

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-10M	2010	ADD. 4	44

REPAIR NOTES

- Spalls and delaminations are called out as "spalls". No separate distinction is made between them since the repairs are the same.
- Unless otherwise indicated on the repair details chip out areas shall extend a minimum of 3" beyond the spall size as indicated in the repair schedule.
- Chamfers indicated on the drawings are minimums. Match the existing chamfer on the element being repaired if it exceeds the chamfer shown on the repair drawings.
- Chipped out area when rebars are exposed shall not be less than 3/4" clear around the bars.
- Edges of chipped out areas shall be square cut by saw cutting for a minimum depth of 1/2" unless otherwise shown on the repair details. Adjust depth of saw cutting to avoid cutting existing rebars. Jackhammer shall be limited to 15 lbs or less.
- See repair notes and details on other sheets. Replace existing rebars as required per Table 1 on Sheet S-15. All exposed rebars shall be cleaned of all scale, rust, dirt, oil and other deleterious materials. Cleaning of rebars shall be performed using hand tools (e.g. wire brush). Blasting using abrasive media or water is not acceptable.
- Fresh concrete and water with cementitious particles shall be prevented from entering the harbor during all concreting work. All forms shall be water tight. Concrete and water with cementitious particles shall not overflow formwork. Formwork and joints shall be sealed to prevent concrete and water with cementitious particles from leaking.
- Do not feather edge repairs.
- Test all repairs after the repair material is cured to verify the bond between the repair material and the existing concrete. A hollow sound when tapped with a hammer indicates unsatisfactory bond and shall be rejected. All rejected repairs shall be redone and retested until a satisfactory bond is achieved, at no additional cost to the State.
- After repairs are completed and accepted by Contractor's quality control specialist, coat repaired areas with a concrete sealer. The coated area shall extend 12" beyond the repaired area.

CONCRETE

- Surface repair mortar shall be a factory blended surface repair material combined with a polymertype admixture having a minimum compressive strength of 3,500 psi at 1 day and 7,000 psi at 28 days and used for repairs where forming is not required and for areas less than 2 square feet.
- Polymer modified concrete shall be a mixture of cement, fine aggregate, coarse aggregate, polymer type admixture, super-plasticizing admixture, corrosive inhibitor admixture, fiber reinforcing and water. It shall have a minimum compressive strength of 4,000 psi at 24 hours and 6,000 psi at 28 days and be used for full depth slab repairs. The patch material shall attain 4,000 psi concrete strength prior to opening to traffic.
- Unless otherwise indicated, super-plasticizing admixtures shall be used at the Contractor's option subject to approval of the Engineer.
- Use of calcium chloride in any concrete is prohibited.

REINFORCING STEEL (NON-PRESTRESSED)

- Detailing of concrete reinforcement shall be in accordance with ACI 315.
- All reinforcing steel shall be high strength deformed bars conforming to ASTM A706, Grade 60, unless noted otherwise.
- All rebars shall be epoxy-coated in accordance with ASTM A934. If splicing onto an existing rebar that does not have epoxy coating, the new rebar shall not be epoxy coated. Apply an epoxy bonding compound after splicing in conformance with ASTM C-881.
- All reinforcement shall have a minimum of 3-inches of concrete cover, unless otherwise noted.
- Reinforcement hooks and bends shall be standard hooks conforming to the provisions of the American Concrete Institute (ACI 318-02), unless otherwise noted.
- Reinforcement shall be lapped 48 bar diameters, minimum, at splices. Stagger splices wherever possible, unless shown otherwise, or refer to weld splice detail 2/S-15.

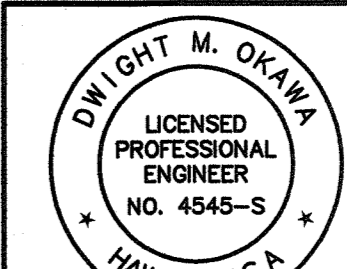
REFERENCES

- Refer to the following State DOT Highways drawings for existing conditions such as reinforcing bars, size of members, elevations, etc.

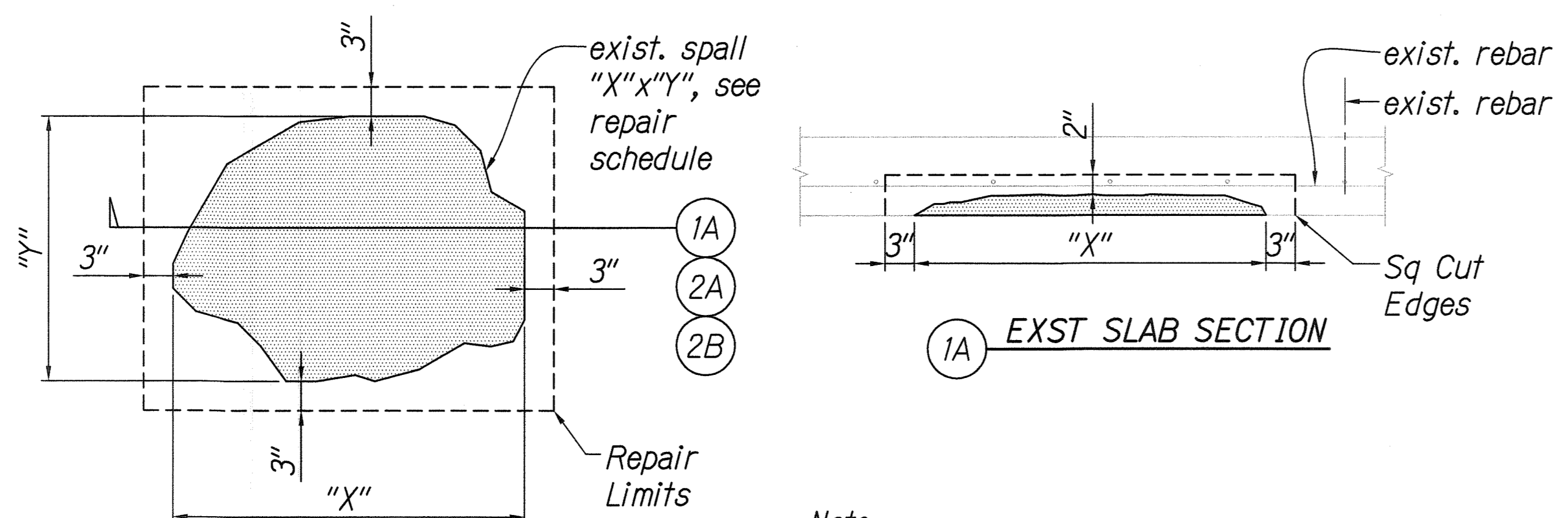
As-Built Drawing Numbers

- Honolulu Pearl Harbor Iwilei Section Federal Aid Urban Project No. Fu 44(3) 2nd Unit (i.e. Honolulu Slip Cover) see Sht No. R-1 to R-11.
- Honolulu Pearl Harbor Road Queen Street Section Federal Aid Urban Project No. Fu 44(5) Unit 2 (i.e. Slip Cover #3) see Sht No. R-12 to R-17.

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ORIGINAL PLAN	
NOTEBOOK	
No.	

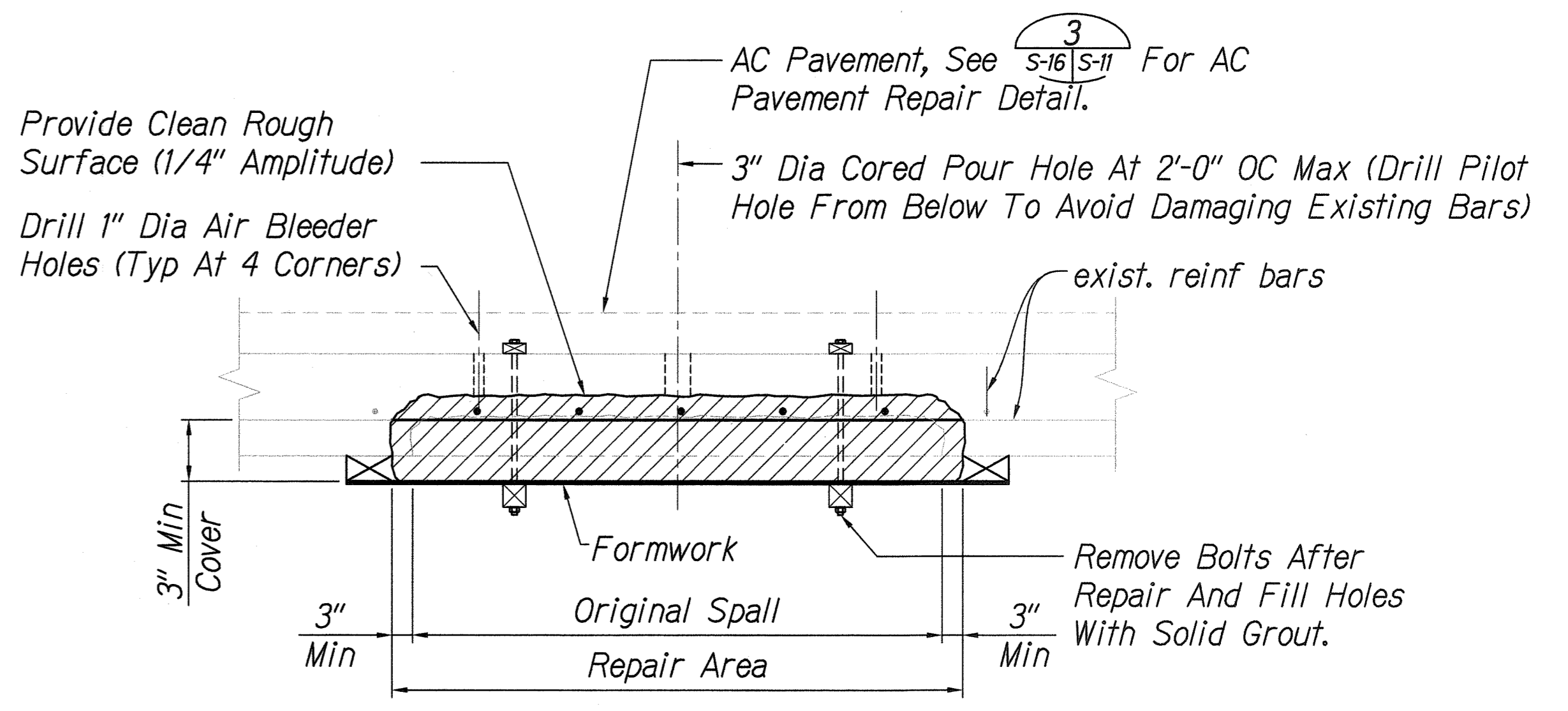
 <p>LICENSE EXPIRES: 4/30/10</p> <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.</p> <p><i>Dwight M. Okawa</i></p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>STRUCTURAL NOTES</p> <p>NIMITZ HIGHWAY Rehabilitation of Honolulu Slip Cover and Slip Cover #3 Project No. 92A-01-10M</p> <p>Scale: None Date: April 2010</p>
	<p>SHEET No. S-2 OF 19 SHEETS</p>

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-10M	2010	ADD. 18	44



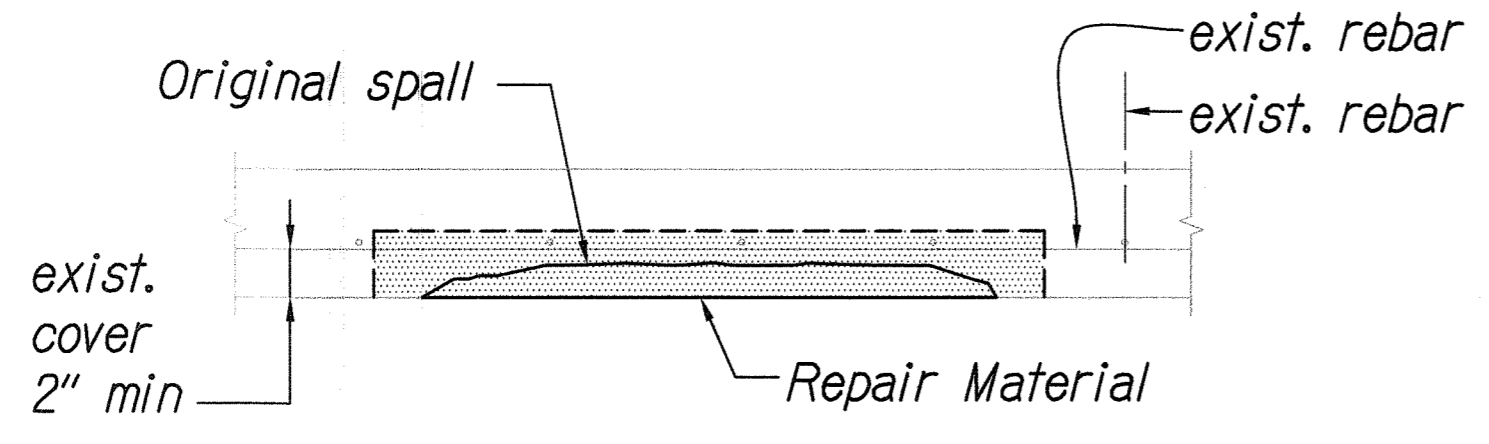
- Note:**
- Spalls and delaminations are called out as "spalls" since the repairs are the same.
 - See concrete repair details on sheet S-15.

1 SLAB SOFFIT SPALL - EXISTING CONDITION
S-16/S-16 NOT TO SCALE

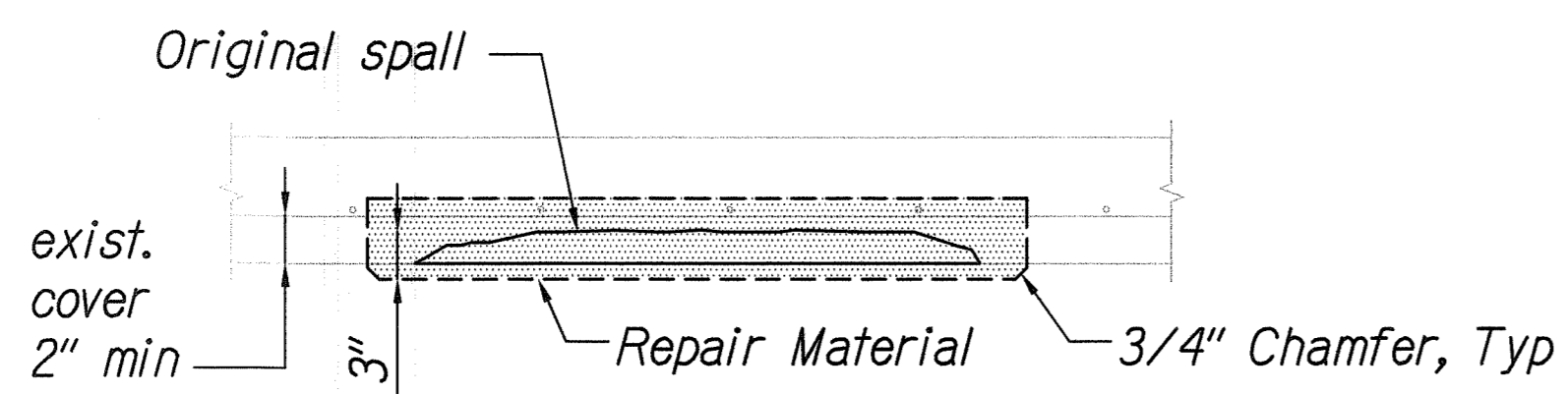


- Note:**
- Fill with concrete repair material by pumping until concrete is flush with top of slab.
 - Remove formwork after concrete has cured.
 - Patch cored and drilled holes to match existing.
 - Patch and grind with repair mortar after form is removed to assure required reinforcement cover. Grind repair areas, as required, to remove concrete/mortar flashings and to provide a generally smooth surface repair.
 - Where the spall removal of deteriorated concrete exceeds half the thickness of the slab, the repair shall be a full depth repair. Provide same size and spacing of reinforcing as existing. Provide additional #3 at 12" o.c. on the bottom mat of the deck slab by tying in-place. Not required to dowel into existing concrete.
 - Replace corroded rebars where required per Table 1 on Sht S-15.
 - Replace A.C., see Standard Specs.

3 SLAB SOFFIT SPALL - REPAIR AREA > 2 SQ FT
S-16/S-16 NOT TO SCALE



2A SLAB SOFFIT SPALL REPAIR
WHERE EXST REBAR COVER \geq 2"



2B SLAB SOFFIT SPALL REPAIR
WHERE EXST REBAR COVER < 2"

- Note:**
- See concrete repair notes and details on Sht S-2 and Sht S-15.
 - Replace corroded rebars where required per Table 1 on Sht S-15.
 - See 1 for exst condition.
 - Where the spall removal of deteriorated concrete exceeds half the thickness of the slab, the repair shall be a full depth repair similar to 3.

2 SLAB SOFFIT SPALL - REPAIR DETAIL
S-16/S-16 NOT TO SCALE

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DWIGHT M. OKAWA
LICENSED PROFESSIONAL ENGINEER
NO. 4545-S
HAWAII, U.S.A.

LICENSE EXPIRES: 4/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Dwight M. Okawa

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SLAB SOFFIT REPAIR
DETAILS**

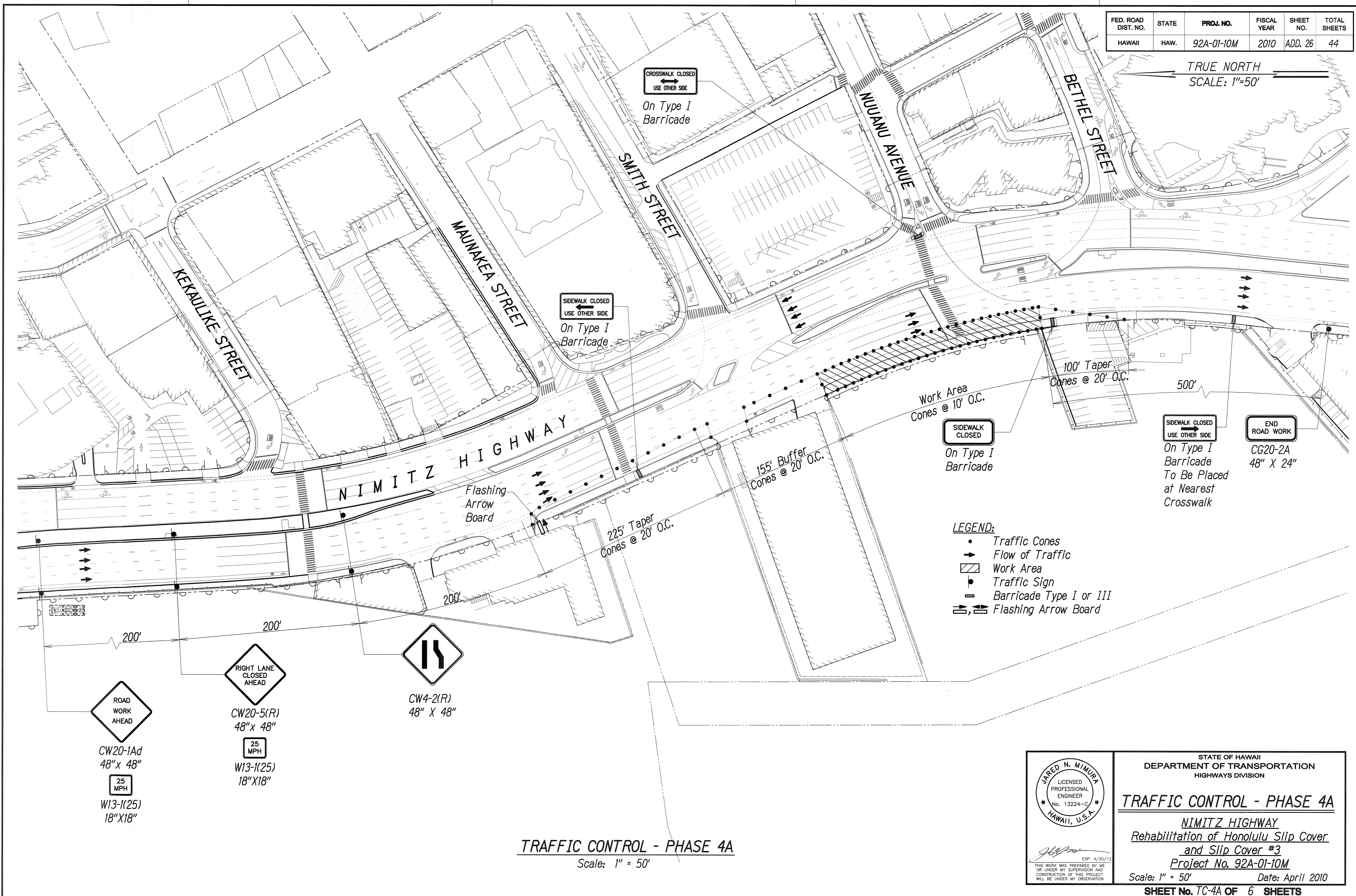
NIMITZ HIGHWAY
Rehabilitation of Honolulu Slip Cover
and Slip Cover #3
Project No. 92A-01-10M

Scale: Not To Scale Date: April 2010

SHEET No. S-16 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-10M	2010	ADD. 26	44

TRUE NORTH
SCALE: 1"=50'



- LEGEND:**
- Traffic Cones
 - Flow of Traffic
 - ▨ Work Area
 - Traffic Sign
 - Barricade Type I or III
 - ⇄ Flashing Arrow Board

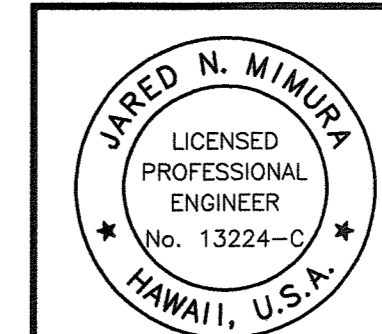
SURVEY PLOTTED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

ROAD WORK AHEAD
CW20-1Ad
48" x 48"
25 MPH
W13-1(25)
18" x 18"

RIGHT LANE CLOSED AHEAD
CW20-5(R)
48" x 48"
25 MPH
W13-1(25)
18" x 18"

CW4-2(R)
48" x 48"

TRAFFIC CONTROL - PHASE 4A
Scale: 1" = 50'



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL - PHASE 4A

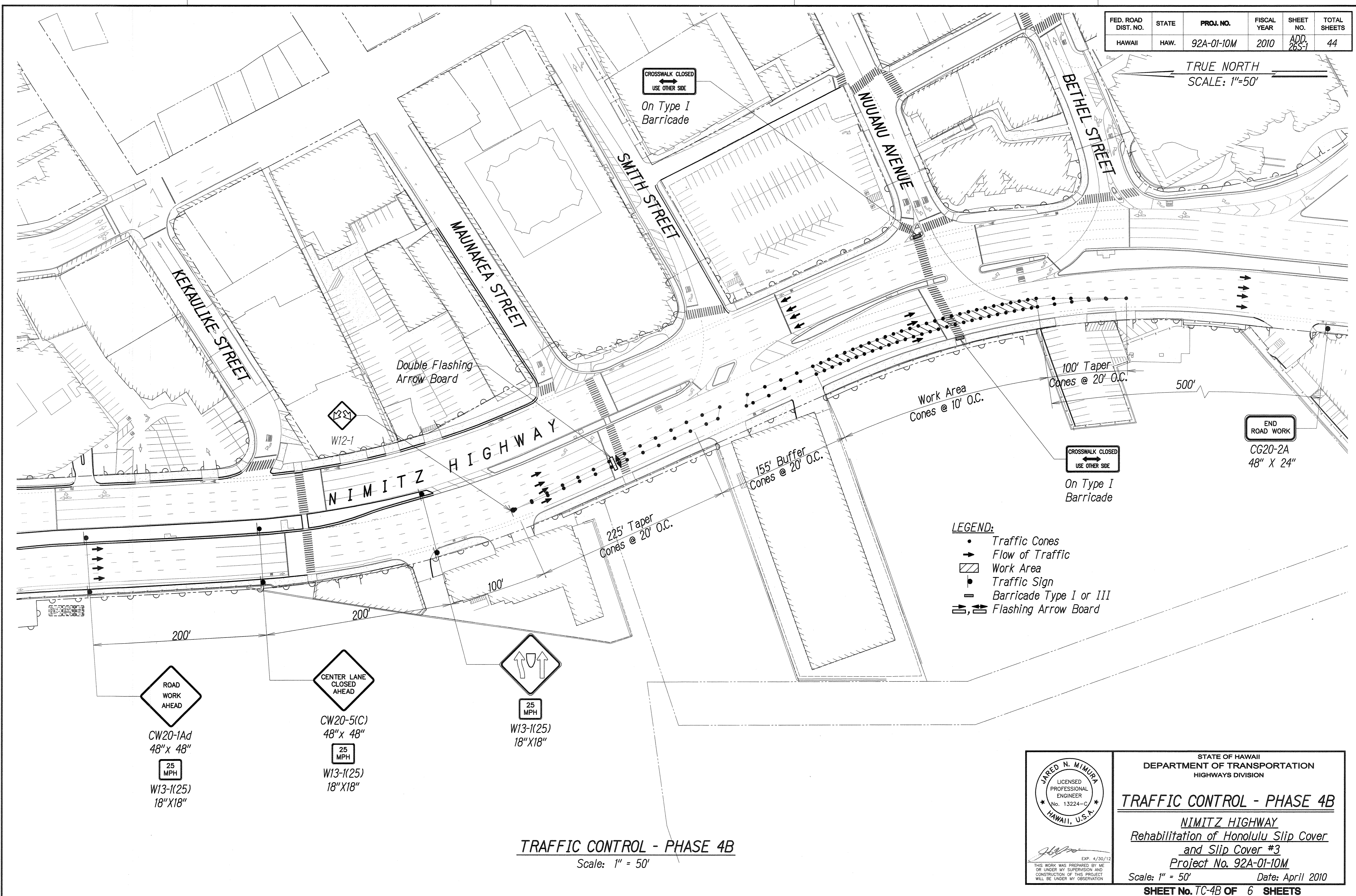
*NIMITZ HIGHWAY
Rehabilitation of Honolulu Slip Cover
and Slip Cover #3
Project No. 92A-01-10M*

Scale: 1" = 50' Date: April 2010

SHEET No. TC-4A OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-10M	2010	ADD. 26S-1	44

TRUE NORTH
SCALE: 1"=50'



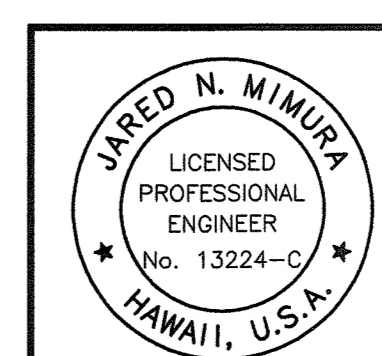
DATE	_____
DESIGNED BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

ROAD WORK AHEAD
CW20-1Ad
48" x 48"
25 MPH
W13-I(25)
18" x 18"

CENTER LANE CLOSED AHEAD
CW20-5(C)
48" x 48"
25 MPH
W13-I(25)
18" x 18"

25 MPH
W13-I(25)
18" x 18"

TRAFFIC CONTROL - PHASE 4B
Scale: 1" = 50'

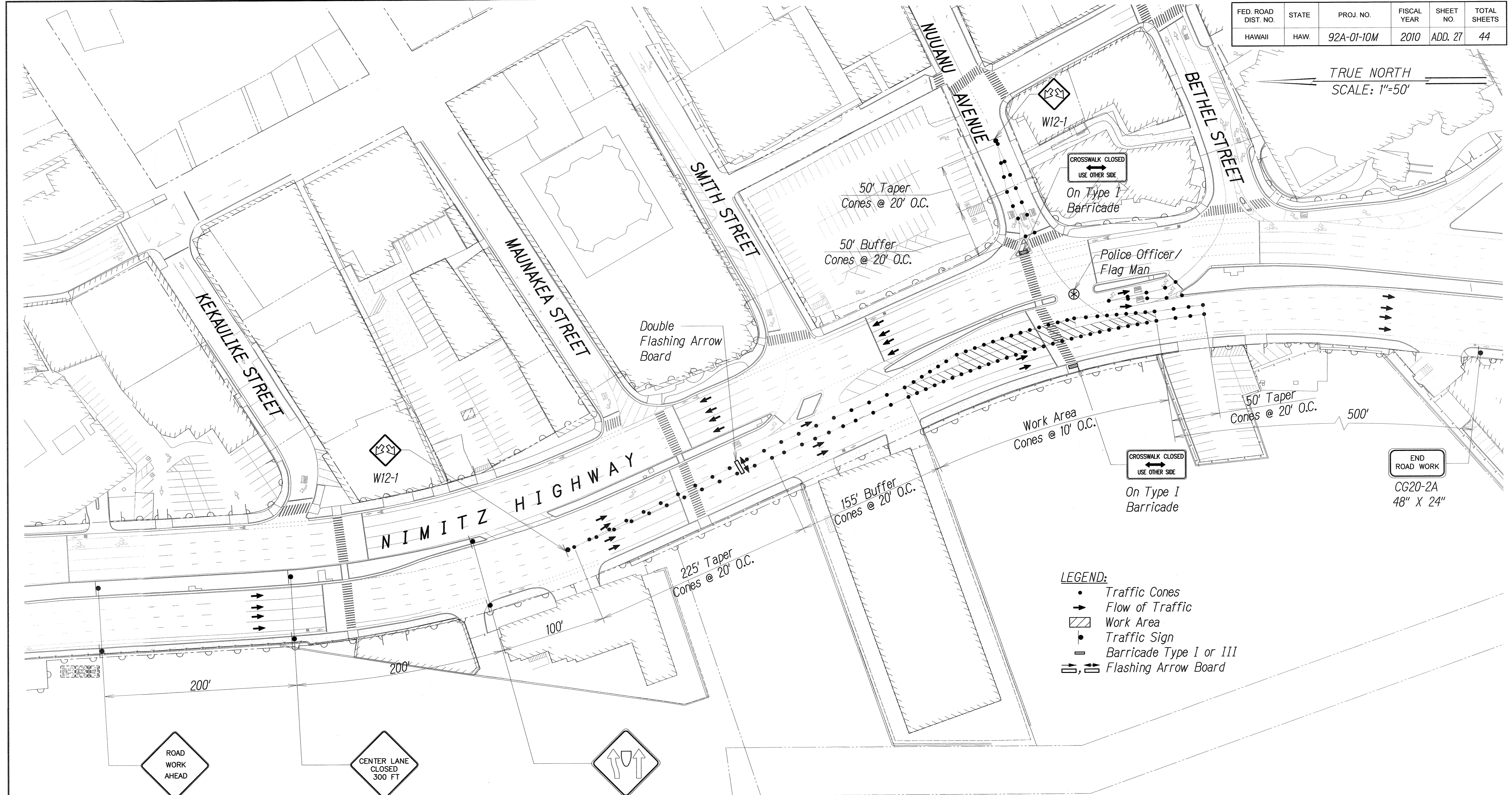


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC CONTROL - PHASE 4B
NIMITZ HIGHWAY
Rehabilitation of Honolulu Slip Cover
and Slip Cover #3
Project No. 92A-01-10M
Scale: 1" = 50' Date: April 2010
SHEET No. TC-4B OF 6 SHEETS

ADD. 26S-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-10M	2010	ADD. 27	44

TRUE NORTH
SCALE: 1"=50'



- LEGEND:**
- Traffic Cones
 - Flow of Traffic
 - ▨ Work Area
 - ◻ Traffic Sign
 - Barricade Type I or III
 - ⇄ Flashing Arrow Board



ROAD WORK AHEAD
CW20-1Ad
48" x 48"
25 MPH
W13-1(25)
18" x 18"



CENTER LANE CLOSED 300 FT
CW20-5(C)
48" x 48"
25 MPH
W13-1(25)
18" x 18"



25 MPH
W13-1(25)
18" x 18"

TRAFFIC CONTROL - PHASE 5
Scale: 1" = 50'

DESIGNED BY	DATE
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TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

JARED N. MIMURA
LICENSED PROFESSIONAL ENGINEER
No. 13224-C
HAWAII, U.S.A.
EXP. 4/30/12
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONTRIBUTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC CONTROL - PHASE 5
NIMITZ HIGHWAY
Rehabilitation of Honolulu Slip Cover
and Slip Cover #3
Project No. 92A-01-10M
Scale: 1" = 50' Date: April 2010
SHEET No. TC-5 OF 6 SHEETS