including changing of batteries and bulbs shall be considered incidental to applicable Movable Barrier Items.

5. Travel Lanes shall be temporarily restriped and adjusted to a minimum of 10 feet to accommodate Movable Barrier Installation and use. Following the completion of grade work, Travel Lanes shall be restriped to their original locations. This work shall be considered incidental to various contract items and shall not be paid for separately.

6. The Contractor shall develop a Traffic Control Plan to include all necessary Traffic Control Devices. This work shall be considered incidental to Contract Item No. 645.0100 - Traffic Control and shall not be paid for separately.

| ORIGINAL PLANS | SURVEY PLOTTED BY | DATE |
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| | QUANTITIES BY | |
| No. | CHECKED BY | |

| | DATE | REVISION |
|---|---|---|
| 1 | 11/10/21 | Movable Barrier Position For Grade Work Details were swapped between sheets 29 and 30. Revised Detail Note 3. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# TEMPORARY MOVABLE BARRIER PLAN

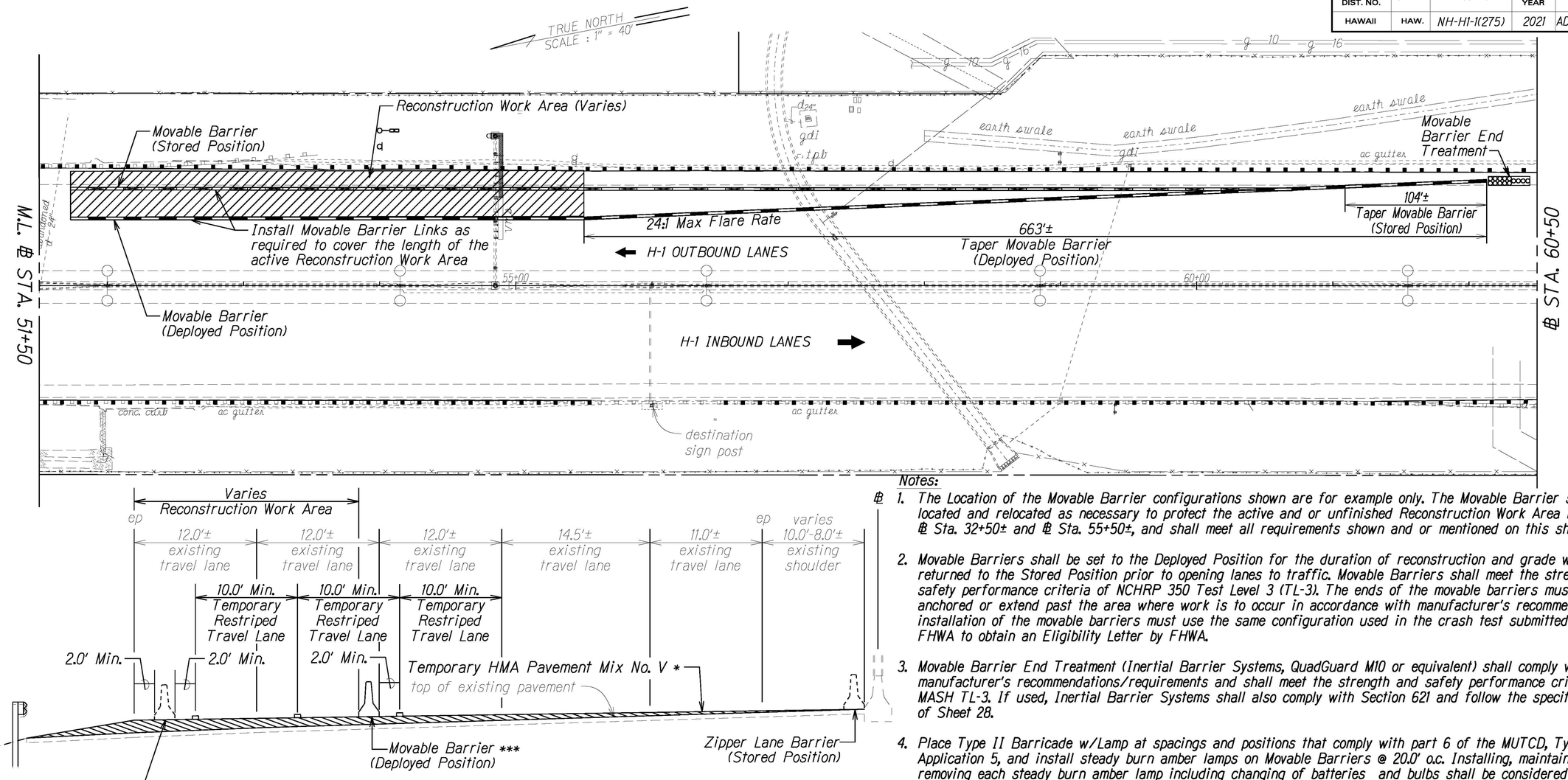
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Scale: 1" = 40'  Date: October, 2021

SHEET No. 1 OF 2 SHEETS

ADD. 29

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 30 | 65 |




**Notes:**

℄ 1. The Location of the Movable Barrier configurations shown are for example only. The Movable Barrier shall be located and relocated as necessary to protect the active and or unfinished Reconstruction Work Area between ℄ Sta. 32+50± and ℄ Sta. 55+50±, and shall meet all requirements shown and or mentioned on this sheet.

2. Movable Barriers shall be set to the Deployed Position for the duration of reconstruction and grade work, and returned to the Stored Position prior to opening lanes to traffic. Movable Barriers shall meet the strength and safety performance criteria of NCHRP 350 Test Level 3 (TL-3). The ends of the movable barriers must be anchored or extend past the area where work is to occur in accordance with manufacturer's recommendations. installation of the movable barriers must use the same configuration used in the crash test submitted to the FHWA to obtain an Eligibility Letter by FHWA.

3. Movable Barrier End Treatment (Inertial Barrier Systems, QuadGuard M10 or equivalent) shall comply with the manufacturer's recommendations/requirements and shall meet the strength and safety performance criteria of MASH TL-3. If used, Inertial Barrier Systems shall also comply with Section 621 and follow the specifications of Sheet 28.

4. Place Type II Barricade w/Lamp at spacings and positions that comply with part 6 of the MUTCD, Typical Application 5, and install steady burn amber lamps on Movable Barriers @ 20.0' o.c. Installing, maintaining and removing each steady burn amber lamp including changing of batteries and bulbs shall be considered incidental to applicable Movable Barrier Items.

5. Travel Lanes shall be temporarily restriped and adjusted to a minimum of 10 feet to accommodate Movable Barrier Installation and use. Following the completion of grade work, Travel Lanes shall be restriped to their original locations. This work shall be considered incidental to various contract items and shall not be paid for separately.

6. The Contractor shall develop a Traffic Control Plan to include all necessary Traffic Control Devices. This work shall be considered incidental to Contract Item No. 645.0100 - Traffic Control and shall not be paid for separately.

**Detail Notes:**

* 1. Prior to cold planing bring existing grade up to finish grade from median barrier to e.p. See Pavement Grade Plans Sheet 40 for elevations at finish grade. For Typical Section Temporary Prior To Cold Planing, see Typical Section Sheet 18.

** 2. Movable Barrier at Stored Position shall be placed at the ep at the same cross slope as the travel lane as shown.

1 *** 3. Movable Barrier shall be installed once temporary HMA Pavement Mix No. V is placed to finish grade. Deploy movable barrier to shield active Reconstruction Work Area. Movable Barrier shall be moved to stored position during periods of time when lane closure is not allowed. Do not remove Movable Barrier from site until the new MGS guardrails within the Reconstruction Work Area are completed in place.

## 1 MOVABLE BARRIER POSITION FOR GRADE WORK DETAIL (OUTBOUND)

Scale: N.T.S.

ORIGINAL PLANS
NOTE BOOK
No.

SURVEY PLOTTED BY
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TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

| DATE | REVISION |
|---|---|
| 1 11/10/21 | Movable Barrier Position For Grade Work Details were swapped between sheets 29 and 30. Revised Detail Note 3. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# TEMPORARY MOVABLE BARRIER PLAN

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 2 OF 2 SHEETS

ADD. 30

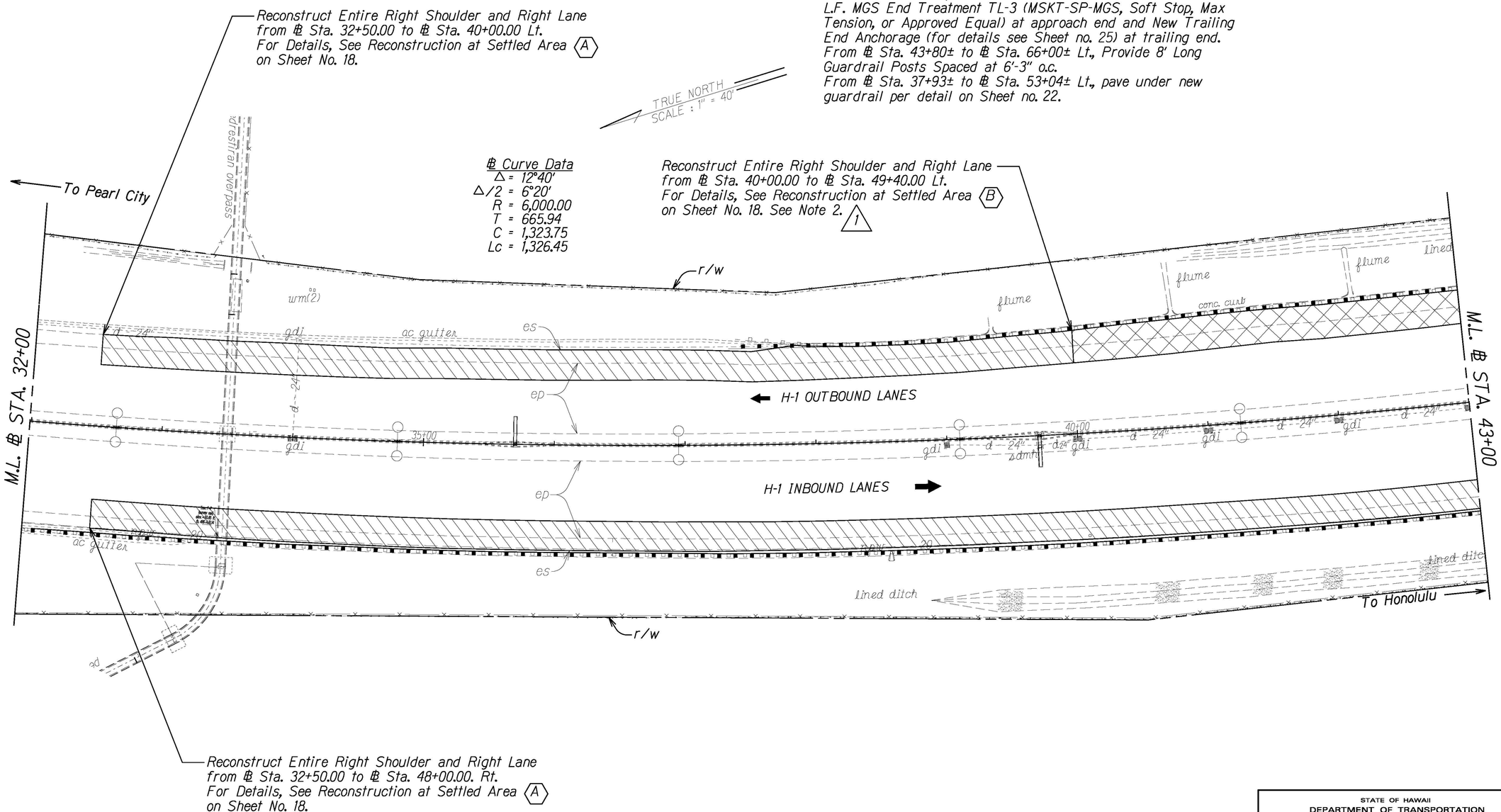
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 32 | 65 |

℄ STA 37+20± to ℄ STA 37+93± Lt.

Reconstruct existing asphalt concrete gutter per detail on Sheet no. 19. Clear existing vegetation to uncover existing gutter.

℄ STA 37+20± to ℄ STA 66+25± Lt.

Remove 1,600± L.F. of existing w-beam guardrail and existing end terminals. Install 2,825 L.F. of New MGS Guardrail with new 50± L.F. MGS End Treatment TL-3 (MSKT-SP-MGS, Soft Stop, Max Tension, or Approved Equal) at approach end and New Trailing End Anchorage (for details see Sheet no. 25) at trailing end.
From ℄ Sta. 43+80± to ℄ Sta. 66+00± Lt., Provide 8' Long Guardrail Posts Spaced at 6'-3" o.c.
From ℄ Sta. 37+93± to ℄ Sta. 53+04± Lt., pave under new guardrail per detail on Sheet no. 22.




Notes:

1. Removal and disposal of existing guardrail and end treatments shall be incidental to pay Item 606.1000 - MGS Guardrail (Type 3) or Item 606.1100 - MGS Guardrail (Type 3) with 8' posts at 6'-3" o.c.
2. The Contractor shall use care when excavating around existing utilities. See General Notes #12 and #15. 1

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
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| NO. | CHECKED BY | |

| 1 | 11/10/21 | Added Note 2. |
|---|---|---|
| | DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ROADWAY PLANS

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 2 OF 9 SHEETS

ADD. 32

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 33 | 65 |

℄ STA. 52+04.19± o/s 86.13' Lt. to ℄ STA. 53+61.77± o/s 85.24' Lt.

Sawcut, Remove, and Dispose of Existing Pavement Beyond New ES. Removal and Disposal shall be Considered Incidental to Pavement Items.

℄ STA 53+04± to ℄ STA 66+25± Lt.

Reconstruct existing asphalt concrete gutter per detail on Sheet no. 19. Clear existing vegetation to uncover existing gutter.

TRUE NORTH
SCALE : 1" = 40'

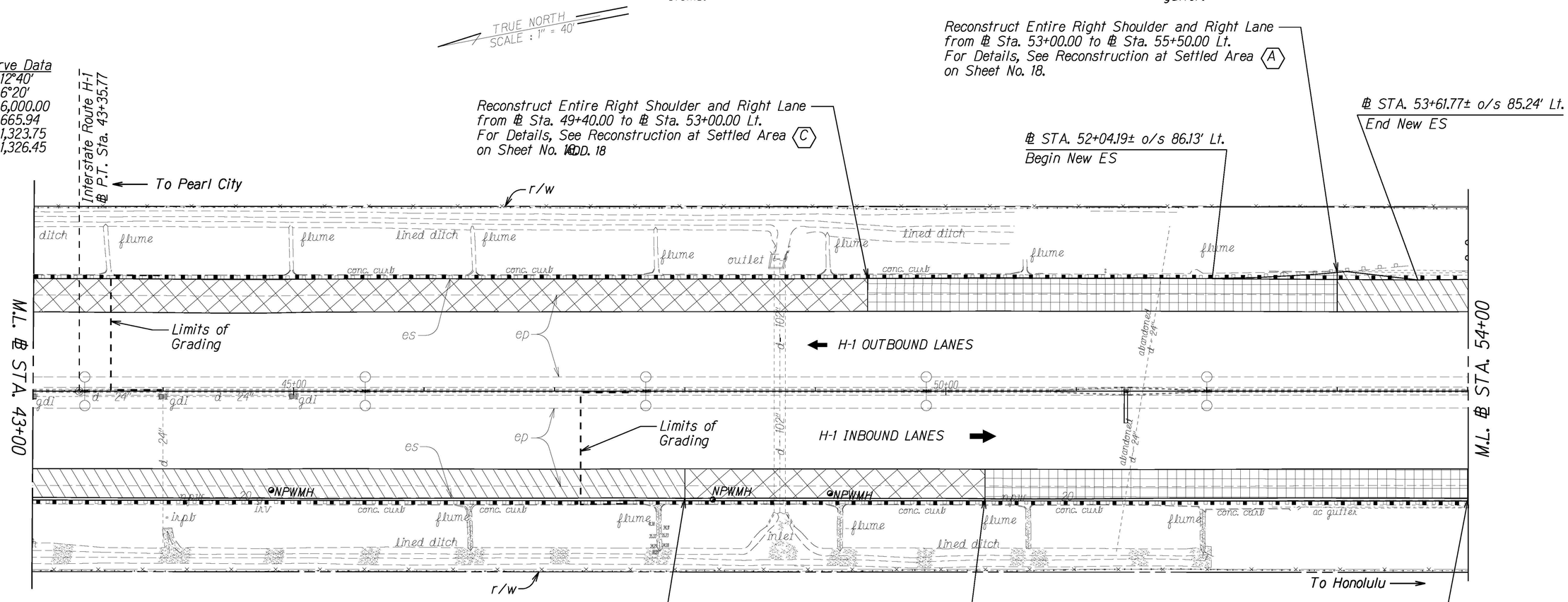
℄ Curve Data
△ = 12°40'
△/2 = 6°20'
R = 6,000.00
T = 665.94
C = 1,323.75
Lc = 1,326.45

Reconstruct Entire Right Shoulder and Right Lane from ℄ Sta. 53+00.00 to ℄ Sta. 55+50.00 Lt. For Details, See Reconstruction at Settled Area (A) on Sheet No. 18.

Reconstruct Entire Right Shoulder and Right Lane from ℄ Sta. 49+40.00 to ℄ Sta. 53+00.00 Lt. For Details, See Reconstruction at Settled Area (C) on Sheet No. 16ADD. 18

℄ STA. 52+04.19± o/s 86.13' Lt.
Begin New ES

℄ STA. 53+61.77± o/s 85.24' Lt.
End New ES




℄ STA 43+60± to ℄ STA 55+20± Lt.
℄ STA 47+20± to ℄ STA 55+20± Rt.

See Pavement Grade Plans for New Finish Grade. Prior to Cold Planing, Bring Existing Pavement up to New Finish Grade with HMA Pavement, Mix V.

Reconstruct Entire Right Shoulder and Right Lane from ℄ Sta. 48+00.00 to ℄ Sta. 50+30.00 Rt. For Details, See Reconstruction at Settled Area (B) on Sheet No. 18. See Notes 2 and 3. 1

Reconstruct Entire Right Shoulder and Right Lane from ℄ Sta. 50+30.00 to ℄ Sta. 54+00.00 Rt. For Details, See Reconstruction at Settled Area (C) on Sheet No. 18. See Notes 2 and 4. 1

Reconstruct Entire Right Shoulder and Right Lane from ℄ Sta. 54+00.00 to ℄ Sta. 55+50.00 Rt. For Details, See Reconstruction at Settled Area (A) on Sheet No. 18.

℄ STA 52+63± to ℄ STA 55+55± Rt.

Reconstruct existing asphalt concrete gutter per detail on Sheet no. 19. Clear existing vegetation to uncover existing gutter.

Notes:

1. Removal and disposal of existing guardrail and end treatments shall be incidental to pay Item 606.1000 - MGS Guardrail (Type 3) or Item 606.1100 - MGS Guardrail (Type 3) with 8' posts at 6'-3" o.c.
2. The Contractor shall use care when excavating around existing utilities. See General Notes #12 and #15. 1
3. For excavation around existing manholes, soil shall be excavated such that the level of soil surrounding the manhole is equal all around. The Contractor shall protect existing manholes and utilities. Any damages incurred shall be repaired or replaced at the cost of the Contractor. 1
4. The water valves in the vicinity shall be shut off during exposure of waterline during reconstruction work. Should the bottom of the existing waterline become exposed, it shall be supported and protected. Any damages incurred shall be repaired or replaced at the cost of the Contractor. Ensure proper compaction around existing pipes. 1

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NOTE BOOK | NO.

| DATE | REVISION |
|---|---|
| 1 11/10/21 | Added Note 2.<br>Added Note 3.<br>Added Note 4. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ROADWAY PLANS

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 3 OF 9 SHEETS

ADD. 33

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-HI-1(275) | 2021 | ADD. 34 | 65 |

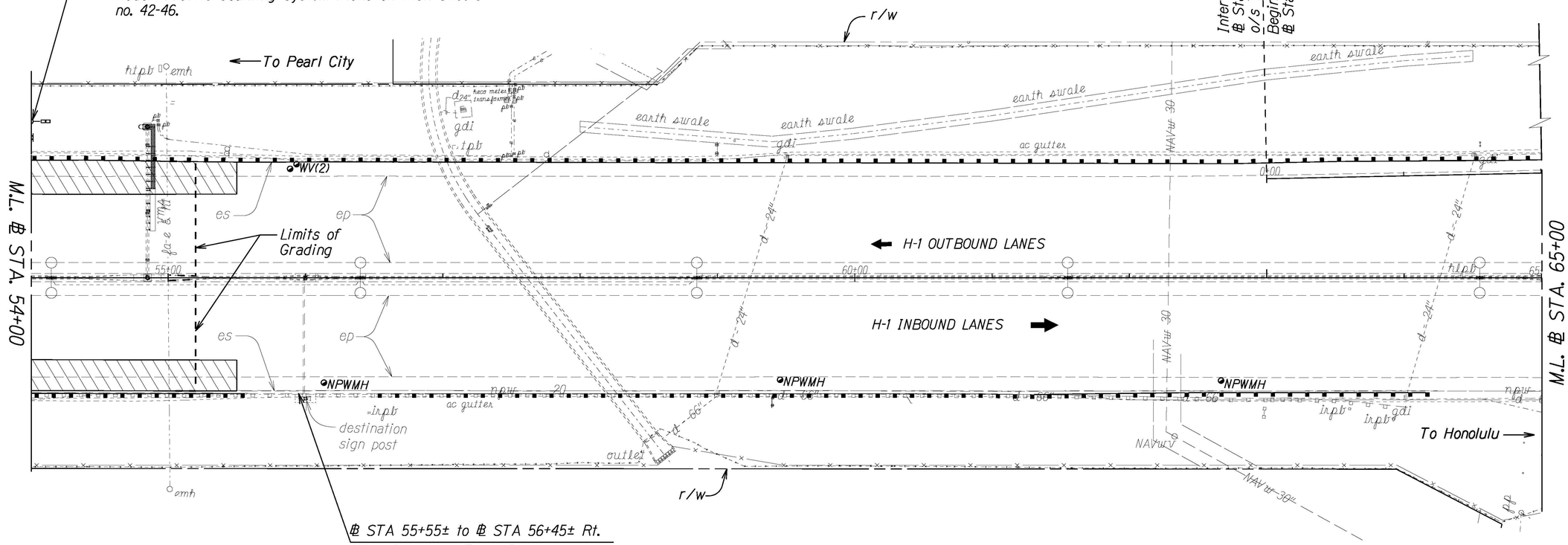
TRUE NORTH
SCALE : 1" = 40'

1 ℄ STA 54+00±, o/s 40.0'± Lt. from ep

Install two (2) new Radar Vehicle Sensing Devices banded to new 30' pole, two (2) new Controller Cabinets on new concrete foundations and new Excavation Warning Signs on post. For details, see Radar Traffic Counting System Plans on Plan Sheets no. 42-46.

℄ STA 55+20± to ℄ STA 66+00± Lt.

See Pavement Grade Plans for New Finish Grade beyond existing edge of pavement.




℄ STA 55+55± to ℄ STA 56+45± Rt.

90'± of existing Thrie Beam to remain.

℄ STA 56+45± to ℄ STA 64+18± Rt.

Reconstruct existing asphalt concrete gutter per detail on Sheet no. 19. Clear existing vegetation to uncover existing gutter.

℄ STA 56+45± to ℄ STA 64+18± Rt.

Remove existing thrie beam transition, 765± L.F. of existing w-beam guardrail and existing end terminal. Install 750 L.F. of New MGS Guardrail with new Trailing End Anchorage (see details on Sheet no. 25). Connect New MGS Guardrail to existing thrie beam with New Transition Section (see details on Sheet no. 26).

Note:
Removal and disposal of existing guardrail and end treatments shall be incidental to pay Item 606.1000 - MGS Guardrail (Type 3) or Item 606.1100 - MGS Guardrail (Type 3) with 8' posts at 6'-3" o.c.

| ORIGINAL PLAN | | SURVEY PLOTTED BY | DATE |
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| NOTE BOOK | | DESIGNED BY | |
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| DATE | REVISION |
|---|---|
| 11/10/21 | 1 Clarified Radar Traffic Counting System Plans are on Plan Sheets no. 42-46 and added approximate ℄ Sta. for the pole. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# ROADWAY PLANS

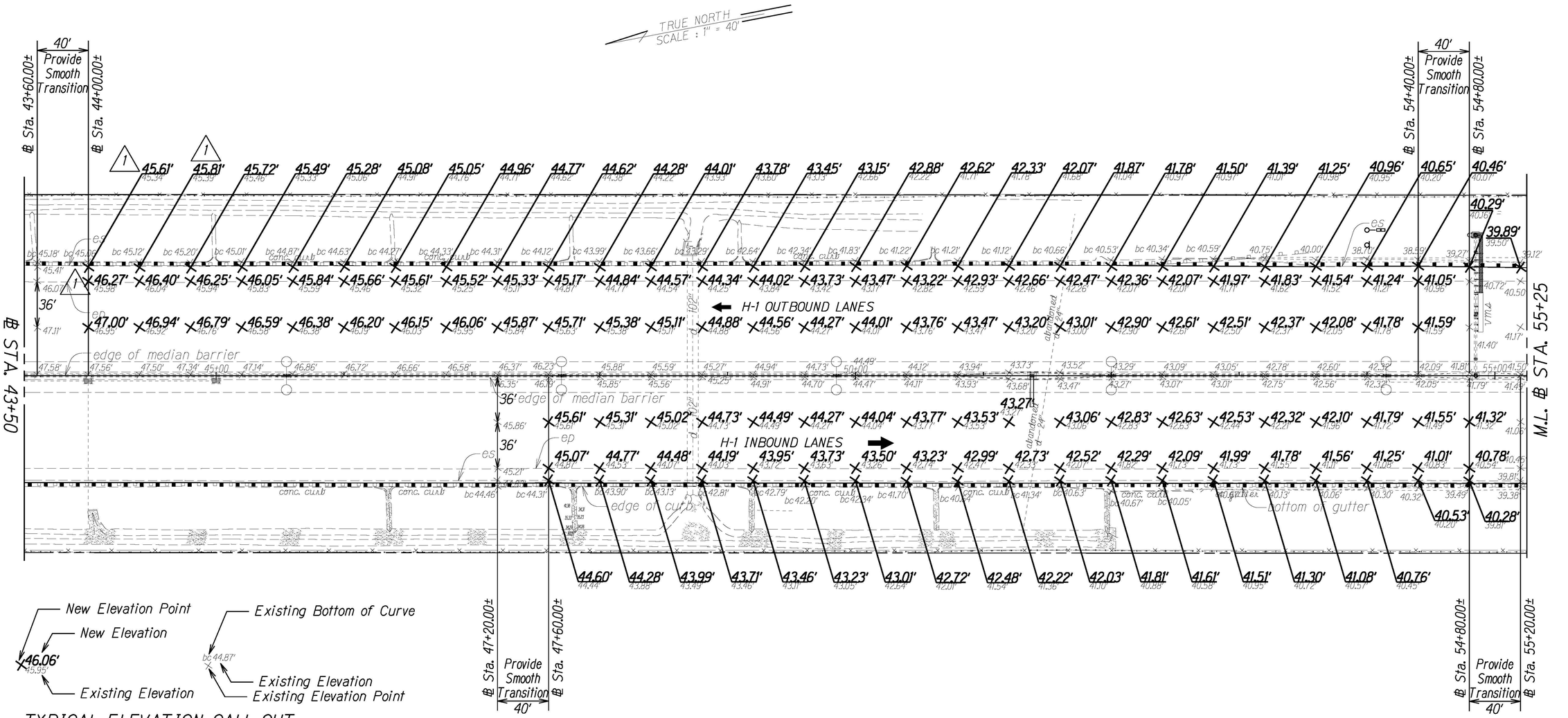
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 4 OF 9 SHEETS

ADD. 34

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 40 | 65 |




TYPICAL ELEVATION CALL OUT

Notes:

1. See General Note #30.
2. Contractor to provide all necessary equipment and services (including surveyor) needed to construct pavement to shown finish grades. All costs shall be incidental to the contract work.
3. Spot elevations shown are spaced at 40' o.c.

| ORIGINAL PLANS BY | SURVEY PLOTTED BY | DATE |
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| NOTE BOOK | DESIGNED BY | |
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| | CHECKED BY | |
| | No. | |

| 1 | 11/10/21 | Added Note 3. Revised Various New Grade Elevation Points. Added smooth transition callout at ℄ Sta. 54+40 (Outbound). |
|---|---|---|
| | DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PAVEMENT GRADE PLANS

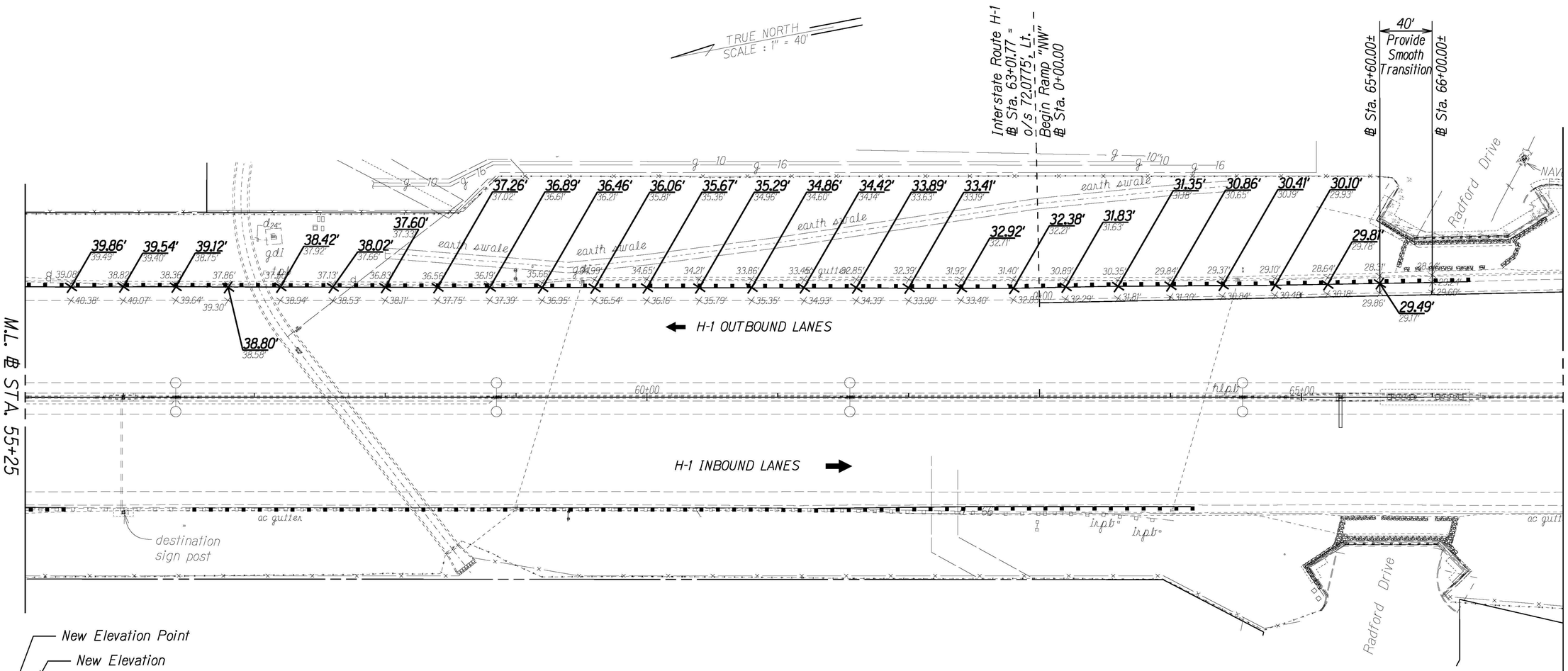
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 1 OF 2 SHEETS

ADD. 40

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 41 | 65 |




New Elevation Point

New Elevation

46.06'
45.95'

Existing Elevation

TYPICAL ELEVATION CALL OUT

Notes:

1. See General Note #30.
2. Contractor to provide all necessary equipment and services (including surveyor) needed to construct pavement to shown finish grades. All costs shall be incidental to the contract work.
3. Spot elevations shown are spaced at 40' o.c.

| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
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| | DRAWN BY | |
| | TRACED BY | |
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| DATE | REVISION |
|---|---|
| 1 11/10/21 | Added Note 3. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# PAVEMENT GRADE PLANS

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: 1" = 40' Date: October, 2021

SHEET No. 2 OF 2 SHEETS

ADD. 41

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-H1-1(275) | 2021 | ADD. 42 | 65 |

## RADAR VEHICLE SENSING DEVICE (RVSD) SYSTEM NOTES

1. The location of new RVSD system components shall be marked in the field by the Contractor and approved by the Engineer prior to installation.
2. The Contractor shall inform the Engineer at least three days prior to installing sensors and other RVSD system components.
3. Utility crossing conduits shall be concrete encased, per Standard Plan TE-36.
4. The Contractor shall verify the location of existing utilities and underground structures whether or not shown on the plans.
5. The Contractor shall assume that underground utilities not shown on the plans may exist. The Contractor shall be responsible for contacting the different utility companies for information and toning.
6. The Contractor shall be held liable for any damages incurred to existing utilities and underground structures as a result of operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.
7. Changes to the contract plans and specifications will not be permitted, unless approved by the Engineer in writing.
8. Sensor lead cables shall be installed in PVC Coated Galvanized rigid metal conduits in above-ground locations, or as directed by the Engineer.
9. Sensor lead cables shall be tested for acceptance before and after installation into conduits.
10. Sensor lead cables shall be continuous with no splices.
11. Sensor lead cables shall be terminated in the controller cabinet and shall have a minimum of 12" additional slack.
12. The Contractor shall restore all affected areas to their original condition or better. This item of work shall not be paid for separately, but shall be considered incidental to work of other paid items.

/1 13. The Contractor shall submit within 7 days following Contract award, two copies of materials and equipment purchase requisition, including copies of the equipment list, manufacturer $5/_{32}$s brochures, catalog cuts, and shop drawings to the Engineer for acceptance.

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DESIGNED BY
QUANTITIES BY
CHECKED BY
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NOTE BOOK
No.

| /1 | 11/10/21 | Added Note 13. |
|---|---|---|
| | DATE | REVISION |

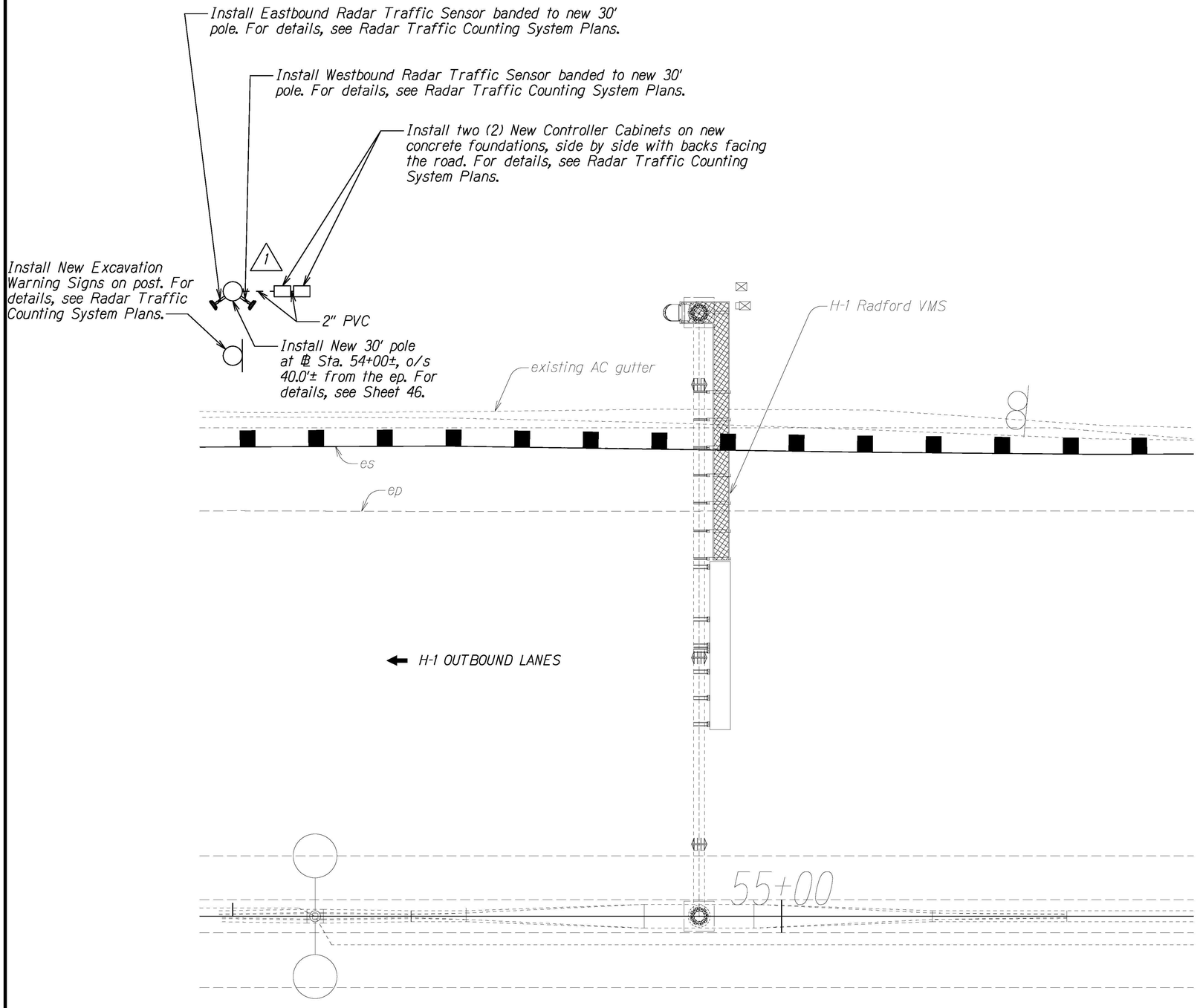
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# RADAR TRAFFIC COUNTING SYSTEM NOTES

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-H1-1(275)

Date: October, 2021

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-HI-1(275) | 2021 | ADD. 45 | 65 |




| ORIGINAL PLANS | SURVEY PLOTTED BY | DATE |
|---|---|---|
| NOTE BOOK | DRAWN BY | . . . . . |
| | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| No. | CHECKED BY | |

| DATE | REVISION |
|---|---|
| 1 11/10/21 | Showed Conduit connecting to the pole and cabinets. Showed sensors on pole. Called out approximate location for New RVSD pole. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# RVSD LAYOUT PLAN

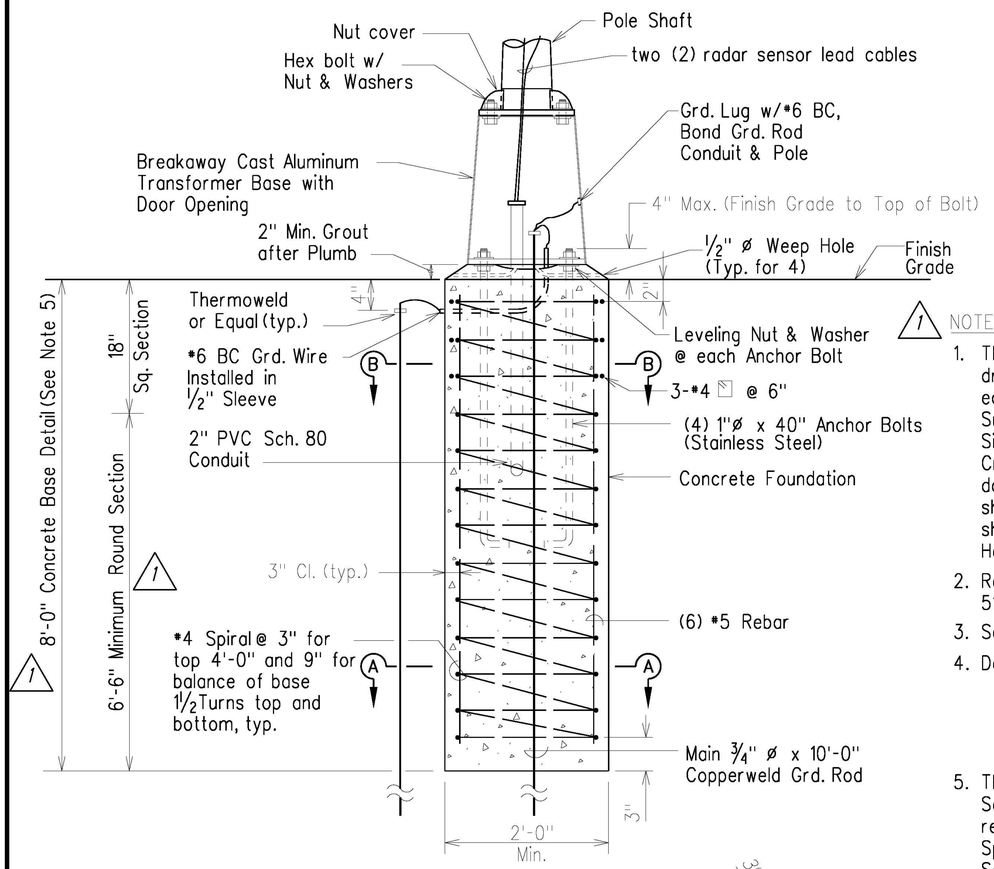
INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: 1" = 10' Date: October, 2021

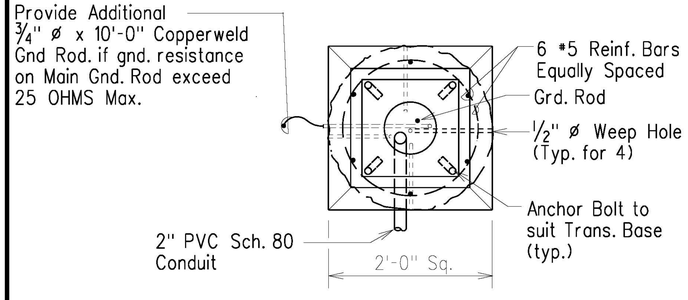
SHEET No. 4 OF 5 SHEETS

ADD. 45

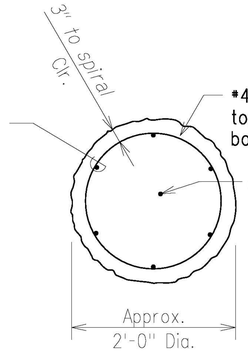
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-HI-1(275) | 2021 | ADD. 46 | 65 |



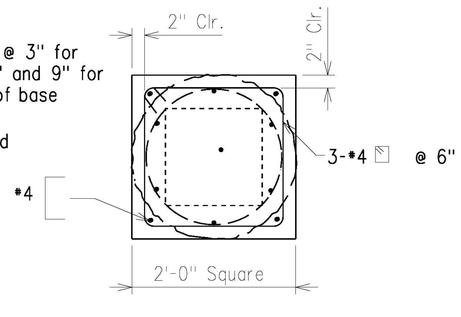

ELEVATION




PLAN




SECTION A-A




SECTION B-B

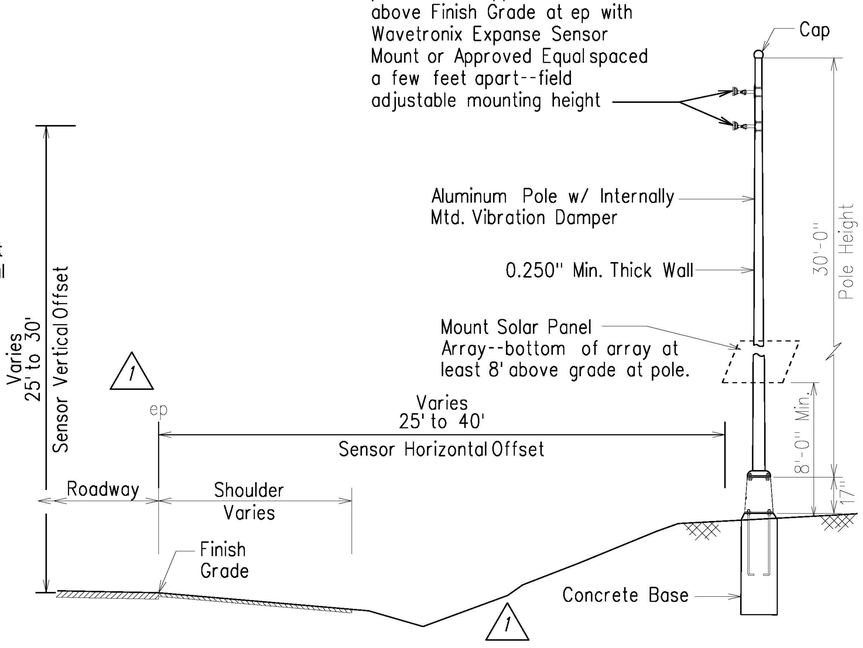
## TYPICAL CONCRETE FOUNDATION AND TRANSFORMER BASE DETAIL

*Scale: N.T.S.*

NOTES:

1. The Contractor shall design the aluminum pole and drilled shaft foundation in accordance with the latest edition of AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals as modified by HDOT Changes to Design Criteria for Bridges and Structures Memorandum dated January 8, 2018. The Contractor shall submit shop drawings for the aluminum pole and drilled shaft foundation such that they are stamped by a Hawaii licensed structural engineer.
2. Refer to State Standard Specifications Section 511 for drilled shaft concrete properties.
3. See Standard Plan B-01 for additional notes.
4. Design Loads:
   Radar Sensor weight: 3 lbs
   Radar Sensor dimensions: 13.3"x5.9"x3.2"
   Radar Sensor Mount weight: 3 lbs
   Radar Sensor Mount arm length: 41 inches max
5. The Contractor shall submit a proposal for the Solar Panel Assembly (Panels and Mount) for review and approval per the specifications in Special Provisions Section 627 - Radar Vehicle Sensing Device System.

1 Two Radar Sensors (Wavetronix Expanse XP20 Sensor or Approved Equal) banded to pole--mount approx. 25' to 30' above Finish Grade at ep with Wavetronix Expanse Sensor Mount or Approved Equal spaced a few feet apart--field adjustable mounting height




1 RVSD POLE INSTALLATION WITH TRANSFORMER BASE

*Scale: N.T.S.*

| DATE | REVISION |
|---|---|
| 11/10/21 | Clarified and revised notes and details. RVSD Pole Installation With Transformer Base detail revised to show offsets. |

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | NO.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# RVSD SYSTEM POLE DETAILS

INTERSTATE ROUTE H-1 REHABILITATION
SALT LAKE BOULEVARD TO AIRPORT VIADUCT
FEDERAL-AID PROJECT NO. NH-HI-1(275)

Scale: NTS Date: October, 2021

SHEET No. 5 OF 5 SHEETS

ADD. 46