FED.ROAD DIST.NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-03-00	2004	ADD 2	66

STANDARD PLANS SUMMARY

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	r07/16/90
B-13	Prestressed Concrete Piles	r07/16/90
D-01 ●	Chain Link Fence With Toprail	r03/06/87
D-02	Chain Link Fence Without Toprail	r07/26/90
D-03 ●	Wire Fence With Metal Posts	07/01/86
D-04 ●	Typical Details of Curbs and/or Gutters	07/01/86
D-05 ●	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09 ●	Field Office	07/01/86
D-10 ●	Field Office	07/01/86
D-11	Project Site Laboratory	07/01/86
D-12	Project Site Laboratory	07/01/86
D-13	Field Office & Project Site Laboratory	07/01/86
H-01	Type A, B, C and D Catch Basin	07/01/86
H-02	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04	Typical Reinforcing Details for Catch Basins	07/01/86
H-05 ●	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07	Type F Storm Drain Manhole	07/01/86
H-08 ●	Catch Basin and Manhole Casting	07/01/86
H-09	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14	61214B Steel Frame and Grates	07/01/86
H-15	61614B Steel Frame and Grates	07/01/86
H-16 ●	Concrete and Cement Rubble Masonry Structures	r10/16/90
H-17	Inlet Structures	r10/16/90
H-18	Flared End Section for Culverts	07/01/86
H-19 ●	Outlet Structures	r02/15/91
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.M.P. Drain	07/01/86
H-22	C.M.P. Coupling Details Standard Joint	r10/16/90
H-23	Hat Shaped Coupling Band	r10/16/90

STANDARD PLAN NO.	TITLE	DATE
TE-01 ●	Miscellaneous Sign Details	07/01/86
TE-02 ●	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03 ●	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04 ●	Regulatory Signs	r09/01/87
TE-05 ●	Warning Signs	07/01/86
TE-06 ●	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08 ●	Construction Signs	r09/01/87
TE-09 ●	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11	Bike Route Sign and Supplementary Plates	07/01/86
TE-12	State Route Marker and Auxiliary Markers	07/01/86
TE-13	Interstate Route Marker	07/01/86
TE-14 ●	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15 ●	Route Marker Assemblies	07/01/86
TE-16 ●	Miscellaneous Reflector Markers	07/01/86
TE-17 ●	Type II Object Markers	07/01/86
TE-18	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23 ●	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24 ●	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30 ●	Raised Pavement Markers and Striping	r05/09/90
TE-31 ●	Miscellaneous Pavement Markings	r05/09/90
TE-32 ●	Miscellaneous Pavement Markings	r05/09/90
TE-33 ●	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35 ●	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36 ●	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40	Loop Detectors	r11/03/89
TE-41	Pullboxes	07/01/86
TE-42	Type III Traffic Signal Standard	07/01/86
TE-43	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50	Metal Guardrail	r03/06/87
TE-51	Metal Guardrail	r09/01/87
TE-52	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59 ●	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60 ●	Anchor Block Details	07/01/86
TE-61	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64 ●	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66	Barricades	07/01/86
TE-67 ●	Delineation & Pavement Markings at Bridges	07/01/86
TE-68	Wheelchair Ramps	r11/03/89
TE-69	Wheelchair Ramps	r11/03/89

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

DATE	REVISION
02/15/91	REVISED H-19
10/16/90	REVISED H-16,H-17, H-22 & H-23
07/26/90	REVISED D-02
07/16/90	REVISED B-12,B-13
05/09/90	REVISED TE-30,TE-31 & TE-32
11/03/89	REVISED TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69, ADDED TE-57A
09/01/87	REVISED TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69
03/06/87	REVISED D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64

	DATE	REVISION
1	05/13/04	ADDED TE-59 & TE-60 TO APPLICABLE DETAILS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KUHIO HIGHWAY IMPROVEMENTS
Extension Of Temporary Kapaa Bypass Road
Project No. 56A-03-00
Scale: No Scale *Date: Mar 2004*

SHEET No. 1 OF 4 SHEETS

ORIGINAL PLAN
NOTE BOOK XXXXXX .dgn
No.____

SURVEY PLOTTED BY ______ DATE ______
DRAWN BY ______ " ______
TRACED BY ______ " ______
DESIGNED BY ______ " ______
QUANTITIES BY ______ " ______
CHECKED BY ______

ADD. 2

FED.ROAD DIST.NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-03-00	2004	ADD 3	66

GENERAL NOTES:

1. The scope of work for this project includes construction of an intersection "roundabout"; realigning adjacent roadways; cold planing (as needed); asphalt concrete pavement overlay resurfacing; installing a new temporary steel frame bridge, street lighting, drainage improvements and curb ramps; removing existing and installing new guardrails and terminal sections, pavement markings, signs and chain link fences; and removing existing concrete pavement.

2. The Contractor is reminded of the requirements of Subsection 108.01–SUBLETTING OF CONTRACT, which requires him to perform work amounting to not less than thirty (30) percent of the total contract cost less deductible items. Non–compliance with this Subsection may be grounds for rejection of bid.

3. The Contractor's attention is directed to the following Sections of the Special Provisions : Subsection 105.06 – COOPERATION BETWEEN CONTRACTORS; Subsection 107.13 – PUBLIC CONVENIENCE AND SAFETY; and Section 645 – TRAFFIC CONTROL.

4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

6. The exact location and limits or areas to be filled with leveling course, excavated, reconstructed and cold planed shall be determined in the field by the Engineer.

7. Except as noted below, the Engineer will permit lane closures only from 8:30 A.M. to 3:00 P.M. Failure of the Contractor to open all lanes of traffic during peak hours and non–working hours shall result in assessment of liquidated damages as specified in Section 108.08 – FAILURE TO COMPLETE ON–TIME AND LIQUIDATED DAMAGES, of the Standard Dpecifications. For the work time schedule, see Section 104 – SCOPE OF WORK OF THE SPECIAL PROVISIONS.

   No lane closures will be permitted on Kuhio Highway from 5:00 A.M. to 10:00 P.M. Contractor must maintain one lane in each direction during the day. The left turn lane may be closed if needed to route traffic away from the work area.

8. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.

9. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately.

10. All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V. In addition, a 3/4" thick leveling layer of Asphalt Concrete Pavement, Mix No. V shall be laid prior to placement of 2 1/2" thick resurfacing layer of Asphalt Concrete Pavement, Mix No. IV.

11. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans.

12. The Contractor shall provide for access to and from all existing side streets and driveways at all times.

13. Trimming and dressing of shoulders shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. Suitable materials shall include materials from roadway excavation, topsoil, and if necessary, additional materials from borrow area outside the limits of the rights of way. Cold–Planed asphaltic concrete material shall not be used for shoulder dressing. Graded and dressed shoulders shall be constructed with a finished slope of 6:1 or flatter. This work shall be considered incidental to the various contract items.

14. Earth swales shall be graded to drain. This work shall be considered incidental to the various contract items.

15. Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.

16. The Contractor shall remove and dispose debris and silt from existing culverts, including aprons and outlets, where inlets are to be relocated. This work shall be paid for under Item No. 603.0030 – CLEAN EXISTING CULVERTS.

△1 17. All saw cutting and cold planing work shall be considered incidental to the various Contract items and will not be paid for separately.

△1 18. Install new Type II Object Marker on all utility poles or trees that are within the State Highway Right–of–Way and within 30 feet of the roadway edge of pavement as directed by the Engineer. This work shall be considered incidental to the various Contract items. Refer to Standard Plan TE–17.

19. Prior to the resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone and cable utilities to be adjusted to the new finished grade. This work shall be considered incidental to the various contract items.

20. After completion of resurfacing, the Contractor, in the presence of the Engineer, will test for and determine ponding areas (i.e. low spots within the resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas.

21. The contractor shall be responsible for cleaning and removal of all silt and debris generated by the excavation work and deposited and accumulated within downstream waterways. The contractor shall reimburse the State for costs incurred in the performance of the above work if required for public health and safety or made necessary by non–performance by the contractor.

22. The contractor shall, at his expense, keep the project and surrounding area free from dust. The State shall require supplementary measures as necessary.

23. All existing utilities, whether or not shown on plans, shall be protected at all times during construction and any damage to them shall be repaired and paid for by the Contractor, unless otherwise noted.

24. Contractor shall submit site specific Best Management Practices (BMP) to the Engineer, forty–five (45) days prior to the start of construction. Cost of the BMP submittals shall be incidental to the various Contract items.

25. Prior to commencing his resurfacing operations, the Contractor shall contact the County of Kauai's Department of Water Maintenance Branch (Phone No. 245–5444) and make arrangements for Department of Water personnel to "tone" for, and mark locations of existing valve boxes that may have been inadvertently paved over on previous resurfacing projects. Approximate location of valve boxes that are to be raised to the new finished grade are noted on the plans.

    It shall be the Contractor's responsibility to offset and record locations of the valve boxes as marked by the Dept. of Water for the purposes of adjusting the valve boxes to the new finished grades after completion of his resurfacing operations. The Contractor shall preserve all offset stakes marking locations of the valve boxes. If offset stakes are damaged or lost, it shall be the Contractor's sole responsibility to survey and re–stake locations of the valve boxes.

    Payment for work involved in locating paved–over water valve boxes shall not be paid for separately, but shall be considered incidental to Item No. 604.0030 – ADJUSTING EXISTING WATER VALVE FRAME AND COVER.

26. All surplus select materials shall remain the property of the State. The Contractor shall transport to and stockpile these materials at the State Baseyard, located at Kahau Road in Kapaa. The contractor shall coordinate with the Maintenance Engineer (Tel. No. 821–4440) to determine the exact locations for stockpiling the surplus materials. Transporting and stockpiling the surplus select material shall be considered incidental to Item No. 203.0010 – ROADWAY EXCAVATION. Determination of select material shall remain the responsibility of the Engineer.

27. Removal and disposal of existing curb ramps, curbs, sidewalk portions and driveways shall be paid for under the various curb ramp items.

28. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.

29. Upon completion of the Bridge Construction, the Contractor shall hire a Licensed Land Surveyor to complete the Federal Emergency Management Agency (FEMA), National Flood Insurance Program, ELEVATION CERTIFICATE. The Project Construction Manager will then submit the completed Certificate to the County of Kauai, Department of Public Works for further processing. This Work shall be considered incidental to the other various Contract Items and shall not be paid for separately.

ORIGINAL PLAN
NOTE BOOK XXXXX .dgn No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

△1	05/13/04	REVISED NOTES
	DATE	REVISION

PETER L. MOW
LICENSED PROFESSIONAL ENGINEER
No. 9080–C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ENGINEERS SURVEYORS HAWAII, INC.
MY LICENSE EXPIRES ON 4/30/2004

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

KUHIO HIGHWAY IMPROVEMENTS
Extension Of Temporary Kapaa Bypass Road
Project No. 56A–03–00

Scale: No Scale Date: Mar 2004

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-03-00	2004	ADD 12	66

<u>Note:</u>
For ℄ Sta. 19+00 to ℄ Sta. 21+82.08 Resurface Exist. A.C. Roadway w/ 2 1/2" A.C. Mix IV. For Travelway, Edge Pavement and Edge Shoulder Delineation/Dimensions See Typical Sections.

For ℄ Sta. 21+82.08 to ℄ Sta. 25+57.17 (Begin Bridge) And For ℄ Sta. 26+50.83 (End Bridge) to ℄ Sta. 29+00 Reconstruct Exist. A.C. Roadway w/ 2 1/2" A.C. Mix IV and 7" A.C. Base. For Travelway, Edge Pavement and Edge Shoulder Delineation/Dimensions See Typical Sections.

RM 18
Box Cut on Bridge
7461.77 N
12852.80 E
"Nonou" △
Elev. = 6.33
℄ CURVE DATA
Δ=28°20'30"
R=800.00
T=202.00
Lc=395.72
C=391.70
Resurfacing
Full Reconstruction Section
100' Roadway Transition/Taper
Sta. 21+82.08
Sta. 22+82.08
℄ P.C. Sta. 21+06.97
337°00'
232°49'45"
391.70
M.L. ℄ STA. 19+00
← To Lihue
R/W
barbed wire fence
ℓ ditch
ES
EP
Top Bank
4'
9'
7'
9'
℄ "KAPAA"
40'
20+00
KAPAA BYPASS ROAD EXTENSION
247°00'
794.37
chainlink fence
39.5' (Typ.)
edge canal
sewer easement
℄ Kapaa Sta. 26+50.83 End Bridge
℄ Kapaa Sta. 25+57.17 Begin Bridge
℄ P.T. Sta. 25+02.70
308°39'30"
Mokeha
Construct New Bridge See Plan Shts 59-64
Bottom Bank (±)
11.5'
5.5'
25+00
218°39'30"
165.87
Toe of Fill
Canal
Install New Thrie Beam guardrail and Transition Section (25 LF each). For details, see Plan Sht. No. 34 and 35.
℄ Sta. 26+87 Lt. and Rt. to
℄ Sta. 30+50 Lt. and 30+49 Rt.
Install Type 3, single guardrail w/ steel posts (725 LF, total). For details, see Plan Sht. No. 30, 31 and 32.
Bottom Bank (±)
R/W
To Hanalei →
M.L. ℄ STA. 29+00
240°19'45"
258.49
True North
Scale: 1"=40'
℄ P.C. Sta. 26+58.57
128°39'30"
℄ CURVE DATA
Δ=43°20'30"
R=350.00
T=139.08
Lc=264.76
C=258.49
wire fence
transmission line easement
Demolish and Remove Exist. Chain Link Fence (250 L.F.)
Install New 6' High Chain Link Fence w/ Top Rail For Details, See Std. Plan D-02.
Install Type "G" Flare End Treatment. For Details, See Std. Plan TE-59 & 60
Demolish and Remove Exist. Wire Fence (300 L.F.)
Exist. Wire Fence To Remain
℄ Sta. 21+67 Lt. and 21+75 Rt. to
℄ Sta. 25+21 Lt. and Rt.
Install Type 3, single guardrail w/ steel posts (700 LF, total). For details, see Plan Sht. No. 30, 31 and 32.
End New 6' High Chain Link Fence w/ Top Rail Connect Exist. Wire Fence to New Chain Link Fence

△	DATE	REVISION
1	05/13/04	ADDED TYPE "G" END TREATMENT AT 21+82.08

PETER L. MOW
LICENSED PROFESSIONAL ENGINEER
No. 9080-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ENGINEERS SURVEYORS HAWAII, INC.
MY LICENSE EXPIRES ON 4/30/2004

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KUHIO HIGHWAY IMPROVEMENTS
Extension Of Temporary Kapaa Bypass Road
Project No. 56A-03-00

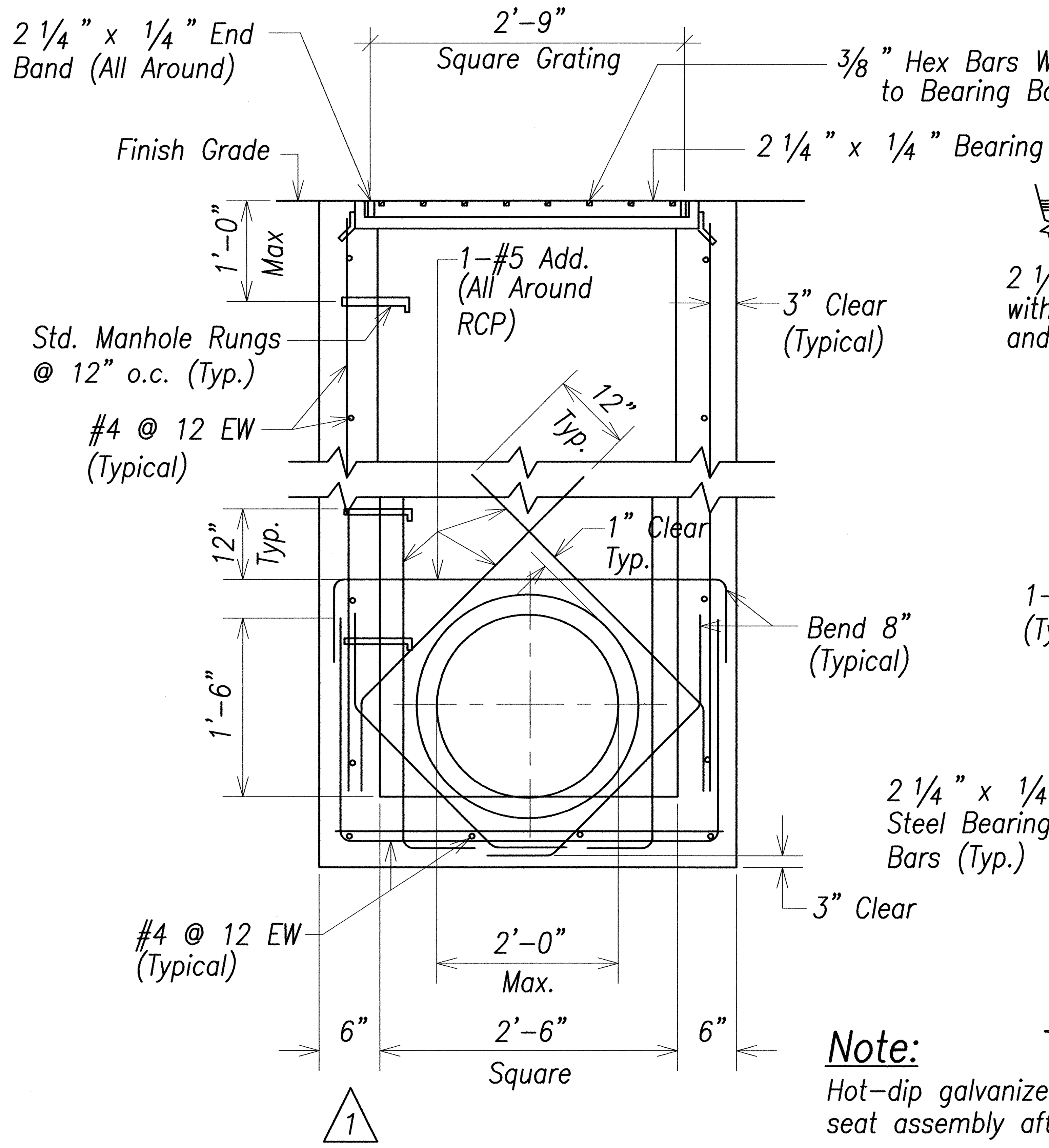
Scale: 1" = 40' Date: Mar 2004

SHEET No. 3 OF 5 SHEETS

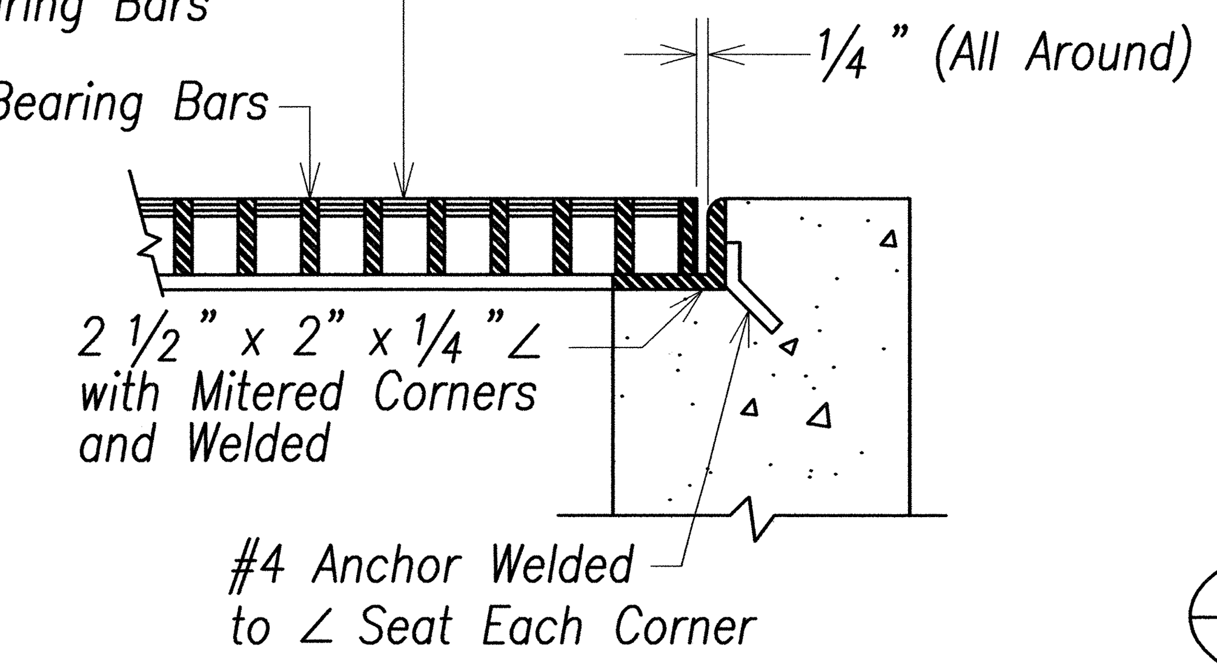
ADD. 12

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK XXXXXX .dgn No.

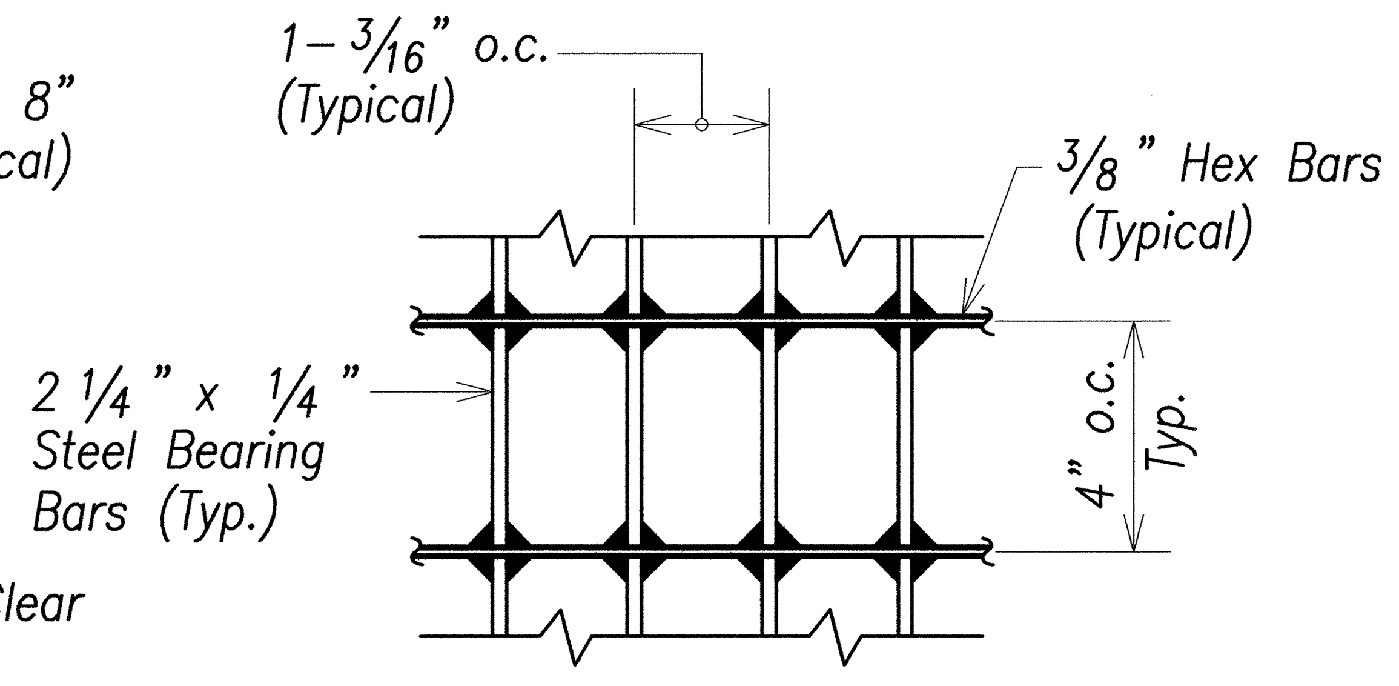
FED.ROAD DIST.NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-03-00	2004	ADD 27	66



DRAIN INLET DETAILS

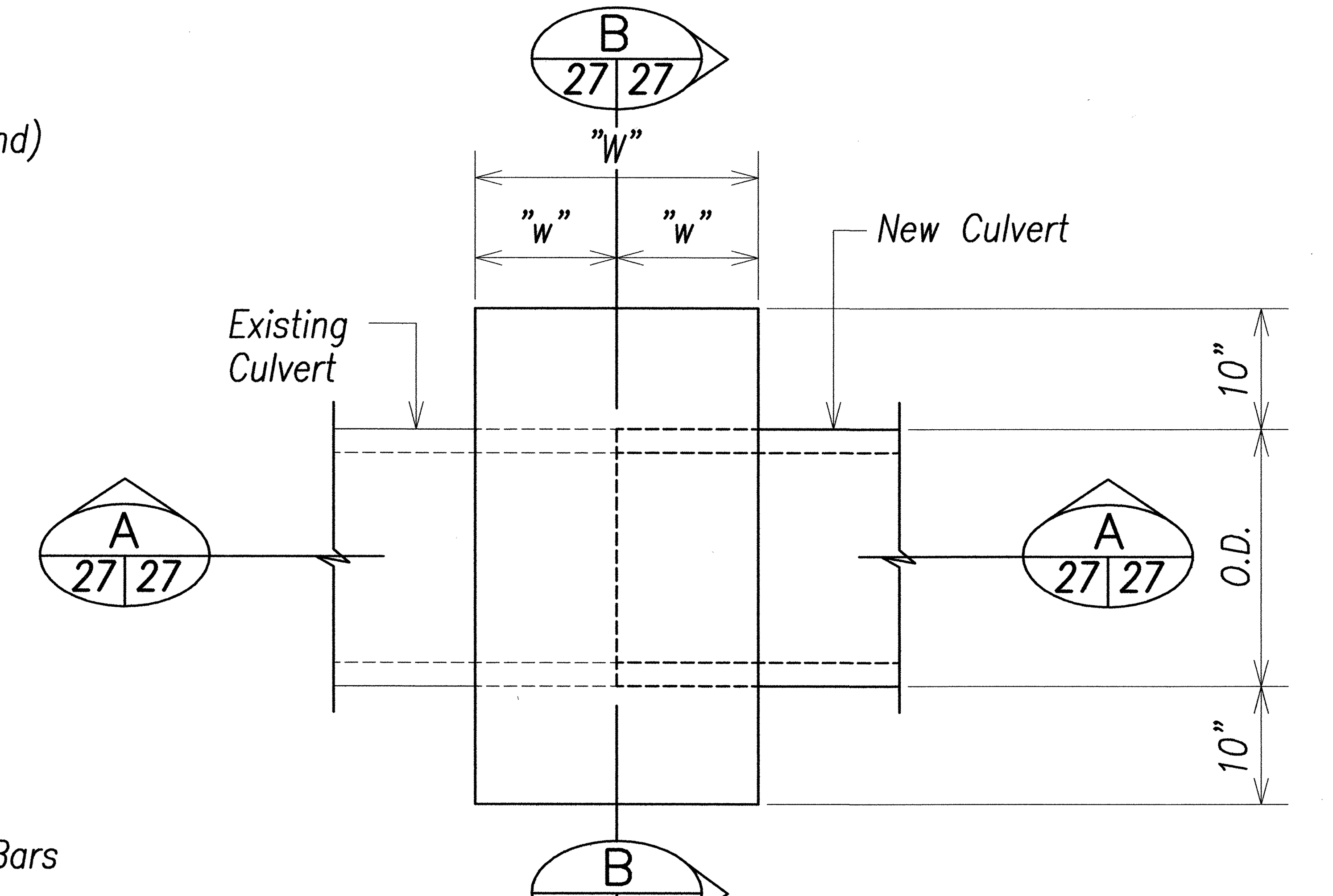


L Seat and Grating

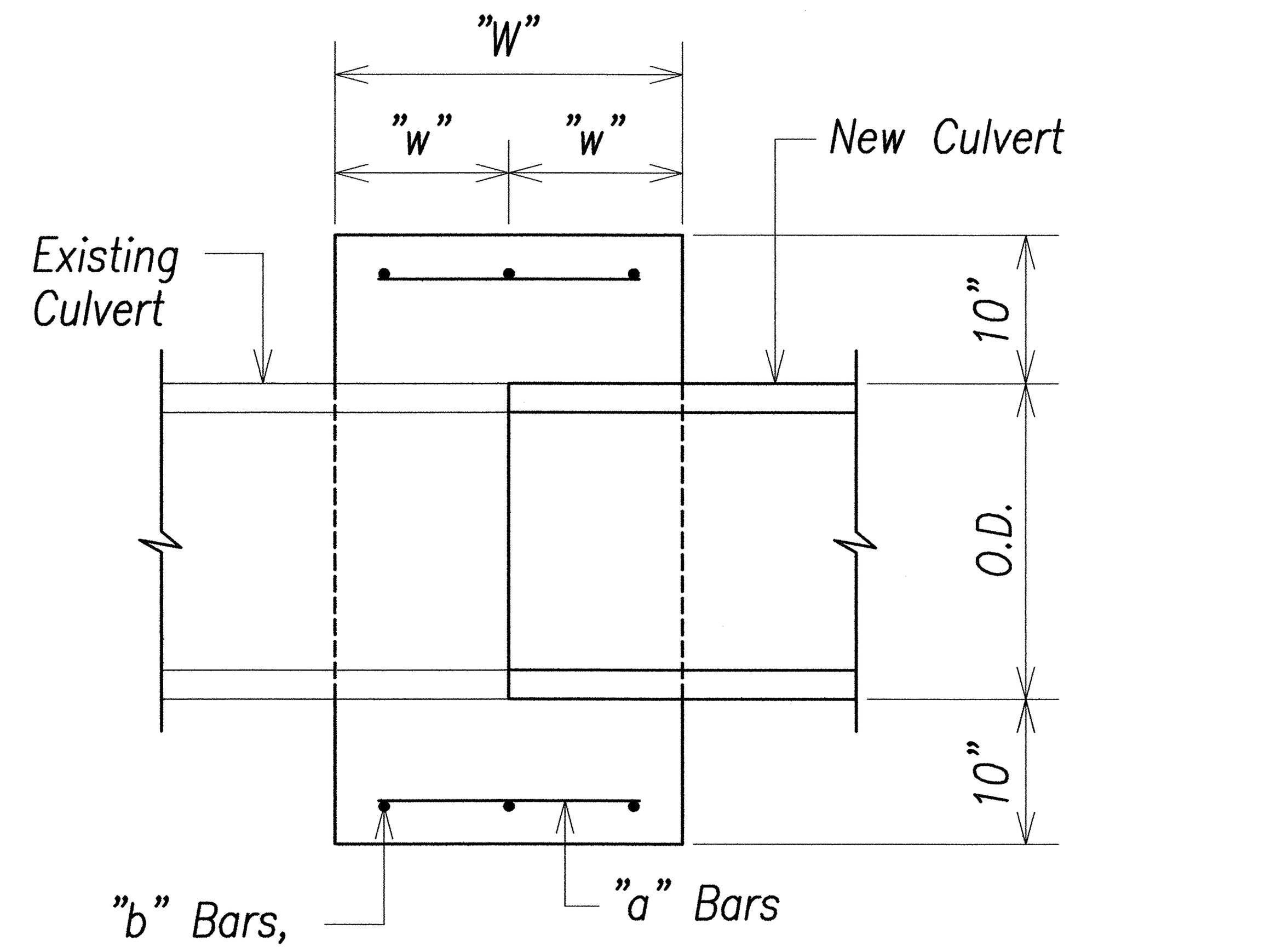


Typical Cross Bar Grating

Note:
Hot-dip galvanize grating and seat assembly after fabrication.



PLAN



SECTION A 27|27

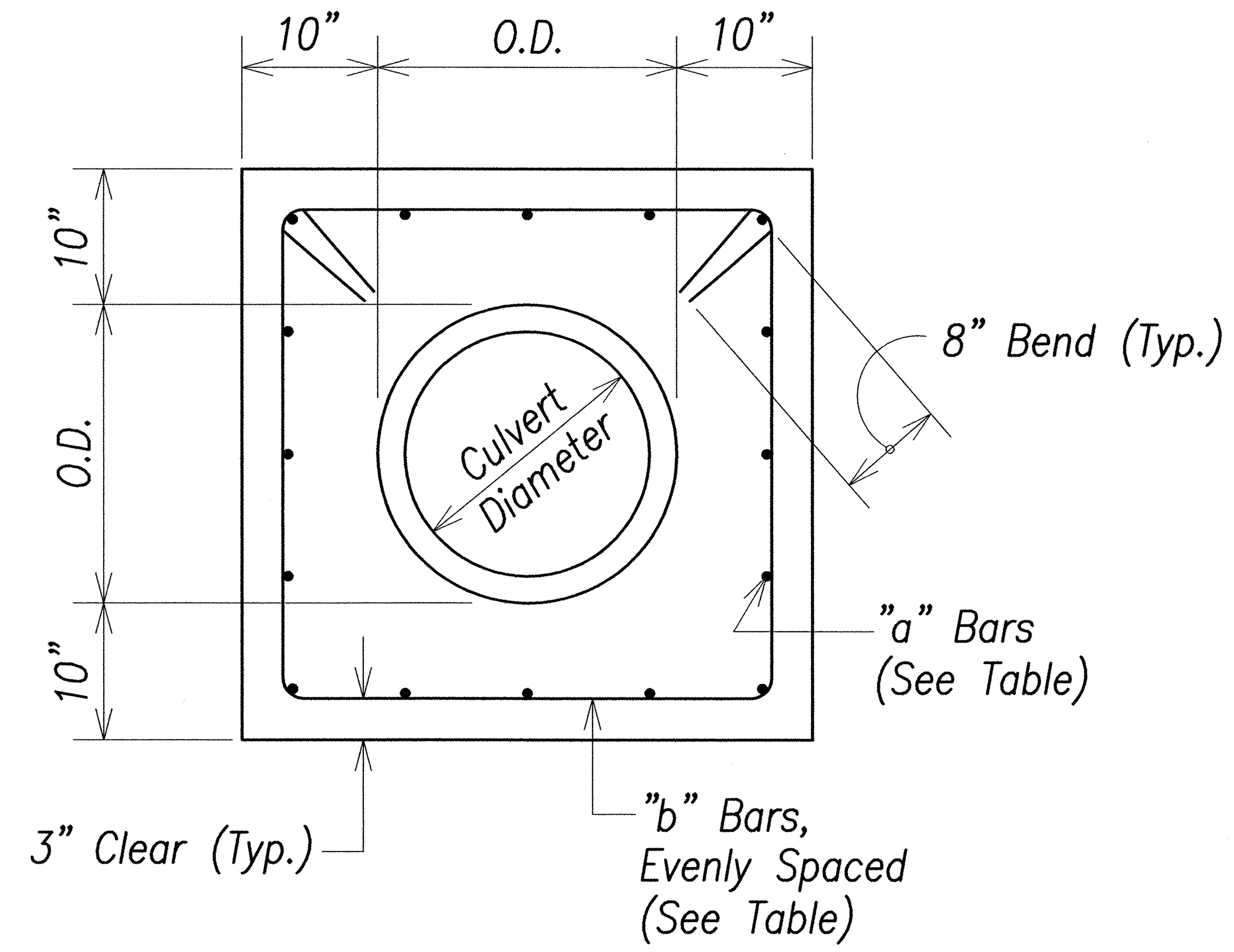
GENERAL NOTE

Reinforcing Steel for Concrete Collar shall conform to the requirements of ASTM 615 – Grade 60.

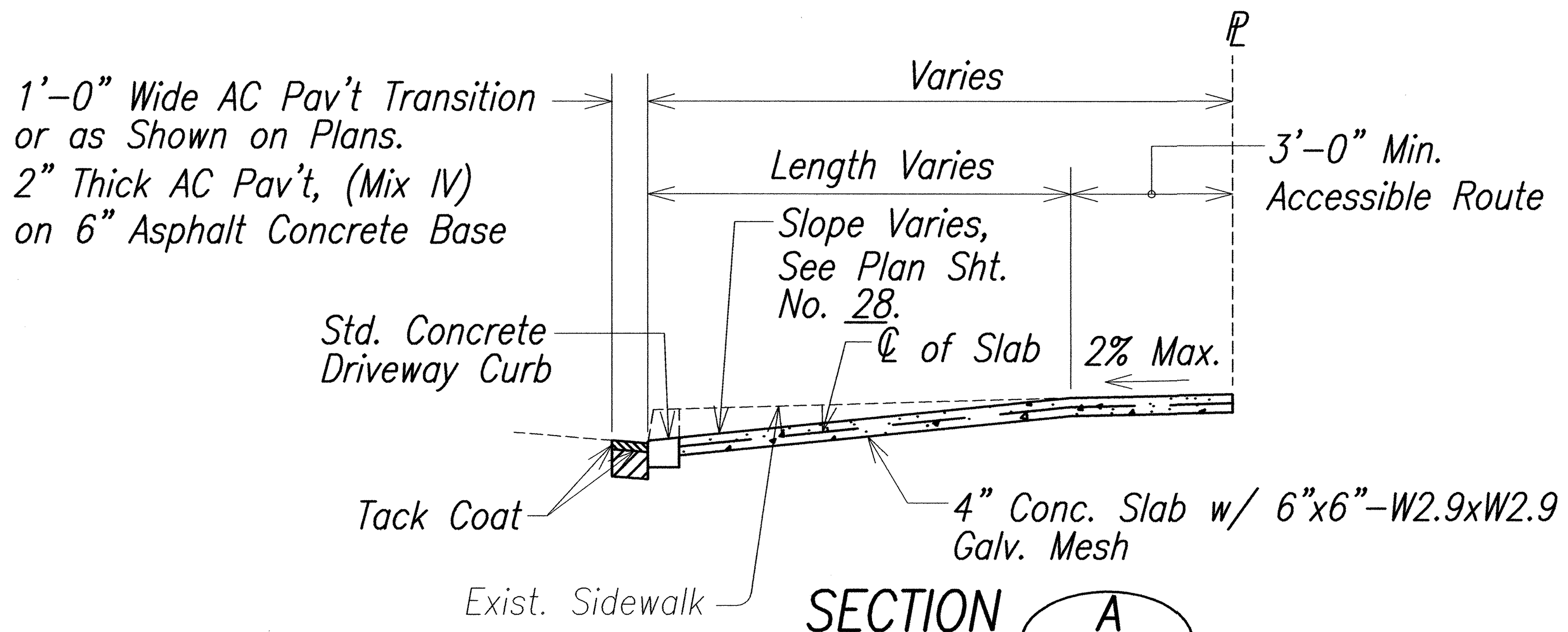
Culvert Diameter	"a" bars	"b" bars	"W"	"w"
18" to 30"	•4 @ 9"	3 – •4	24"	12"
36" to 48"	•5 @ 9"	4 – •4	30"	15"

Cross Reference to Section No.: 503 – Concrete Structures

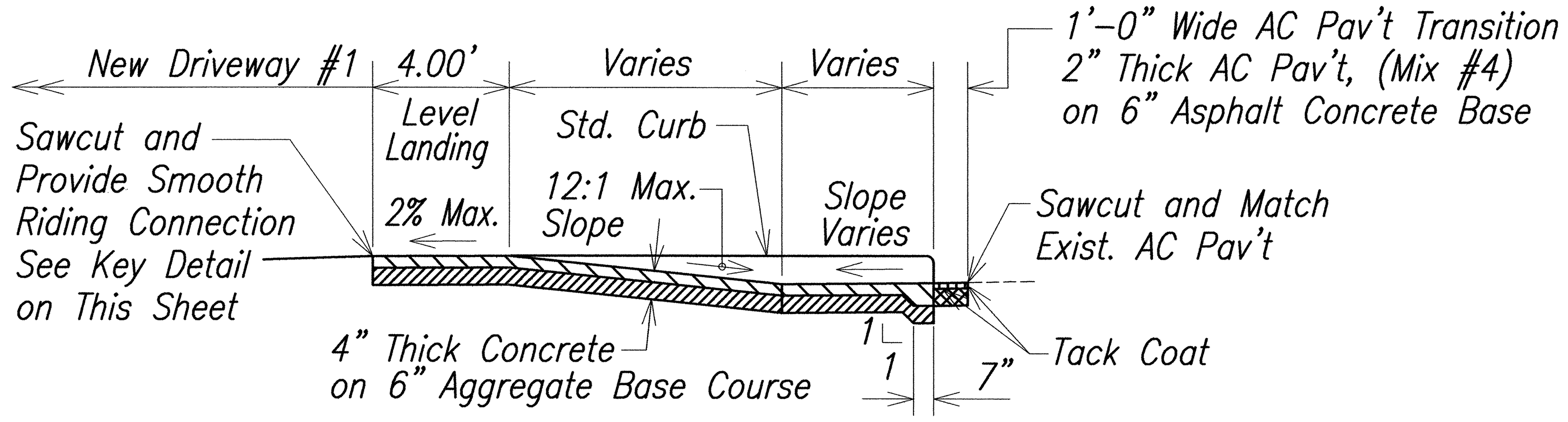
REINFORCED CONCRETE COLLAR



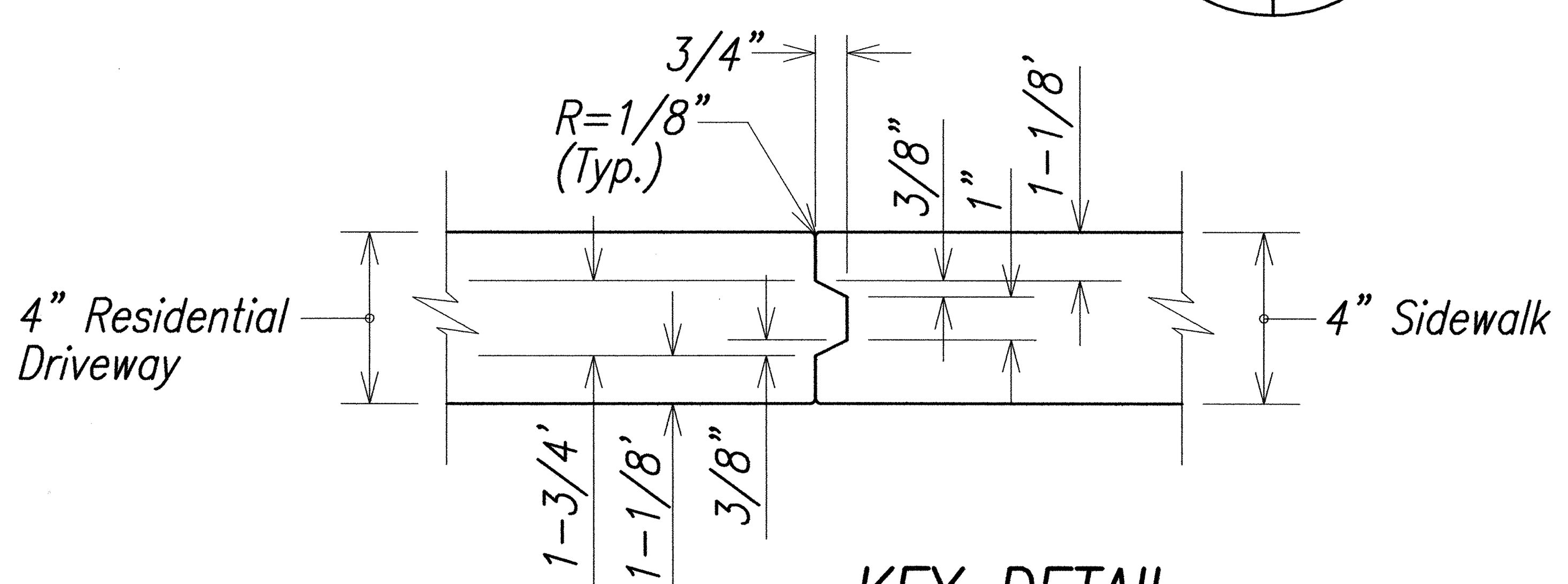
SECTION B 27|27



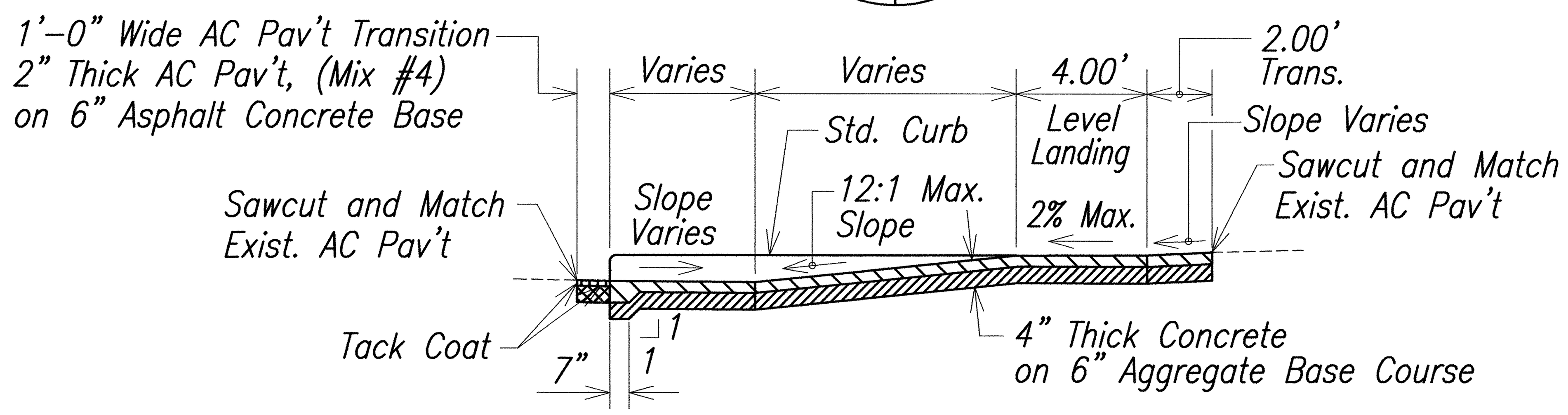
SECTION A 29|27



SECTION B 29|27



KEY DETAIL



SECTION C 29|27

1	05/13/04	ADDED DIMENSION TO INLET DETAIL
	DATE	REVISION

PETER L. MOW — LICENSED PROFESSIONAL ENGINEER — No. 9080-C — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ENGINEERS SURVEYORS HAWAII, INC.
MY LICENSE EXPIRES ON 4/30/2004

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

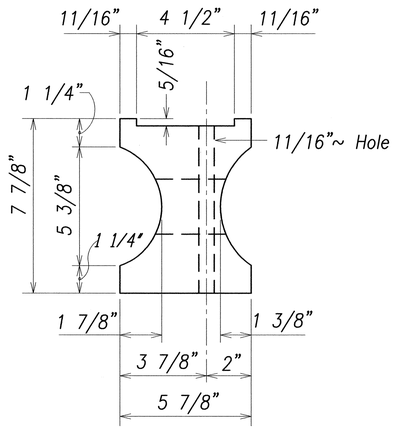
KUHIO HIGHWAY IMPROVEMENTS
Extension Of Temporary Kapaa Bypass Road
Project No. 56A-03-00

Scale: Not to Scale   Date: Mar 2004

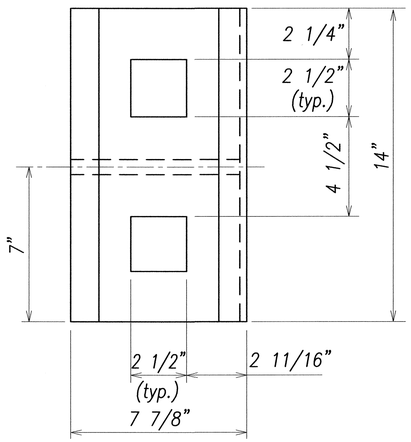
SHEET No. 2 OF 2 SHEETS

ORIGINAL PLAN | NOTE BOOK hkmsdt04 .dgn | No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

FED.ROAD DIST.NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-03-00	2004	ADD 30	66

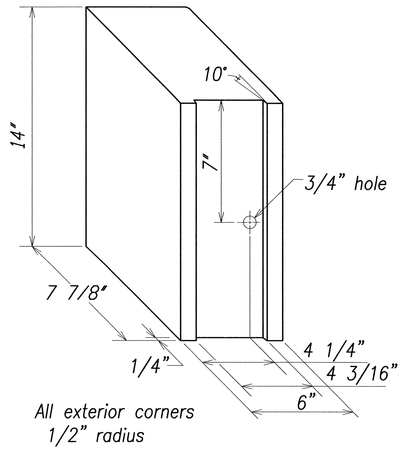


TOP

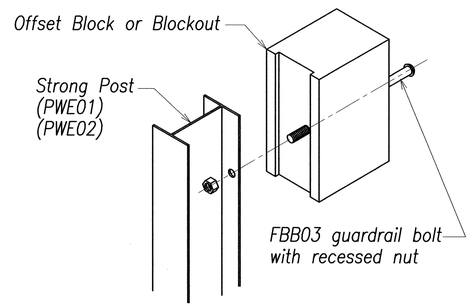


SIDE

RECYCLED PLASTIC BLOCKOUT (TYPE I)

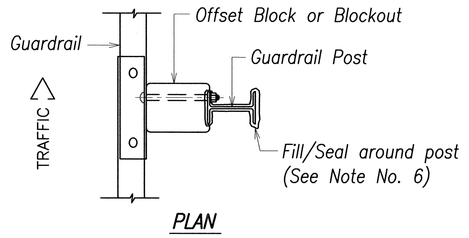


RECYCLED POLYETHYLENE OFFSET BLOCK (TYPE II)

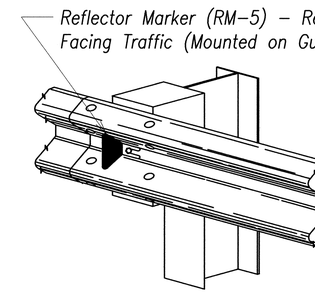


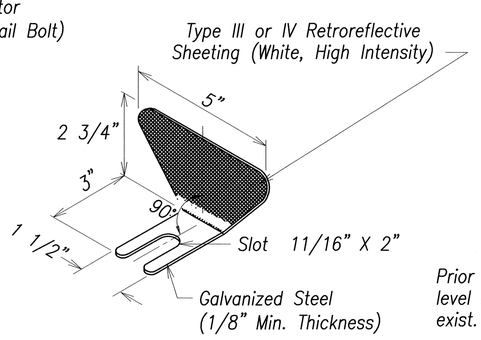
EXPLODED VIEW
(Rail, washer and reflector not shown)

STEEL POST AND BLOCK DETAIL

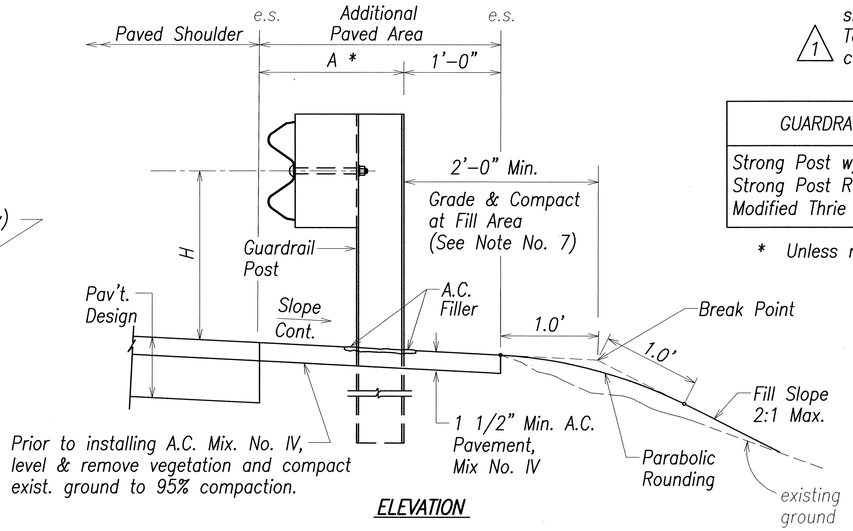


PLAN





REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION



ELEVATION

TYPICAL GUARDRAIL INSTALLATION

GENERAL NOTES:

1. All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
2. Where conditions require, special post lengths in increments of 6 inches may be specified.
3. All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM02a, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware," a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
4. The Recycled Plastic Block or Offset Block shall be approved by the State.
5. All new guardrail systems (system consists of total length of guradrail including both end treatments) shall include the Additional Paved Area.
6. After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All cost associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
7. When standards for the fill slope area cannot be met, a site specific, engineer-approved design may be used.
8. New A.C. pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
9. Reflector Markers (RM-5) mounted on new and existing guardrails within the project limits shall be spaced every 50'-0". RM-5's shall not be installed on the FLEAT-350 or Type "G" Modified Terminal Sections. Furnishing and installing of RM-5 shall be considered incidental to the adjacent guardrail system.

1

GUARDRAIL TYPE	DIMENSION	
	H	A*
Strong Post w/ W-Beam	1'-9 5/8"	1'-6"
Strong Post Rubrail (W-Beam)	2'-0"	1'-6"
Modified Thrie Beam	2'-0"	2'-0"

* Unless noted otherwise on plans.

1	05/13/04	REVISED NOTES
	DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS AND NOTES

KUHIO HIGHWAY IMPROVEMENTS
Extension Of Temporary Kapaa Bypass Road
Project No. 56A-03-00

Scale: No Scale Date: Mar 2004

SHEET No. 1 OF 6 SHEETS

ADD. 30

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