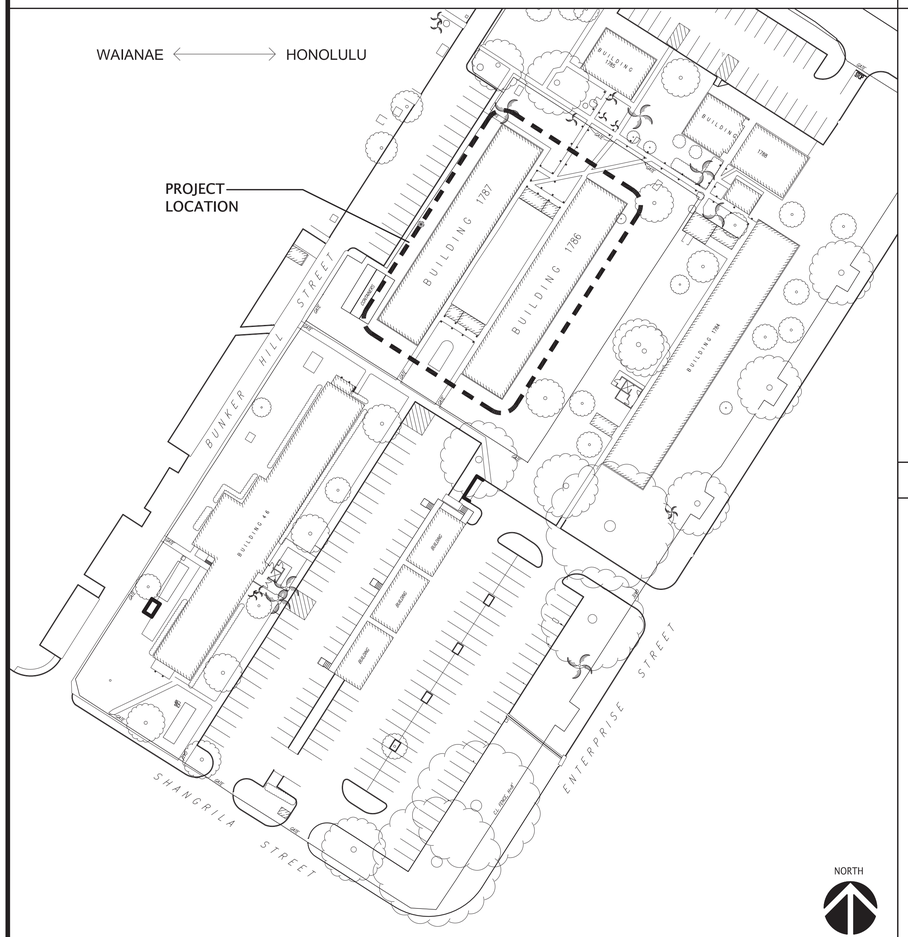
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787
RAILING REPLACEMENT, PHASE 1

KALAELOA, OAHU, HAWAI'I

STATE OF HAWAI'I, DEPARTMENT OF DEFENSE
JOB NO. CA-1605-C

VICINITY MAP



PROJECT DATA

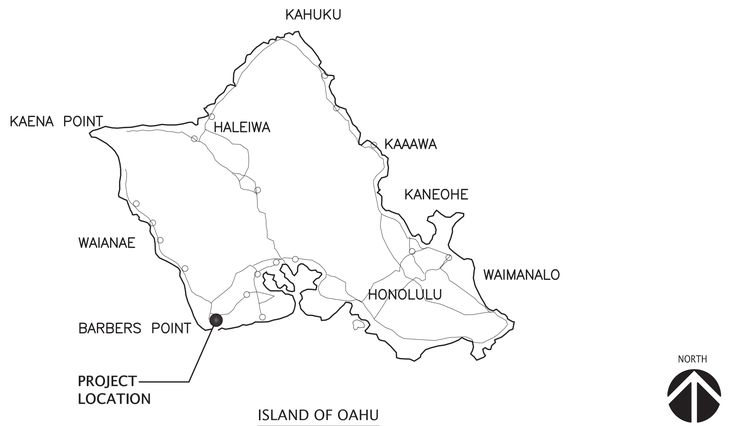
BUILDING FLOOR AREAS

EXISTING BUILDING 1786 APPROX. 20,055 SF

EXISTING BUILDING 1787 APPROX. 20,055 SF

CODE: INTERNATIONAL BUILDING CODE 2006

PROJECT SITE MAP



ISLAND OF OAHU

CONSULTANTS

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SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN
LICENSED PROFESSIONAL ARCHITECT
NO. 5401
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

TITLE

LOU CHAN & ASSOCIATES, INC.		JOB NO. CA-1605-C	DRAWING NO. 001
DESIGNED BY: LCC	CHECKED BY: LCC		
DRAWN BY: NS	APPROVED BY: LCC	DATE APRIL 2017	SHEET 1 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

SYMBOLS AND ABBREVIATIONS

SYMBOLS

&	AND	%	PERCENT
∠	ANGLE	⊥	PERPENDICULAR
@	AT	#	POUND OR NUMBER
℄	CENTERLINE	℔	PROPERTY LINE
⌞	CHANNEL	±	PLUS OR MINUS
Ø	DIAMETER OR ROUND		

ABBREVIATIONS

A

AB	ANCHOR BOLT
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACCESS	ACCESSIBLE
ACOUS	ACOUSTICAL
ADA	AMERICANS WITH DISABILITIES ACT
ADDM	ADDENDUM
ADJ	ADJUSTABLE, ADJACENT
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT

B

BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM, BENCHMARK
BOT	BOTTOM

C

CAB	CABINET
CB	CATCH BASIN
CCT	CUBICLE CURTAIN TRACK
CT	CERAMIC TILE
CG	CORNER GUARD
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CLO	CLOSET
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT(S)
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR, CORRUGATED
CPT	CARPET
CRM	CONCRETE RUBBLE MASONRY
CTSK	COUNTERSUNK, (SINK)

D

D	DEEP, DEPTH
DA	DOUBLE ACTING
DBL	DOUBLE
DEFS	DIRECT-APPLIED EXTERIOR FINISH SYSTEM
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DO	DUPLEX RECEPTACLE
DR	DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER

E

EA	EACH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXP	EXPANSION
EXIST	EXISTING
EXT	EXTERIOR

F

FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH(ED)
FL	FLOOR
FLASH	FLASHING
FLDG	FOLDING
FLRG	FLOORING
FLUOR	FLUORESCENT
FOF	FACE OF FINISH

F (CONTINUED)

FOS	FACE OF STUD(S)
FP	FIREPROOFING
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT, FEET
FTG	FOOTING

G

GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLASS
GND	GROUND
GR	GRADE
GYP BD	GYPSUM WALL BOARD

H

H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HDWD	HARDWOOD
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HT	HEIGHT

I

ID	INSIDE DIAMETER/ DIMENSION
INCL	INCLUD(ED), (ING), (SIVE)
INSUL	INSULATION
INT	INTERIOR

J

JAN	JANITOR
JT	JOINT

K

KD	KNOCKED DOWN
KIT	KITCHEN
KO	KNOCK-OUT

L

L	LENGTH, LONG
LAM	LAMINATE
LAV	LAVATORY
LKR	LOCKER
LP	LOW POINT
LT	LIGHT

M

MANUF	MANUFACTURER
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOLDING
MO	MASONRY OPENING
MOD	MODIFIED
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION

N

N	NORTH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE

O

OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER/ DIMENSION
OF/CI	OWNER FURNISHED-CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED-OWNER INSTALLED
OPNG	OPENING
OPP	OPPOSITE

P

PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PROP	PROPERTY
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION PAPER TOWEL DISPENSER AND RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE

R

R	RISER, RADIUS
RH	ROBE HOOK
RD	ROOF DRAIN
REF	REFERENCE, REFRIGERATOR
REFL	REFLECTED
REINF	REINFORCES, REINFORCING
REQD	REQUIRED
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RDWD	REDWOOD

S

S	SOUTH
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCR	SHOWER CURTAIN ROD
SCHED	SCHEDULE
SD	SOAP DISPENSER
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SLDG	SLIDING
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNDU	SANITARY NAPKIN DISPOSAL UNIT
SP	SAFETY POST
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPEND(ED)
SYMM	SYMMETRICAL

T

T&G	TONGUE AND GROOVE
T	TREAD
TB	TOWEL BAR
TEL	TELEPHONE
TMPD	TEMPERED
THK	THICK
TOC	TOP OF CURB
TOP	TOP OF PAVEMENT
TOS	TOP OF SLAB
TOW	TOP OF WALL
TTD	TOILET TISSUE DISPENSER
TV	TELEVISION
TYP	TYPICAL

U

UBC	UNIFORM BUILDING CODE
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL

V

VERT	VERTICAL
VEST	VESTIBULE
VTR	VENT THROUGH ROOF

W

W	WEST, WIDE, WIDTH
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WATER HEATER
W/O	WITHOUT
WP	WATERPROOF (ING)
WR	WATER RESISTANT
WB	WEATHER BARRIER
WSCT	WAINSCOT
WT	WEIGHT
WO	WHERE OCCURS
WWF	WELDED WIRE FABRIC

GRAPHIC SYMBOLS AND MATERIAL LEGEND

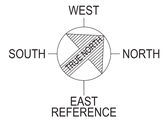
GRAPHIC SYMBOLS

DEMOLITION SYMBOL

RENOVATION SYMBOL

GRID LINE SYMBOL

TRUE NORTH ARROW



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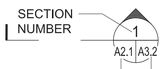


SECTION REFERENCE TAG

SHEET WHERE SECTION IS DRAWN

SHEET WHERE SECTION IS REFERENCED

DETAIL REFERENCE TAG

SHEET WHERE DETAIL IS DRAWN

SHEET WHERE DETAIL IS REFERENCED

MATERIALS

DEMOLITION - PLAN

CORRUGATED METAL SIDING - PLAN/ELEVATION

MEMBRANE ROOFING - PLAN/ELEVATION

FLUID APPLIED COATING - PLAN/ELEVATION

SHEET METAL - PLAN/ELEVATION

PLYWOOD - SECTION

STEEL - SECTION

CONCRETE MASONRY - SECTION

CONCRETE - SECTION

THERMAL INSULATION - SECTION

COVER BOARD - SECTION

TYPE 'X' BOARD - SECTION

INDEX TO DRAWINGS

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN
LICENSED PROFESSIONAL ARCHITECT
NO. 5401
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

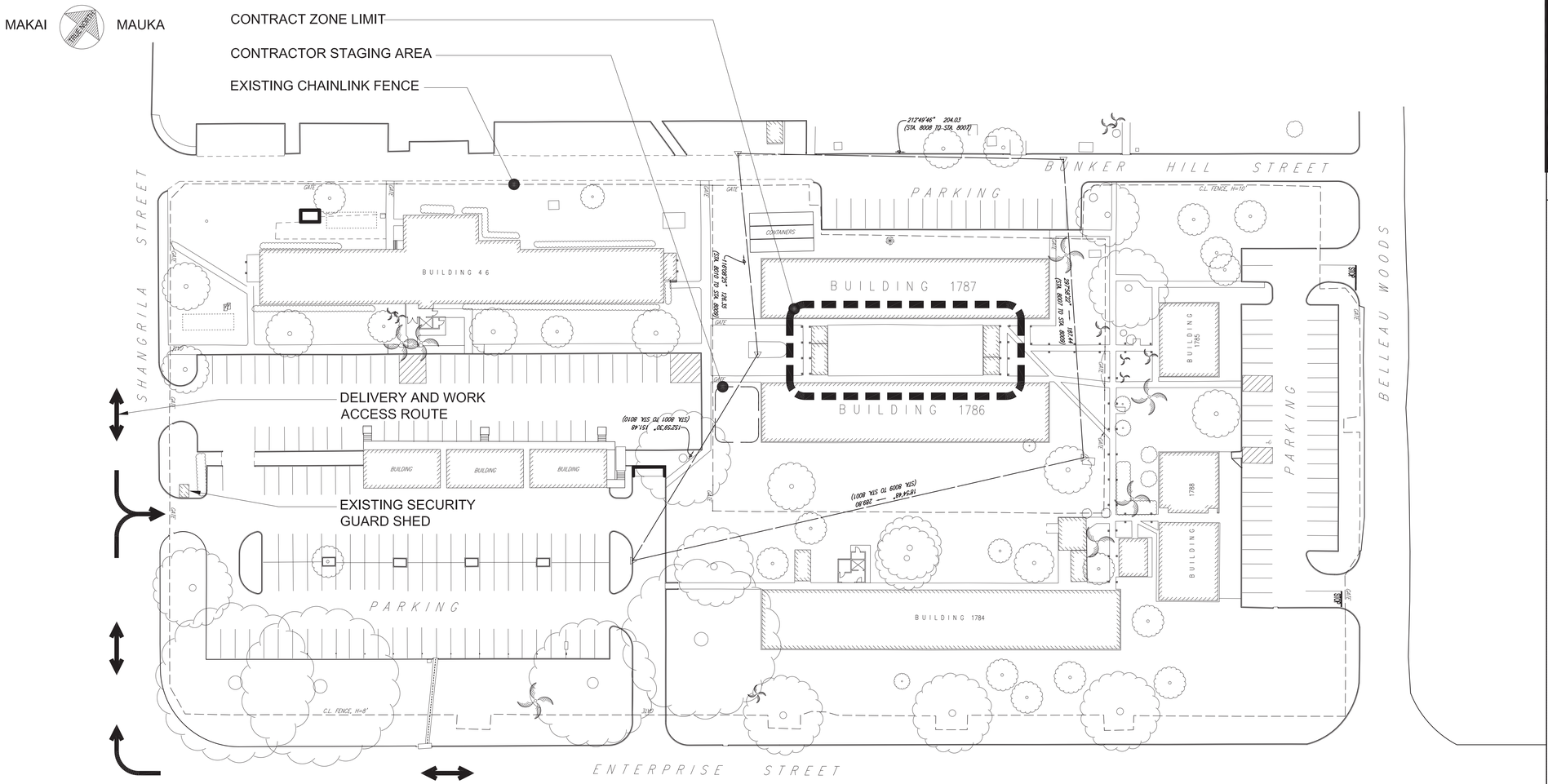
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SYMBOLS, ABBREVIATIONS AND INDEX

LOU CHAN & ASSOCIATES, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	002
DRAWN BY:	APPROVED BY:	DATE	SHEET
NS	LCC	APRIL 2017	2 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 003 | 003 ARCHITECTURAL SITE PLAN

NOT TO SCALE

WORK SCOPE

WORK SCOPE SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING WORK ITEMS:

BASE BID (BUILDINGS 1786 AND 1787 CORRIDORS)

1. REMOVE EXISTING ALUMINUM RAILING SYSTEM, EMBEDDED FOOTING, GROUT AND SLEEVE (SECOND AND THIRD FLOOR).
2. REMOVE EXISTING TEMPORARY 4X4 WOOD POST, 2X4 WOOD RAILS, METAL STRAPS, ANCHOR PLATES AND BOLTS. FILL AND PATCH ALL HOLES (SECOND AND THIRD FLOOR).
3. REMOVE DAMAGED CONCRETE SLAB AND UNDERSIDE SOFFIT, EXPANSION JOINTS, AND PLYWOOD COVER (SECOND FLOOR, THIRD FLOOR AND ROOF DECK).
4. CONSTRUCT ALUMINUM RAIL, POST AND PICKETS (SECOND FLOOR AND THIRD FLOOR).
5. CONCRETE WALL AND DECK REPAIR (SECOND FLOOR, THIRD FLOOR AND ROOF DECK)

ADDITIVE ALTERNATE NO. 1 (MAKAI WALK DECK)

6. REMOVAL OF EXISTING RAILING SYSTEM AND CONSTRUCT ALUMINUM RAIL, POST AND PICKETS AT MAKAI WALK DECK BETWEEN BUILDING 1786 AND 1787 (SECOND FLOOR AND THIRD FLOOR).
7. CONCRETE WALL AND DECK REPAIR AT MAKAI WALK DECK BETWEEN BUILDING 1786 AND 1787 (SECOND FLOOR, THIRD FLOOR AND ROOF DECK).

ADDITIVE ALTERNATE NO. 2 (MAUKA WALK DECK)

8. REMOVAL OF EXISTING RAILING SYSTEM AND CONSTRUCT ALUMINUM RAIL, POST AND PICKETS AT MAUKA WALK DECK BETWEEN BUILDING 1786 AND 1787 (SECOND FLOOR AND THIRD FLOOR).
9. CONCRETE WALL AND DECK REPAIR AT MAUKA WALK DECK BETWEEN BUILDING 1786 AND 1787 (SECOND FLOOR, THIRD FLOOR AND ROOF DECK).

PHASING PLAN

PHASING

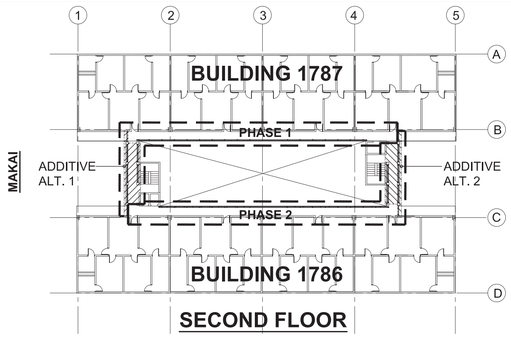
WORK SHALL BE CONDUCTED IN PHASES AS TO MINIMIZE DISRUPTION TO THE OPERATION OF THE FACILITY. EACH PHASE SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF WORK IN NEXT PHASE. SEQUENCE OF CONSTRUCTION SHALL BE DETERMINED JOINTLY BY THE CONTRACTOR, FACILITY AND THE PROJECT MANAGER PRIOR TO THE WORK.

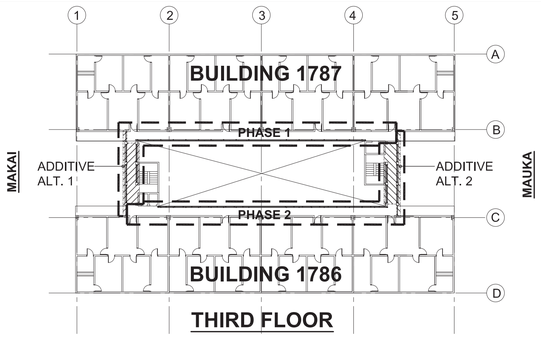
PHASE 1

REMOVE AND RECONSTRUCT RAILING AND REPAIR CONCRETE AT BUILDING 1787 CORRIDORS. REMOVE AND RECONSTRUCT RAILING AND REPAIR CONCRETE AT MAKAI WALK DECK UNDER ADDITIVE ALTERNATE 1.

PHASE 2

REMOVE AND RECONSTRUCT RAILING AND REPAIR CONCRETE AT BUILDING 1786 CORRIDORS. REMOVE AND RECONSTRUCT RAILING AND REPAIR CONCRETE AT MAUKA WALK DECK UNDER ADDITIVE ALTERNATE 2.





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Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SITE PLAN AND WORK SCOPE

LOU CHAN & ASSOCIATES, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	003
DRAWN BY: NS	APPROVED BY: LCC	DATE: APRIL 2017	SHEET 3 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

GENERAL REQUIREMENTS

1. **BUILDING OPERATION**
THE YOUTH CHALLENGE ACADEMY IN BUILDING 1786 AND BUILDING 1787 SHALL BE IN OPERATION DURING ALL WORK DAYS, WEEKDAYS AND WEEKENDS. CONTRACTOR SHALL KEEP DISRUPTION TO THEIR OPERATION TO A MINIMUM. DEMOLITION AND CONSTRUCTION WORK, LOADING AND UNLOADING OPERATION THAT SLOW DOWN OR BLOCKING VEHICULAR AND PEDESTRIAN TRAFFIC SHALL BE CONDUCTED DURING NON-CLASS HOURS OF OFF HOURS. CONTRACTOR SHALL REMOVE ALL TOOLS AND CONSTRUCTION MATERIALS, DEBRIS AND DUST FROM THE WORK AREA AT THE END OF EACH WORKING DAY. CLOSURE AND BLOCKAGE AFFECT CIRCULATION IN WALKWAY AND HALLWAY SHALL BE RESTRICTED IN SMALL ZONES AND IN SHORT DURATION. CONTRACTOR SHALL SUBMIT WORK SCHEDULE TO THE PROJECT MANAGER FOR COMMENT AND APPROVAL AT LEAST TWO WEEKS PRIOR TO ANY CLOSURE AND BLOCKAGE.

2. **PHASING**
WORK SHALL BE CONDUCTED IN PHASES AS TO MINIMIZE DISRUPTION TO THE OPERATION OF THE FACILITY. EACH PHASE SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF WORK IN NEXT PHASE. SEQUENCE OF CONSTRUCTION SHALL BE DETERMINED JOINTLY BY THE CONTRACTOR, FACILITY AND THE PROJECT MANAGER PRIOR TO THE WORK.

3. **DEMOLITION AND RENOVATION WORK**
CONTRACTOR SHALL THOROUGHLY EXAMINE ALL PLANS AND SPECIFICATIONS, DEMOLITION WORK SHALL INCLUDE ALL THE WORK INDICATED ON PLANS TO BE DEMOLISHED AND REMOVAL AND ALL THE WORK NOT REQUIRED FOR RENOVATION WORK. RENOVATION WORK SHALL INCLUDE ALL THE WORK INDICATED ON PLANS TO BE RENOVATED AND REPLACED. FOR CLARITY, LOCATIONS AND QUANTITY OF WORKS TO BE DEMOLISHED AND RENOVATED WERE NOT NECESSARILY INDICATED OR TOTALLY SHOWN ON THE PLAN. CONTRACTOR SHALL PAINT ALL NEW WORK, CONDUIT, AND PIPING AND UNDERSIDE OF WALK DECK. HAZARDOUS MATERIALS, SOLVENT, PAINT AND MASTIC REMOVAL, SEALANT, SEALER, COATING OR PAINT THAT CAN GENERATE LINGERING ODOR INSIDE THE ENCLOSED SPACE SHALL NOT BE USED IN THE PROJECT.

4. **EXISTING DIMENSIONS AND CONDITIONS**
DIMENSIONS AND MEASUREMENTS SHOWN IN THE PLAN WERE ONLY APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, FIELD MEASURE ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK.

5. **EXISTING ELECTRICAL AND DATA CONDUITS AND BOXES**
CONTRACTOR SHALL FIELD VERIFY THE EXISTENCE AND LOCATION OF EXISTING WALL, FLOOR AND UNDERSIDE MOUNTED ELECTRICAL AND DATA CONDUITS, PANEL AND JUNCTION BOXES. OFFSET AND REMOUNT AWAY FROM WORK AREA AS REQUIRED FOR RAILING AND CONCRETE REPAIR WORK. WORK DISTURBING EXISTING ELECTRICAL WIRING AND CONNECTION SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR.

6. **OFF HOUR WORK**
WORK ACTIVITY THAT GENERATE EXCESSIVE DUST, NOISE, SMELL, ODOR AND VIBRATION, AND WORK ACTIVITY THAT MAY PREVENT THE USE OF THE FACILITY SHALL BE CONDUCTED DURING NON-CLASS HOURS, SECURITY PERSONNEL ACCEPTABLE TO THE PROJECT MANAGER SHALL BE REQUIRED FOR ALL OFF HOUR WORK IN THE FACILITY. COST FOR ALL OFF HOUR WORK AND SECURITY PERSONNEL SHALL BE ENTIRELY BORNE BY THE CONTRACTOR.

7. **PROTECTION OF PROPERTY AND EXISTING WORK**
CONTRACTOR SHALL COVER AND PROTECT IN PLACE ALL WINDOW AND DOOR OPENINGS, EQUIPMENT, FIRE ALARM, FIRE EXTINGUISHER TO REMAIN. CONTRACTOR SHALL IDENTIFY ALL PRE-EXISTING DAMAGE AND SUBMIT AN ANNOTATED SUMMARY INCLUDING PHOTOS WITH DATE IF NECESSARY TO THE PROJECT MANAGER FOR RECORD.

8. **PROTECTION OF OPENING**
CONTRACTOR SHALL INSTALL TEMPORARY SAFETY RAILING TO ALL HALLWAYS, WALKWAY AND OPEN DECK ONCE EXISTING RAILING INCLUDING EXISTING TEMPORARY 4X4 POST AND 2X4 RAILING ARE REMOVED. ALL OPENINGS ABOVE GROUND FLOOR HALLWAY SHALL BE CLOSED WITH SECURITY FENCE AND SAFETY RAIL AT ANY MOMENT WITHOUT CONTRACTOR'S DIRECT SUPERVISION.

ENVIRONMENTAL REQUIREMENTS

1. PRIOR TO START OF CONSTRUCTION AND WITHIN 30 DAYS OF COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUBMIT TO HAWAI'I ARMY NATIONAL GUARD ENVIRONMENTAL OFFICE (HIARNG-ENV) A HAZARDOUS MATERIAL INVENTORY LOG OF CHEMICAL PRODUCTS TO BE USED IN THE PROJECT, AND PROVIDE AN UPDATE NO LATER THAN 31 JANUARY OF EACH CALENDAR YEAR. THE LOG SHALL INCLUDE THE PRODUCT NAME AND MANUFACTURER ID NUMBER, CONTAINER SIZE, AMOUNT USED, AND MAXIMUM NUMBER OF CONTAINERS TO BE STORED ON SITE AT ANY GIVEN DAY DURING THE PROJECT. MATERIAL SAFETY DATA SHEETS (MSDSS) SHALL BE PROVIDED OR MADE AVAILABLE TO THE PROJECT MANAGER AND HIARNG-ENV UPON REQUEST.

2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR WILL PROVIDE TO HIARNG-ENV AN ESTIMATE OF THE MAXIMUM AMOUNT OF HAZARDOUS WASTE EXPECTED TO BE GENERATED PER MONTH, AND THE TOTAL AMOUNT ANTICIPATED TO BE STORED ON-SITE AT ANY GIVEN TIME. ALL WASTE WILL BE STORED IN A SECURED AREA PENDING REMOVAL FOR DISPOSAL, WITH SIGNAGE INDICATING CONTACT INFORMATION AND SHALL BE MANAGED AND LABELED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

3. CONTRACTOR SHALL PROVIDE COPIES OF ALL WASTE DISPOSAL DOCUMENTATION (INCLUDING ANY REQUIRED LAB ANALYSES, WASTE PROFILES, AND ANY OTHER SUPPORTING DOCUMENTATION) TO THE GOVERNMENT CONTRACT REPRESENTATIVE (COR) AND HIARNG-ENV, ALONG WITH DRAFT COPIES OF THE WASTE MANIFESTS FOR REVIEW PRIOR TO WASTE SHIPMENT OFF-SITE FOR DISPOSAL. IF THE CONTRACTOR UTILIZES A HIARNG EPA ID NUMBER FOR WASTE DISPOSAL, MANIFESTS WILL ONLY BE SIGNED BY INDIVIDUALS AUTHORIZED BY HIARNG-ENV. ALL COSTS FOR DISPOSAL OF WASTE GENERATED BY THIS PROJECT SHALL BE PAID FOR BY THE CONTRACTOR.

ENVIRONMENTAL REQUIREMENTS (CONT.)

4. HIARNG-ENV APPROVAL IS REQUIRED FOR ANY FUELING OPERATIONS BEING CONDUCTED ON-SITE, WHICH WILL BE CONDUCTED IN ACCORDANCE WITH (IAW) ALL APPLICABLE REQUIREMENTS.

5. HIARNG-ENV APPROVAL IS REQUIRED FOR ANY ABOVEGROUND STORAGE TANK STAGED ON-SITE. FOR STORAGE OF OIL EXCEEDING THE EPA THRESHOLD OF 1,320 GALLONS SHELL CAPACITY OF OIL IN CONTAINERS 55 GALLONS OR GREATER, CONTRACTOR IS RESPONSIBLE FOR PREPARING A SPILL PREVENTION, CONTROL, AND COUNTERMEASURES (SPCC) PLAN IN ACCORDANCE WITH 40 CFR 112, AND PROVIDING A COPY TO HIARNG-ENV

6. CONTRACTOR SHALL USE PROTECTIVE MEASURES FOR ON-SITE CHEMICALS, EQUIPMENT AND VEHICLES TO PREVENT SPILLS AND LEAKS INTO THE ENVIRONMENT AND ENSURE ONLY RAINWATER, AS PERMITTED, ENTERS ON-SITE UICS, STORM DRAINS, SWALES, STREAMS, AND OTHER PATHS TO NAVIGABLE WATERS.

7. CONTRACTOR SHALL REPORT SPILLS IMMEDIATELY TO THE COR AND HIARNG-ENV AND COMPLETE THE HIARNG SPILL INCIDENT REPORT FORM AS REQUIRED. CONTRACTOR SHALL IMMEDIATELY CLEAN UP ALL SPILLS IAW FEDERAL AND STATE GUIDELINES AND TO THE SATISFACTION OF HIARNG-ENV, AND IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE CLEANUP. CONTRACTOR SHALL MAINTAIN ADEQUATE SPILL SUPPLIES COMMENSURATE WITH THE POTENTIAL FOR SPILLS, AND WILL CONTRACT OUT SPILL CLEANUP BEYOND THEIR CAPABILITIES. CONTRACTOR SHALL ACCOMPLISH ALL REGULATORY VERBAL AND WRITTEN NOTIFICATIONS TO THE STATE EMERGENCY RESPONSE COMMISSION (SERC), LOCAL EMERGENCY PLANNING COMMITTEE (LEPC), NATIONAL RESPONSE CENTER (NRC), ENVIRONMENTAL PROTECTION AGENCY (EPA), AS APPLICABLE, AND PROVIDE HIARNG-ENV COPIES OF ALL SPILL REPORTS.

8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL REQUIRED ENVIRONMENTAL PERMITS, E.G., CONSTRUCTION-RELATED SURFACE DISCHARGE PERMITS, COUNTY-REQUIRED INDUSTRIAL WASTEWATER DISCHARGE PERMITS, MINOR (POLLUTION) SOURCE AIR PERMITS, ETC. FOR ANY CONTRACT-RELATED WORK.

HAZARDOUS MATERIALS ABATEMENT

PRESENCE OF HAZARDOUS MATERIALS

HAZARDOUS MATERIALS WERE TESTED POSITIVELY AND FOUND IN BUILDING 1786 AND BUILDING 1787. WHENEVER THE CONFIRMED HAZARDOUS MATERIALS ARE TO BE DISTURBED DURING RENOVATION ACTIVITIES, ALL HAZARDOUS MATERIAL SHOULD BE PROPERLY REMOVED AND DISPOSED PRIOR TO GENERAL CONSTRUCTION ACTIVITIES PER CORRESPONDING SPEC SECTIONS. CONTRACTOR SHALL INSTALL TEMPORARY COVER AND PROTECTION DUE TO THE REMOVAL OF HAZARDOUS MATERIALS.

A. ACM (ASBESTOS CONTAINING MATERIALS) : THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP), 40 CFR 61 PART M, DEFINES ASBESTOS CONTAINING MATERIALS AS THOSE WHICH CONTAIN GREATER THAN 1% ASBESTOS IN ACCORDANCE WITH NESHAP REQUIREMENTS, SAMPLES FROM TARGETED AREAS CONSISTING OF DISTINCT LAYERS OF MATERIALS WERE ANALYZED, NO ASBESTOS WAS IDENTIFIES IN THE SAMPLES. ADDITIONAL SUSPECT ACM MAY EXIST WITHIN AND OUTSIDE THE SAMPLE AREAS EXAMINED. IF SUSPECT ACM ARE DISCOVERED DURING THE PLANNED RENOVATION ACTIVITIES, CONTRACTOR SHOULD CONDUCT ADDITIONAL TESTING AND ANALYSIS OF THE SUSPECT ACM.

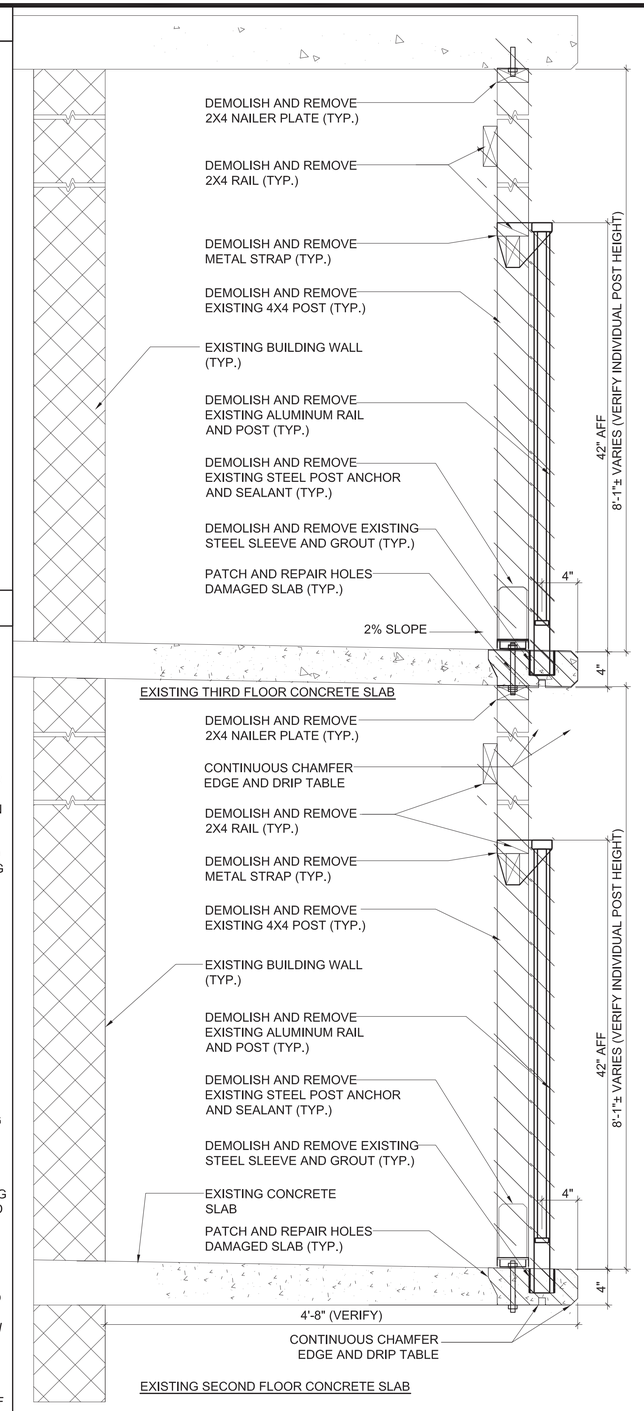
B. LBP (LEAD-BASED PAINTS): EPA DEFINES LEAD-BASE PAINT (LBP) AS PAINT OR COATINGS CONTAINING LEAD IN EQUAL OR IN EXCESS OF 0.5% LEAD BY WEIGHT. BASED ON THE LABORATORY ANALYTICAL RESULTS FROM SAMPLES COLLECTED FROM THE TARGET AREA, THE PAINT DID NOT HAVE LEAD CONCENTRATIONS EXCEEDING THE EPA GUIDELINES FOR LEAD IN PAINT.

C. LCP (LEAD-CONTAINING PAINT): PAINT WITH LEAD CONCENTRATIONS BELOW 0.5% BY WEIGHT IS IDENTIFIED AS LEAD -CONTAINING PAINT AS PAINT OR COATINGS. SAMPLING WAS CONDUCTED ON THE BUILDING COMPONENTS THAT MAY BE IMPACTED BY THE RENOVATION ACTIVITY. LEAD AT CONCENTRATIONS BELOW THE EPA GUIDELINES WAS IDENTIFIED IN VARIOUS PAINTS ON:

1. BEIGE COLORED CONCRETE POST AND DECK IN 2ND AND 3RD LEVEL HALLWAY.
2. BLUE OVER MAROON AND BEIGE COLORED STAIRCASE CONCRETE STAIR LANDING AND STEPS IN SECOND AND THIRD LEVEL HALLWAY.
3. TAN OVER MAROON STAIRCASE CMU WALL (LOWER PORTION) IN SECOND AND THIRD LEVEL HALLWAY.

PRIOR TO THE DISTURBANCE OF ANY PAINTS, CONTRACTOR'S EMPLOYEES REMOVING OR DISTURBING THE PAINTED MATERIAL MUST BE INFORMED THAT IT CONTAINS LEAD AND MUST HAVE RECEIVED TRAINING UNDER OSHA 29 CFR 1926.62 *LEAD* AND HIOSH 12-148,1 *LEAD*. IF ANY OTHER UNTESTED PAINTS ARE DISTURBED, THEY SHOULD BE ASSUMED TO CONTAIN LEAD.

IF THE PAINTED COMPONENTS CONTAINING THE LEAD ARE SCHEDULED FOR DEMOLITION, COMPOSITE SAMPLES OF THE EXPECTED BUILDING WASTE GENERATED SHOULD BE COLLECTED FOR *TOXICITY CHARACTERISTIC LEACHING PROCEDURE* (TCLP) ANALYSIS TO DETERMINE THE WASTE DISPOSAL CHARACTERIZATION. *HAWAI'I ADMINISTRATIVE RULES, TITLE 11, DEPARTMENT OF HEALTH, CHAPTER 261, HAZARDOUS WASTE MANAGEMENT* ALLOWS A MAXIMUM CONCENTRATION OF LEAD CONTAMINANT BY TCLP AT 5.0 MG/L. TCLP RESULTS EXCEEDING THE 5.0 MG/L THRESHOLD REQUIRES THE MATERIAL TO BE DISPOSED OF AS HAZARDOUS WASTE. RESULTS BELOW THIS THRESHOLD ALLOWS FOR THE MATERIALS TO BE DISPOSED OF AS CONSTRUCTION DEBRIS.

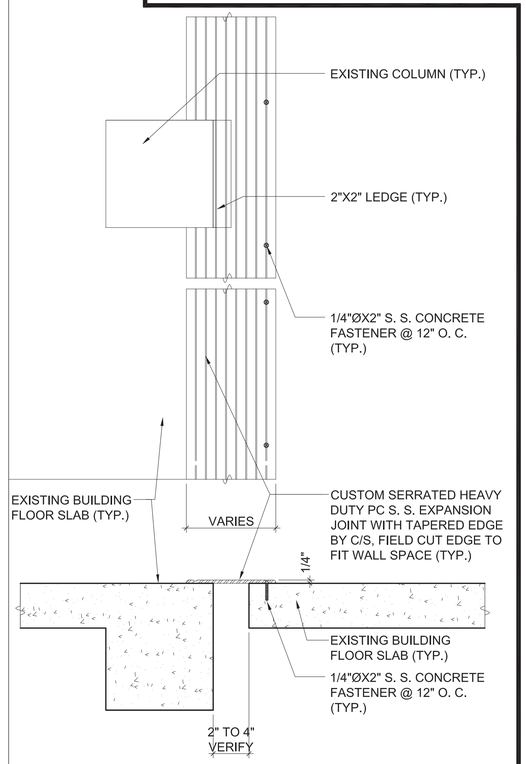


6 A101 004 EXISTING RAIL DEMOLITION DETAILS

SCALE: 1 1/2" = 1'–0"

6" 0 6" 12" 18"

SCALE: 1 1/2"=1'



7 A201 004 FLOOR EXPANSION JOINT COVER

SCALE: 1 1/2" = 1'–0"

6" 0 6" 12" 18"

SCALE: 1 1/2"=1'

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN
LICENSED PROFESSIONAL ARCHITECT
NO. 5401
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

REQUIREMENTS AND DETAILS

LOU CHAN & ASSOCIATES, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	004
DRAWN BY:	APPROVED BY:	DATE	SHEET
NS	LCC	APRIL 2017	4
SCALE: AS INDICATED			OF 24 SHTS.

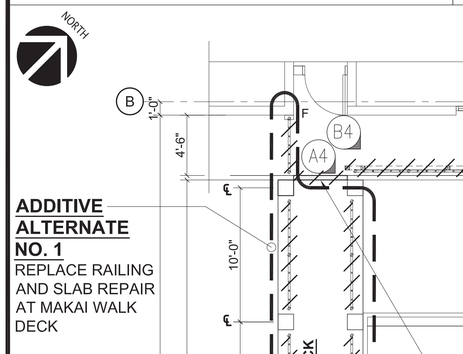
FILE_____ DRAWER_____ FOLDER_____

A4 - UNDERSIDE OF 2ND LEVEL

B4 - 2ND LEVEL DECK

A3 - UNDERSIDE OF 2ND LEVEL

B3 - 2ND LEVEL DECK



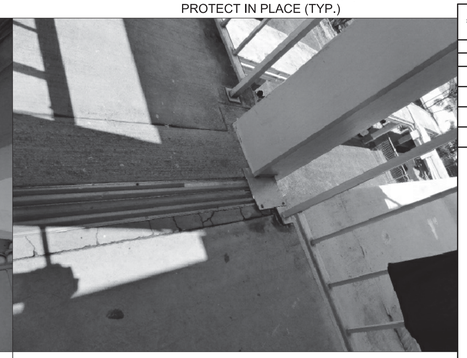
1 A101 A101 BUILDING 1786 AND 1787 - SECOND LEVEL CORRIDOR RAILING DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

A1 - UNDERSIDE OF 2ND LEVEL

B1 - 2ND LEVEL DECK

A2 - UNDERSIDE OF 2ND LEVEL



D2 (B2 SIMILAR) - 2ND LEVEL DECK

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U S A

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

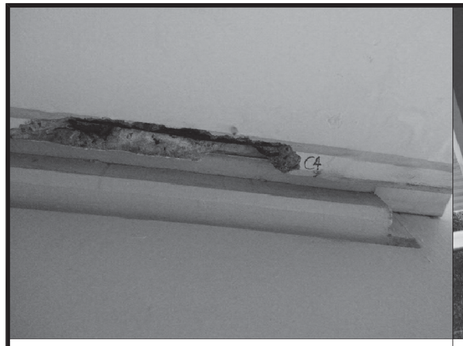
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SECOND LEVEL DEMOLITION PLAN

LOU CHAN & ASSOCIATES, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	A101
DRAWN BY:	APPROVED BY:	DATE	SHEET
NS	LCC	APRIL 2017	5 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

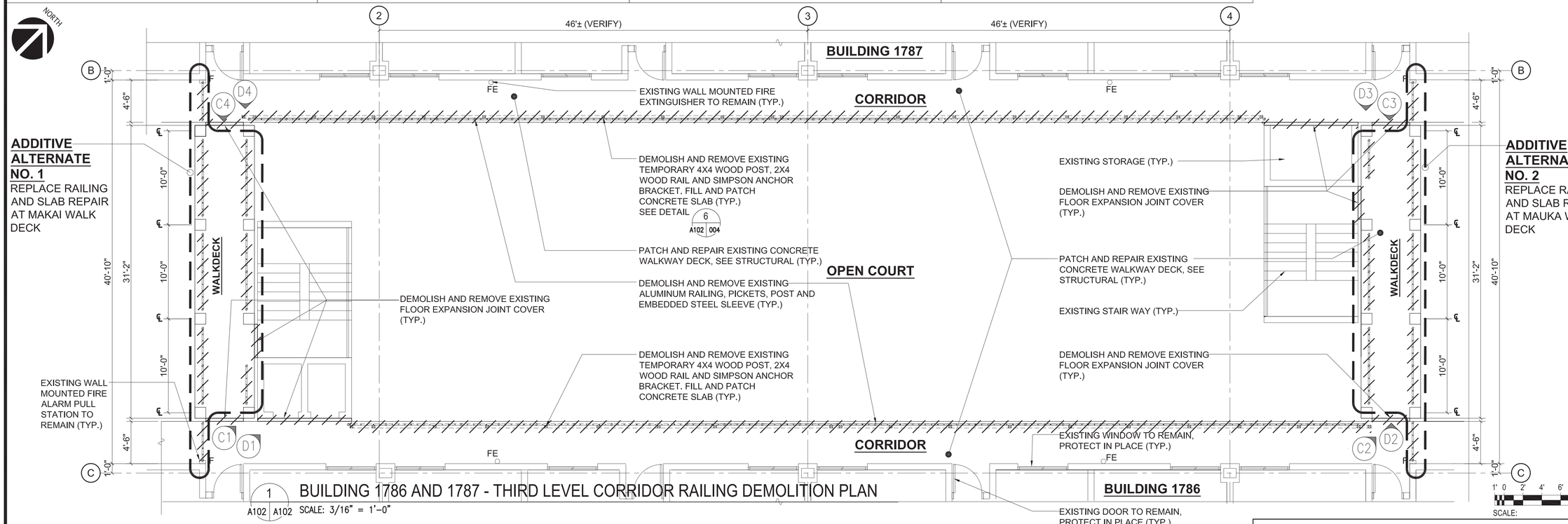


C4 - UNDERSIDE OF 3RD LEVEL

D4 - 3RD LEVEL DECK

C3 - UNDERSIDE OF 3RD LEVEL

D3 - 3RD LEVEL DECK



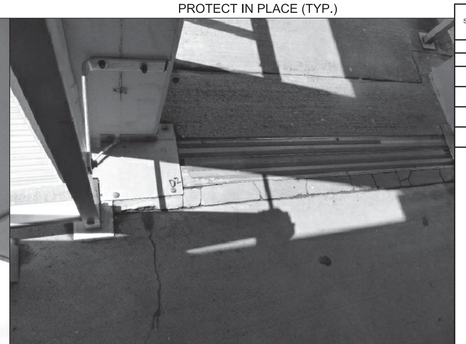
1 A102 A102 BUILDING 1786 AND 1787 - THIRD LEVEL CORRIDOR RAILING DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

C1 - UNDERSIDE OF 3RD LEVEL

D1 - 3RD LEVEL DECK

C2 - UNDERSIDE OF 3RD LEVEL



D2 - 3RD LEVEL DECK

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U.S.A.

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LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

THIRD LEVEL DEMOLITION PLAN

LOU CHAN & ASSOCIATES, INC.		JOB NO. CA-1605-C	DRAWING NO. A102
DESIGNED BY: LCC	CHECKED BY: LCC		
DRAWN BY: NS	APPROVED BY: LCC	DATE APRIL 2017	SHEET 6 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

ADDITIVE ALTERNATE NO. 1
REPLACE RAILING AND SLAB REPAIR AT MAKAI WALK DECK

ADDITIVE ALTERNATE NO. 2
REPLACE RAILING AND SLAB REPAIR AT MAUKA WALK DECK

EXISTING WALL MOUNTED FIRE ALARM PULL STATION TO REMAIN (TYP.)

EXISTING WALL MOUNTED FIRE EXTINGUISHER TO REMAIN (TYP.)

INSTALL SERRATED METAL FLOOR EXPANSION JOINT COVER (TYP.)

ALUMINUM TOP AND BOTTOM RAIL, SEE STRUCT DWGS (TYP.)

ALUMINUM POST AND MOUNTING PLATE ANCHORED TO TOP OF FLOOR AND UNDERSIDE OF SOFFIT, SEE STRUCT DWGS (TYP.)

ALUMINUM RAIL PICKET (TYP.)

EDGE OF CONCRETE DECK (TYP.)

EXISTING STORAGE (TYP.)

INSTALL SERRATED METAL FLOOR EXPANSION JOINT COVER (TYP.) SEE DETAIL 7 / A201 004

PATCH AND REPAIR EXISTING CONCRETE WALK DECK AND SOFFIT UNDERSIDE, SEE STRUCTURAL (TYP.)

EXISTING STAIR WAY (TYP.)

INSTALL SERRATED METAL FLOOR EXPANSION JOINT COVER (TYP.)

BUILDING 1787

CORRIDOR

OPEN COURT

WALKDECK

BUILDING 1786

NOTE:
ALSO SEE STRUCTURAL FOR RAILING AND CONCRETE WALL AND SLAB REPAIR.

1 BUILDING 1786 AND 1787 - SECOND LEVEL FLOOR PLAN

A201 | A201 SCALE: 3/16" = 1'-0"

1' 0 2' 4' 6' 10'

SCALE: 3/16"=1'

NORTH

EXT ELEV (A, B, C, D)

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

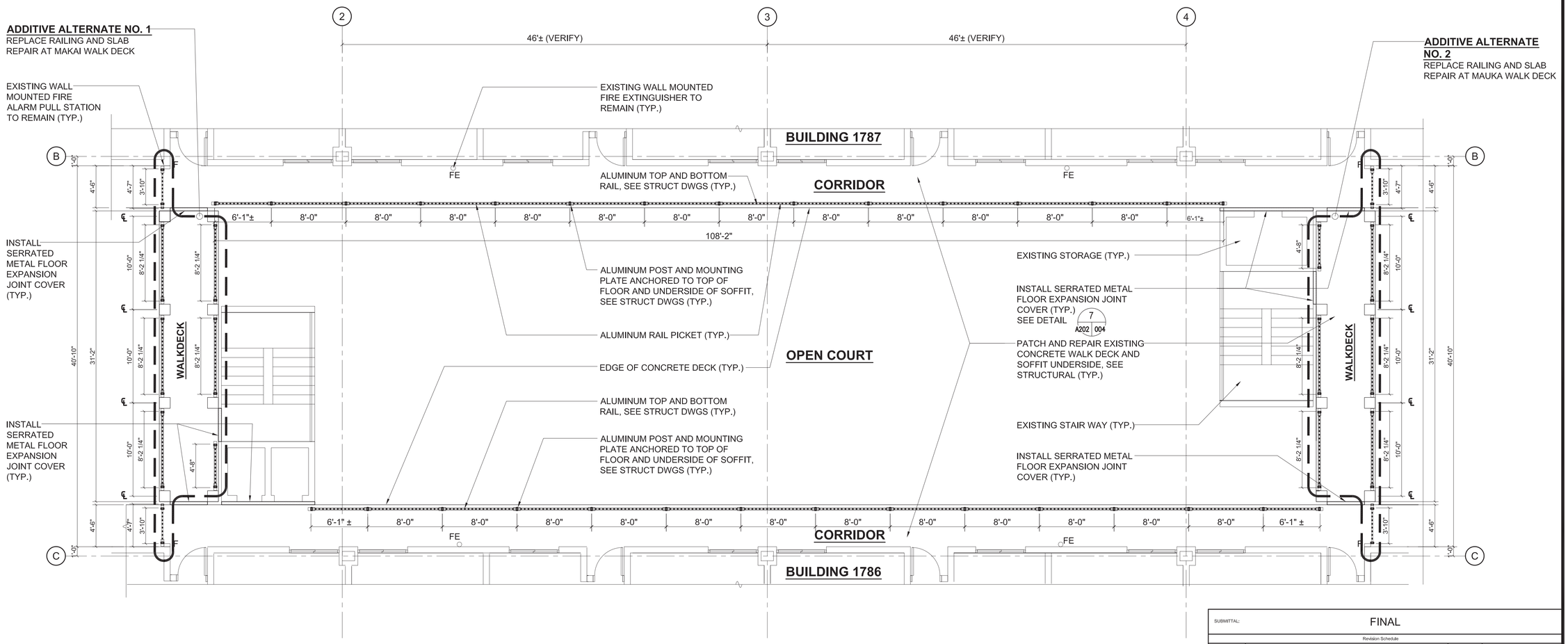
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SECOND LEVEL FLOOR PLAN

LOU CHAN & ASSOCIATES, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	A201
DRAWN BY:	APPROVED BY:	DATE	SHEET
NS	LCC	APRIL 2017	7 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



NOTE:
ALSO SEE STRUCTURAL FOR RAILING AND CONCRETE WALL AND SLAB REPAIR.

1 A202 | A202 BUILDING 1786 AND 1787 - THIRD LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

1' 0 2' 4' 6' 10'

SCALE: 3/16"=1'

NORTH

EXT ELEV A B C D

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

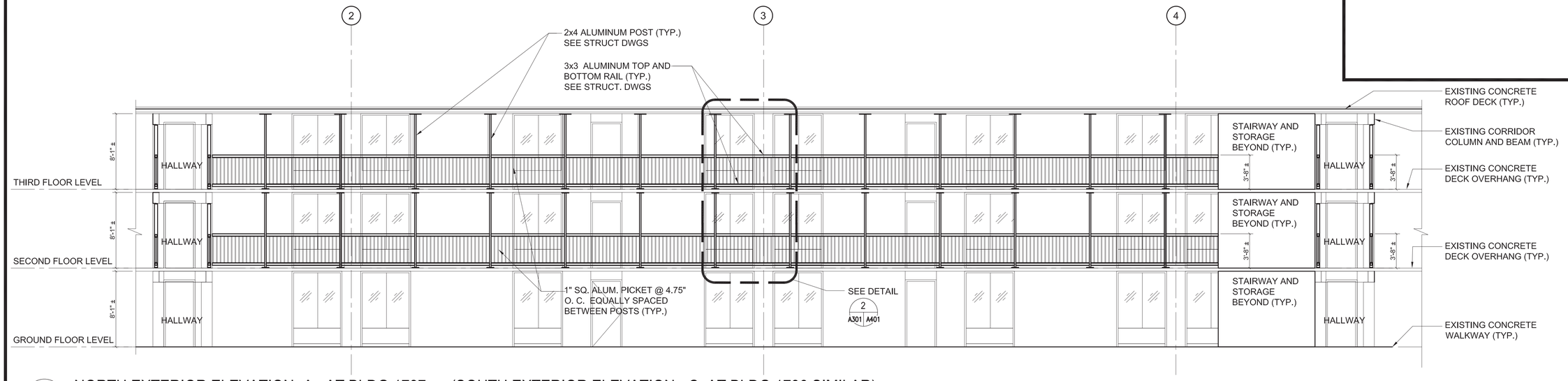
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

THIRD LEVEL FLOOR PLAN

LOU CHAN & ASSOCIATES, INC.		JOB NO. CA-1605-C	DRAWING NO. A202
DESIGNED BY: LCC	CHECKED BY: LCC		
DRAWN BY: NS	APPROVED BY: LCC	DATE APRIL 2017	SHEET 8 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

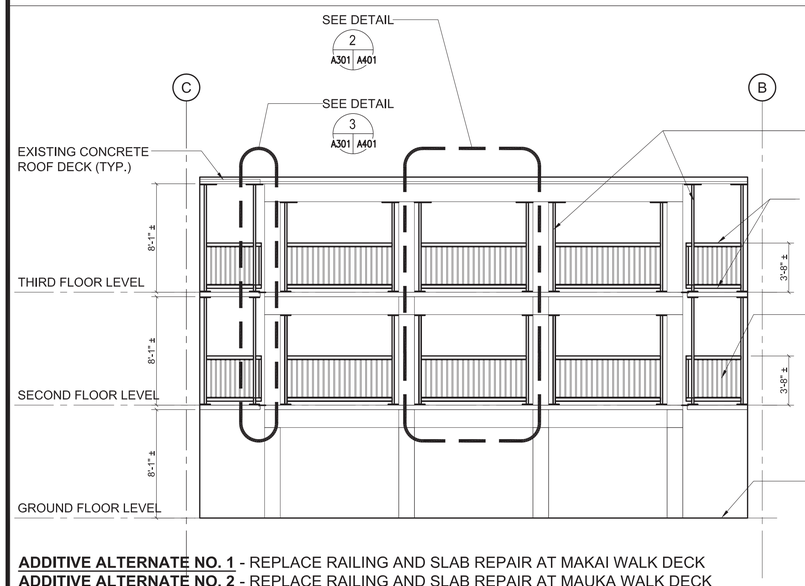


3 A301 A301 NORTH EXTERIOR ELEVATION -A AT BLDG 1787 (SOUTH EXTERIOR ELEVATION - C AT BLDG 1786 SIMILAR)

SCALE: 3/16" = 1'-0" 1' 0 2' 4' 6' 10'

SCALE: 3/16"=1'

PROJECT AREA

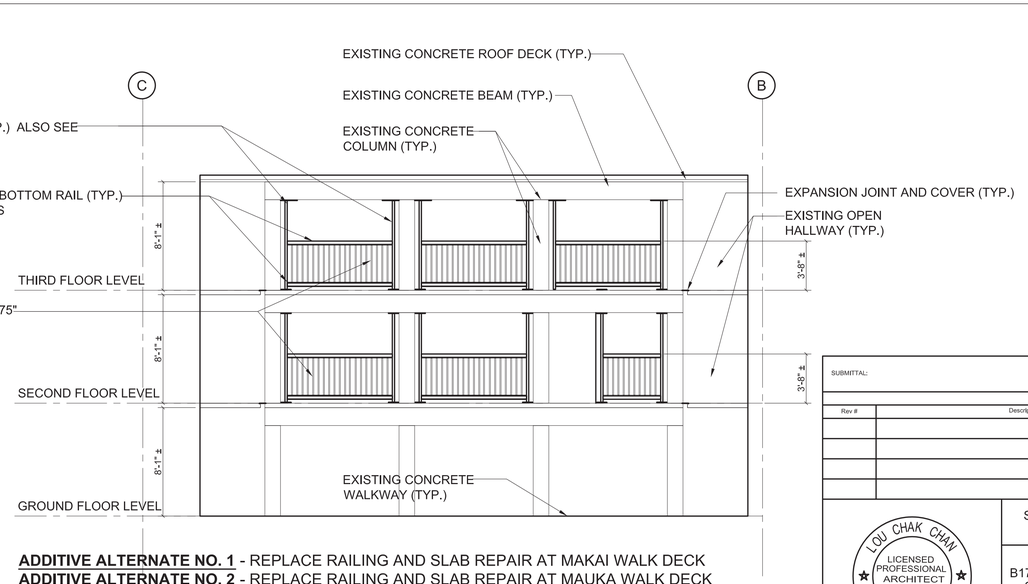


ADDITIVE ALTERNATE NO. 1 - REPLACE RAILING AND SLAB REPAIR AT MAKAI WALK DECK
ADDITIVE ALTERNATE NO. 2 - REPLACE RAILING AND SLAB REPAIR AT MAUKA WALK DECK

1 A301 A301 MAUKA EXTERIOR ELEVATION -B (MAKAI EXTERIOR ELEVATION -D SIMILAR)

SCALE: 3/16" = 1'-0" 1' 0 2' 4' 6' 10'

SCALE: 3/16"=1'



ADDITIVE ALTERNATE NO. 1 - REPLACE RAILING AND SLAB REPAIR AT MAKAI WALK DECK
ADDITIVE ALTERNATE NO. 2 - REPLACE RAILING AND SLAB REPAIR AT MAUKA WALK DECK

2 A301 A301 MAUKA EXTERIOR ELEVATION -B1 (MAKAI EXTERIOR ELEVATION - D1 SIMILAR)

SCALE: 3/16" = 1'-0" 1' 0 2' 4' 6' 10'

SCALE: 3/16"=1'

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN
LICENSED PROFESSIONAL ARCHITECT
NO. 5401
HAWAII, U.S.A.

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LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

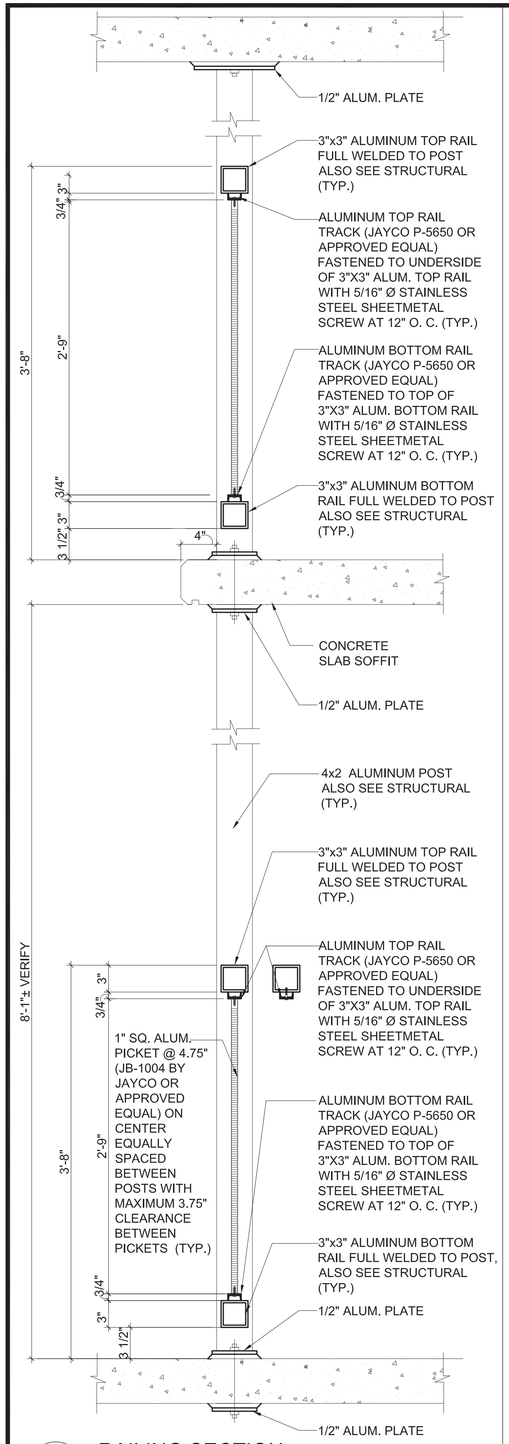
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

EXTERIOR ELEVATIONS

LOU CHAN & ASSOCIATES, INC.

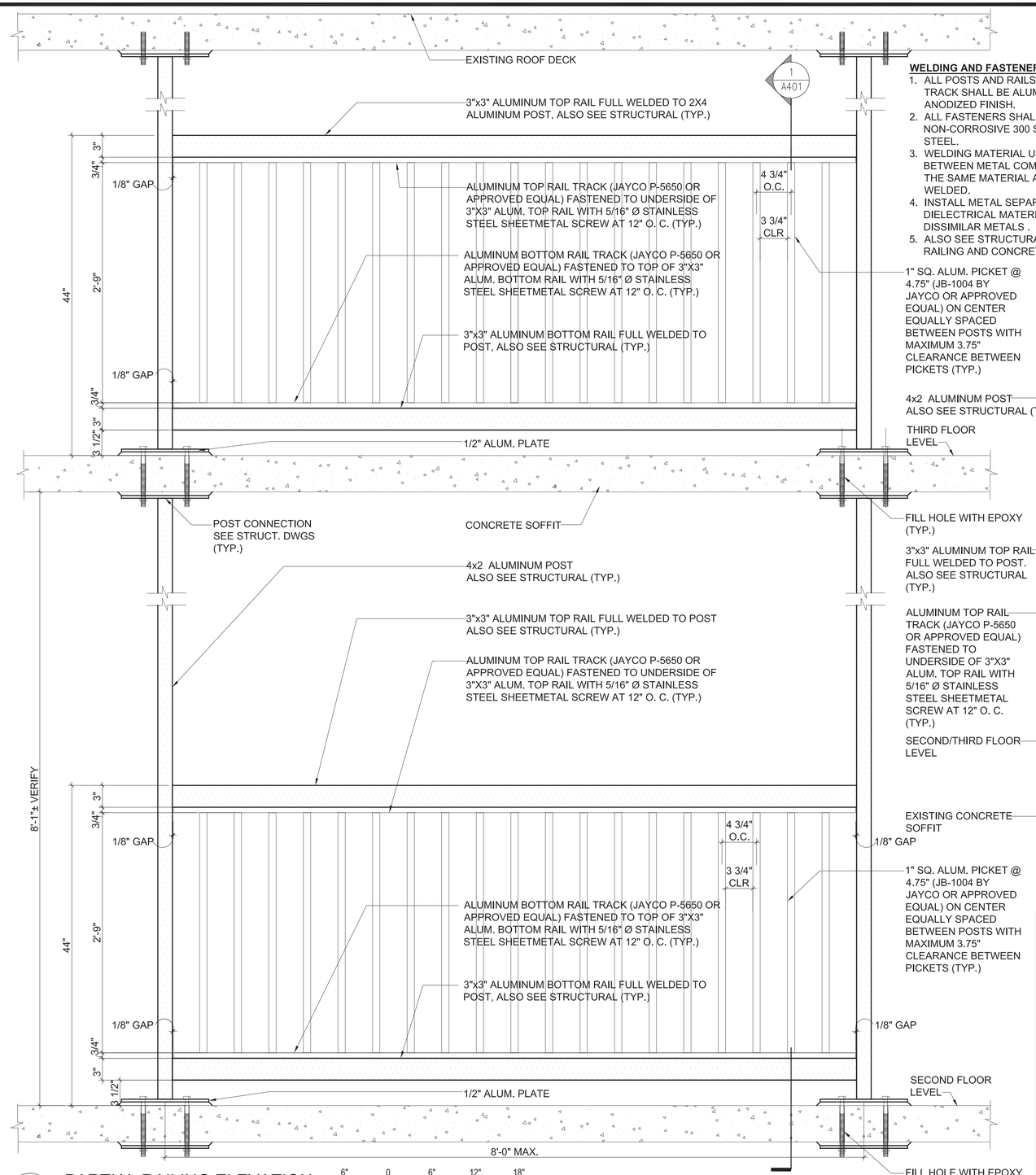
DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
LCC	LCC	CA-1605-C	A301
DRAWN BY:	APPROVED BY:	DATE	SHEET
NS	LCC	APRIL 2017	9 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 A401 | A401 SCALE: 1 1/2" = 1'-0"

RAILING SECTION



2 A301 | A401 SCALE: 1 1/2" = 1'-0"

PARTIAL RAILING ELEVATION

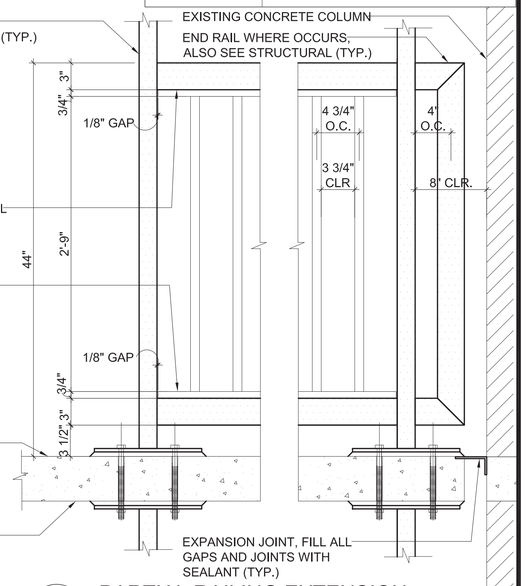
6" 0 6" 12" 18"
SCALE: 1 1/2"=1'

WELDING AND FASTENER NOTES:

1. ALL POSTS AND RAILS, PICKETS AND TRACK SHALL BE ALUMINUM WITH CLEAR ANODIZED FINISH.
2. ALL FASTENERS SHALL BE NON-CORROSIVE 300 SERIES STAINLESS STEEL.
3. WELDING MATERIAL USED FOR WELDING BETWEEN METAL COMPONENTS SHALL BE THE SAME MATERIAL AS THE METAL TO BE WELDED.
4. INSTALL METAL SEPARATOR OR DIELECTRICAL MATERIAL BETWEEN DISSIMILAR METALS .
5. ALSO SEE STRUCTURAL DWGS FOR RAILING AND CONCRETE REPAIR WORK.

FINISH SCHEDULE

CEILING	PAINT FINISH TO MATCH EXISTING FINISH COLOR
WALL	PAINT FINISH TO MATCH EXISTING FINISH COLOR
FLOOR	SEALANT TO MATCH EXISTING FINISH COLOR
RAILING	CLEAR ANODIZED



3 A301 | A401 SCALE: 1 1/2" = 1'-0"

PARTIAL RAILING EXTENSION

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

LOU CHAK CHAN LICENSED PROFESSIONAL ARCHITECT NO. 5401 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

LICENSE EXPIRATION DATE: 4/30/2018

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

RAILING DETAILS

LOU CHAN & ASSOCIATES, INC.		JOB NO. CA-1605-C	DRAWING NO. A401
DESIGNED BY: LCC	CHECKED BY: LCC		
DRAWN BY: NS	APPROVED BY: LCC	DATE APRIL 2017	SHEET 10 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

GENERAL

1. THE CONTRACTOR SHALL VERIFY ALL REPAIR QUANTITIES WITH THE ENGINEER BEFORE PROCEEDING WITH THE REPAIR WORK.
2. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS, EXISTING ELEVATIONS AND CONDITIONS AGAINST THE PROJECT DRAWINGS PRIOR TO STARTING WORK. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE DESIGN AND PROVISION OF ALL TEMPORARY BRACING, SHORING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
4. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE STARTING ANY WORK.
5. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS.
6. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. SHOULD THERE BE CONFLICTS BETWEEN THE REQUIREMENTS OF THE DRAWINGS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
7. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
8. DETAILS SHOWN ON THE DRAWINGS SHALL BE TYPICAL FOR ALL SIMILAR CONDITIONS. MODIFY DETAILS FOR SPECIAL CONDITIONS AS DIRECTED BY THE ENGINEER.
9. CONTRACTOR SHALL PROTECT EXISTING SURFACES AND OBJECTS TO REMAIN FROM DAMAGE. ANY ITEM TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED OR REPAIRED TO MATCH EXISTING ADJACENT SURFACES AT NO ADDITIONAL COST.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PROTECT THE NEW WORK AND EXISTING STRUCTURES DURING THE CONSTRUCTION.
11. NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY STRUCTURAL MEMBER UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
12. ALL EXISTING UTILITIES TO REMAIN, INCLUDING, BUT NOT LIMITED TO, COMMUNICATIONS AND ELECTRICAL LINES, CONDUITS, AND CABLES, SHALL BE PROTECTED FROM DAMAGES DURING CONSTRUCTION. ANY DAMAGES BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
13. DESIGN CRITERIA:
    A. CODES:
       2006 INTERNATIONAL BUILDING CODE (NEW CONSTRUCTION ONLY)
    B. DESIGN LIVE LOADS:
       RAILING = 50 PLF
                 250 LB

STRUCTURAL SPECIAL INSPECTION REQUIREMENTS

1. ALL SPECIAL INSPECTIONS SHALL BE DONE PER IBC SPECIAL INSPECTIONS PROVISIONS OF SECTION 1704 OF THE 2006 INTERNATIONAL BUILDING CODE GOVERNING PORTIONS OF THE STRUCTURAL WORK SHOWN IN THE STRUCTURAL DRAWINGS:
   A. EPOXY EMBEDS = REQUIRED
   B. FIELD WELDING = REQUIRED
2. CONTRACTOR SHALL HIRE AND PAY FOR THIRD PARTY SPECIAL INSPECTION AND TESTING SERVICES. SPECIAL INSPECTION SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AND TO PROVIDE SAFETY ON SITE.
3. CONTRACTOR SHALL NOTIFY SPECIAL INSPECTOR AT LEAST 72 HOURS IN ADVANCE FOR WORK TO BE PERFORMED REQUIRING SPECIAL INSPECTION. CONTRACTOR SHALL HAVE THE AREA REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES.

REINFORCING STEEL

1. REINFORCING STEEL BARS SHALL CONFORM TO ASTM A615 GRADE 60. REINFORCING STEEL BARS USED IN DETAIL 2/S501 SHALL CONFORM TO ASTM A706 GRADE 60.
2. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE – REINFORCING STEEL" (AWS D1.4).
3. REINFORCEMENT HOOKS AND BENDS SHALL BE STANDARD HOOKS CONFORMING TO THE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI 318–11), UNLESS OTHERWISE NOTED.
4. REINFORCEMENT SHALL BE LAPPED 48 BAR DIAMETERS, MINIMUM, AT SPLICES. STAGGER SPLICES WHEREVER POSSIBLE, UNLESS SHOWN OTHERWISE, OR REFER TO WELD SPLICE DETAIL 2/S501.
5. REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
6. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.
7. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
8. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE "ACI DETAILING MANUAL – 2004" (SP–66) AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.
9. CONTRACTOR SHALL SUBMIT REINFORCING BAR LAYOUTS AND DETAILS FOR ENGINEER'S REVIEW PRIOR TO FABRICATION. FABRICATE FROM REVIEWED DRAWINGS ONLY. PHOTO COPIES AND DUPLICATES OF CONSTRUCTION DOCUMENTS SUBMITTED AS SHOP DRAWINGS WILL BE REJECTED.

EPOXY MATERIAL

1. REFER TO DRAWINGS FOR STRUCTURES THAT REQUIRE EPOXY EMBEDDED CONNECTIONS.
2. EPOXY SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER INSTALLATION INSTRUCTIONS. HOLE SHALL BE PROPERLY CLEANED BY AIR HOSE AND/OR MANUFACTURER AIR NOZZLES.
3. DO NOT OVER DRILL HOLE AND PENETRATE BOTTOM OF SLAB.
4. EPOXY EMBEDDED STEEL RODS AND REINFORCING SHALL BE MADE INTO GROUTED CELLS ONLY. LOCATE GROUTED CELLS BY NON–DESTRUCTIVE METHODS. CONNECTION INTO PARTIALLY GROUTED CELLS SHALL BE MADE ONLY WHERE IDENTIFIED ON DRAWINGS. CENTER OF ROD OR BAR SHALL BE A MINIMUM OF 2" FROM CMU MORTAR JOINT LINE. REFER TO DRAWINGS FOR SPECIFIC PRODUCT AND INSTALLATION REQUIREMENTS.
5. CONFIRM EPOXY EXPIRATION DATE SHOWN ON PACKAGING.
6. TO PREVENT DAMAGE, CONTRACTOR SHALL LOCATE EXISTING STEEL REINFORCING BY NON–DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXISTING REINFORCING IF DAMAGE IS CAUSED.

DEMOLITION NOTES

1. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING FOR ALL DEMOLITION WORK.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS. ALL EXISTING DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR IN FIELD PRIOR TO STARTING WORK. ANY DISCREPANCIES WITH DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO STARTING WORK.
3. NEW OPENINGS IN EXISTING SLABS AND WALLS SHALL NOT BE OVERCUT.
4. NEW PIPES AND CONDUITS SHALL NOT BE EMBEDDED IN EXISTING CONCRETE AND CMU WALLS AND SLABS.
5. DEMOLITION DRAWINGS ARE BASED ON INFORMATION FROM FIELD INSPECTION. AS–BUILT DRAWINGS WERE NOT AVAILABLE. ALL EXISTING DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR IN FIELD PRIOR TO STARTING WORK. ANY DISCREPANCIES WITH DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO STARTING WORK.
6. CONTRACTOR SHALL PROTECT EXISTING SURFACES AND OBJECTS TO REMAIN FROM DAMAGES DURING CONSTRUCTION. ANY DAMAGES BY THE CONTRACTOR SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PROTECT THE NEW WORK AND EXISTING STRUCTURES DURING CONSTRUCTION.
8. EXISTING CONCRETE SURFACES THAT INTERFACE WITH NEW CONSTRUCTION SHALL BE REMOVED OF ALL LOOSE OR UNSOUND MATERIALS AND OTHER CONDITIONS THAT WOULD INHIBIT BOND SUCH AS PLASTER, LAITANCE, DUST, DIRT, OIL, CURING COMPOUND, EXISTING PAINT OR COATINGS, EFFLORESCENCE AND OTHER MATTER THAT COULD INTERFERE WITH THE BOND OF NEW CONSTRUCTION.

STRUCTURAL ALUMINUM

1. STRUCTURAL ALUMINUM SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL "SPECIFICATION FOR ALUMINUM STRUCTURES – BUILDING LOAD AND RESISTANCE FACTOR DESIGN"
2. STRUCTURAL ALUMINUM SECTIONS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

   PLATES = ASTM B 209, GRADE 6061–T6
   TUBES = ASTM B 308, GRADE 6061–T6

3. ALL BOLTS SHALL CONFORM TO ASTM F593 BOLTS, UNLESS OTHERWISE NOTED.
4. THE STRUCTURAL ALUMINUM FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL ALUMINUM FOR CONTRACTING OFFICER'S REVIEW BEFORE FABRICATION.
5. BOLT HOLES IN STEEL SHALL BE 1/16" LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNLESS OTHERWISE NOTED.
6. ALL WELDS SHALL BE IN CONFORMITY WITH THE STRUCTURAL WELDING CODE AWS D1.2 OF THE AMERICAN WELDING SOCIETY; SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. ALUMINUM ALLOY PARTS SHALL BE KEPT FROM DIRECT CONTACT WITH STEEL OR OTHER DISSIMILAR MATERIALS. SEE SPECIFICATIONS.
8. ALL GROUT (OR DRYPACK) BELOW BASE PLATES, BEAMS BEARING ON CONCRETE WALLS, ETC., SHALL BE NON–SHRINK, NON–STAINING, WITH F'C=5,000 PSI. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

REPAIR NOTES

1. INFORMATION SHOWN ON DRAWINGS WAS OBTAINED FROM FIELD OBSERVATIONS CONDUCTED IN FEBRUARY 2017.
2. CONTRACTOR'S SUPPLIERS AND MANUFACTURER'S REPRESENTATIVE SHALL VISIT THE SITE TO INSTRUCT ALL CONTRACTOR'S PERSONNEL PERFORMING THE WORK, BEFORE WORK BEGINS, ON THE PROPER MIXING, SURFACE PREPARATION AND APPLICATION OF THE REPAIR MATERIAL AND SHALL BE AVAILABLE ON AN ON–CALL BASIS THROUGHOUT THE EXTENT OF THE PROJECT. ANY COST ASSOCIATED WITH THIS REQUIREMENT SHALL BE INCLUDED IN THE BID PRICE.
3. SPALLS AND DELAMINATIONS ARE CALLED OUT AS "SPALLS". NO SEPARATE DISTINCTION IS MADE BETWEEN THEM SINCE THE REPAIRS ARE THE SAME.
4. 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.
5. 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.
6. CHIPPED OUT AREA WHEN REBARS ARE EXPOSED SHALL NOT BE LESS THAN 3/4" CLEAR AROUND THE BARS OR 1/4" LARGER THAN THE LARGEST AGGREGATE IN THE REPAIR MATERIAL WHICHEVER IS GREATER.
7. EDGES OF CHIPPED OUT AREAS SHALL BE SQUARE CUT BY SAW CUTTING FOR A MINIMUM DEPTH OF 3/4" 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.
8. SEE REPAIR NOTES AND DETAILS ON OTHER SHEETS. REPLACE EXISTING REBARS AS REQUIRED PER TABLE I ON SHEET S–501. 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.
9. DO NOT FEATHER EDGE REPAIRS.
10. 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 OWNER.
11. 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.
12. PAINT REPAIR SURFACE TO MATCH EXISTING CONDITION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

CONCRETE REPAIR MATERIAL

1. SURFACE REPAIR MORTAR SHALL BE A FACTORY BLENDED SURFACE REPAIR MATERIAL COMBINED WITH A POLYMER TYPE ADMIXTURE USED FOR REPAIRS WHERE FORMING IS NOT REQUIRED AND FOR AREAS LESS THAN 2 SQUARE FEET.
2. POLYMER MODIFIED CONCRETE SHALL BE A MIXTURE OF CEMENT, FINE AGGREGATE, COARSE AGGREGATE, POLYMER TYPE ADMIXTURE, SUPER–PLASTICIZING ADMIXTURE, CORROSION INHIBITOR ADMIXTURE AND WATER. IT SHALL BE USED FOR REPAIRS WHERE FORMING IS REQUIRED.
3. POLYMER MODIFIED MORTAR SHALL BE A MIXTURE OF CEMENT, FINE AGGREGATE, POLYMER TYPE ADMIXTURE, CORROSION INHIBITOR ADMIXTURE AND WATER. IT SHALL BE USED FOR REPAIRS WHERE FORMING IS REQUIRED.
4. UNLESS OTHERWISE INDICATED, ADMIXTURES SHALL BE USED AT THE CONTRACTOR'S OPTION SUBJECT TO APPROVAL OF THE ENGINEER.
5. USE OF CALCIUM CHLORIDE IN ANY CONCRETE IS PROHIBITED.

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479–S HAWAII, U.S.A.

License Expiration Date 04–30–18

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

Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

STRUCTURAL GENERAL NOTES

NAGAMINE OKAWA ENGINEERS, INC.

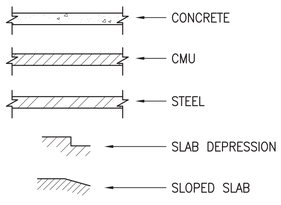
DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S001
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	11 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

ABBREVIATIONS

AB	ANCHOR BOLT
ADDT	ADDITIVE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
(B), BOT	BOTTOM
BLDG	BUILDING
BM	BEAM
BTWN	BETWEEN
CIP	CAST–IN–PLACE
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DO	DITTO
DWG(S)	DRAWING(S)
(E), EXST	EXISTING
EA	EACH
EF	EACH FACE
EL, ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
FF	FINISH FLOOR
FLR	FLOOR
FIN	FINISH
FTG	FOOTING
GALV	GALVANIZED
(H), HORIZ	HORIZONTAL
MTL	METAL
(N)	NEW
NO.	NUMBER
NS	NON–SHRINK
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE HAND
OPN'G	OPENING
OPP	OPPOSITE
PL	PLATE
REINF	REINFORCING
REQ'D	REQUIRED
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPECS	SPECIFICATIONS
SOG	SLAB–ON–GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
(T)	TOP
T&B	TOP AND BOTTOM
THK	THICK
THRU	THROUGH
TOF	TOP OF FOOTING
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
(V), VERT	VERTICAL
W/	WITH
WD	WOOD

LEGEND



SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE
LICENSED PROFESSIONAL ENGINEER
NO. 5479–S
HAWAII, U.S.A.

License Expiration Date 04–30–18

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Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

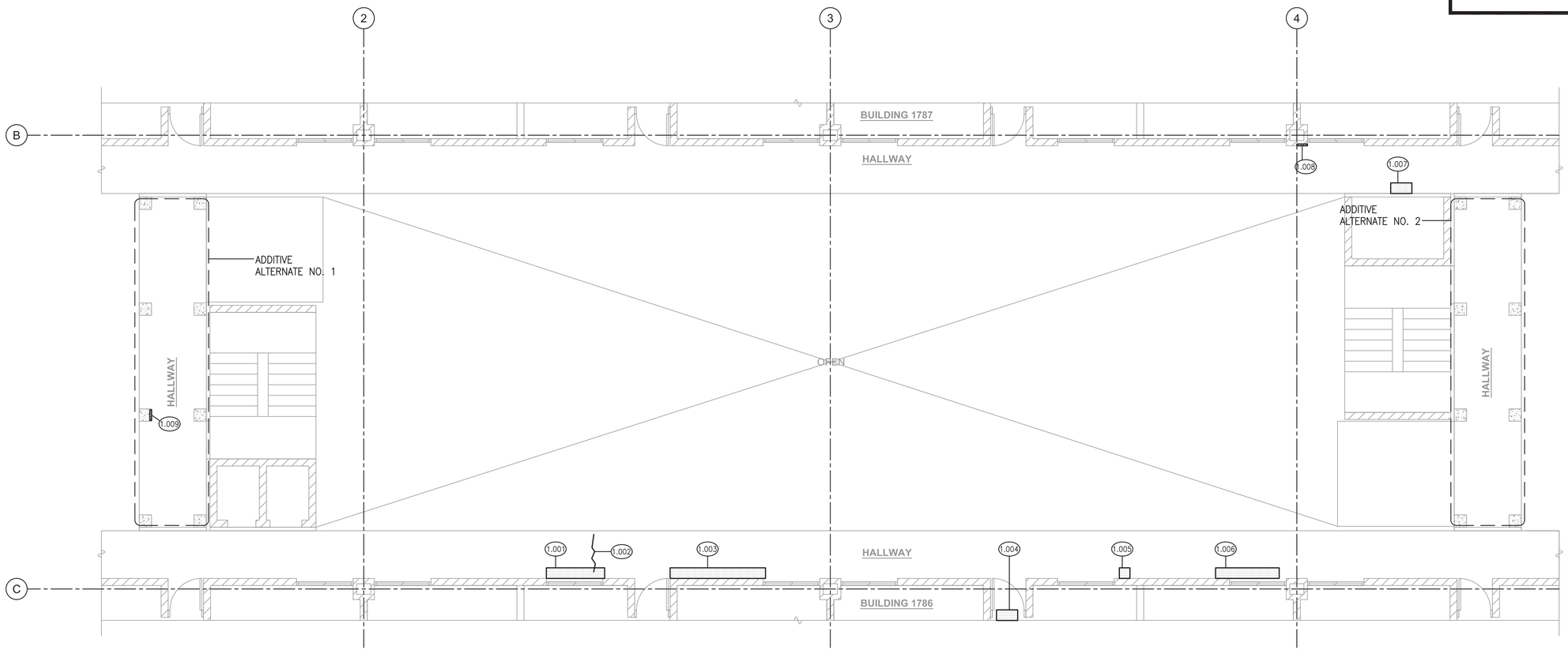
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

ABBREVIATIONS AND LEGEND

NAGAMINE OKAWA ENGINEERS, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S002
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	12 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 FIRST LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, OPENINGS, SLOPES, DEPRESSIONS, ETC.
3. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, DUCTS, PIPES, CONDUITS, ETC.
4. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.

LEGEND:

- SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.
- SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE
- CRACK REPAIR
- REPAIR NUMBER (X.XXX) LEVEL — REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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Norman K Nagamine
Signature

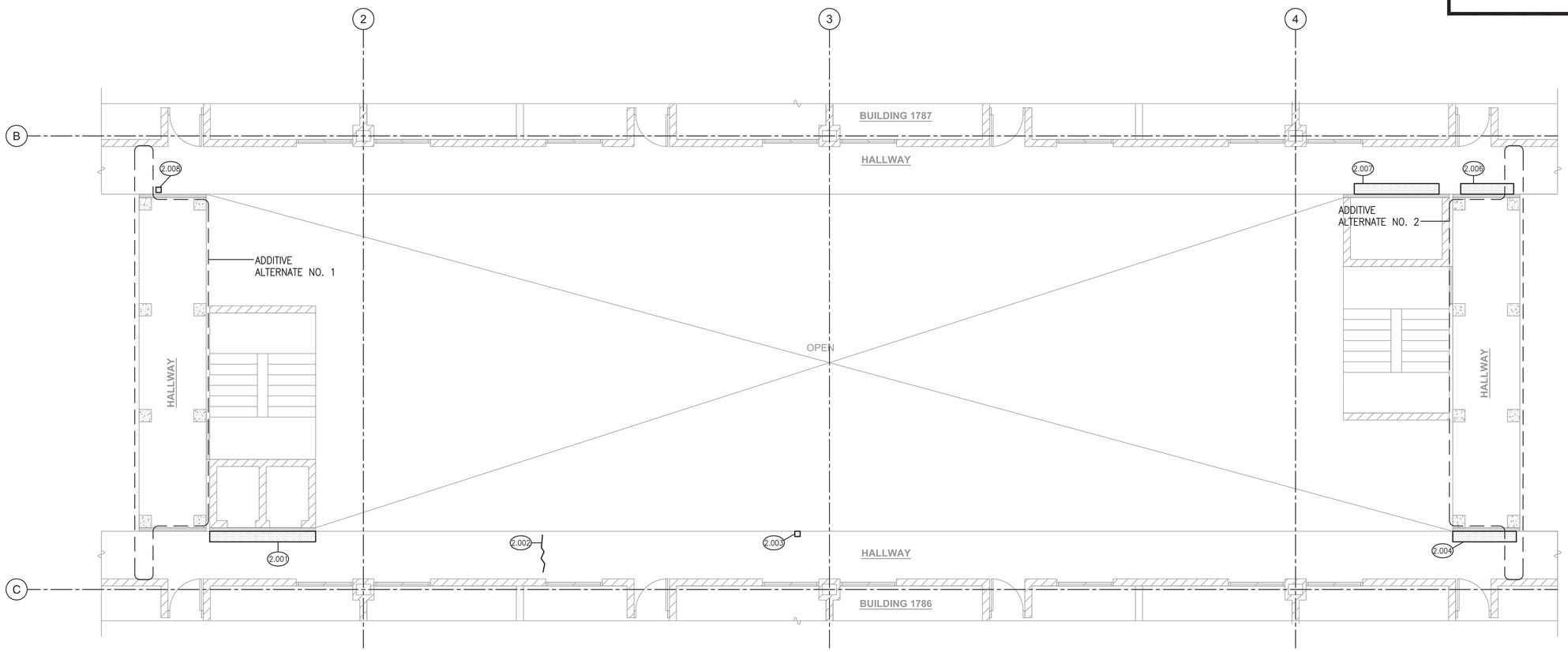
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

GROUND LEVEL FLOOR PLAN

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S101
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 13 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 SECOND LEVEL SOFFIT PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
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3. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, DUCTS, PIPES, CONDUITS, ETC.
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LEGEND:

SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.

SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE

CRACK REPAIR

REPAIR NUMBER (X.XXX) LEVEL

REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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Norman K. Nagamine
Signature

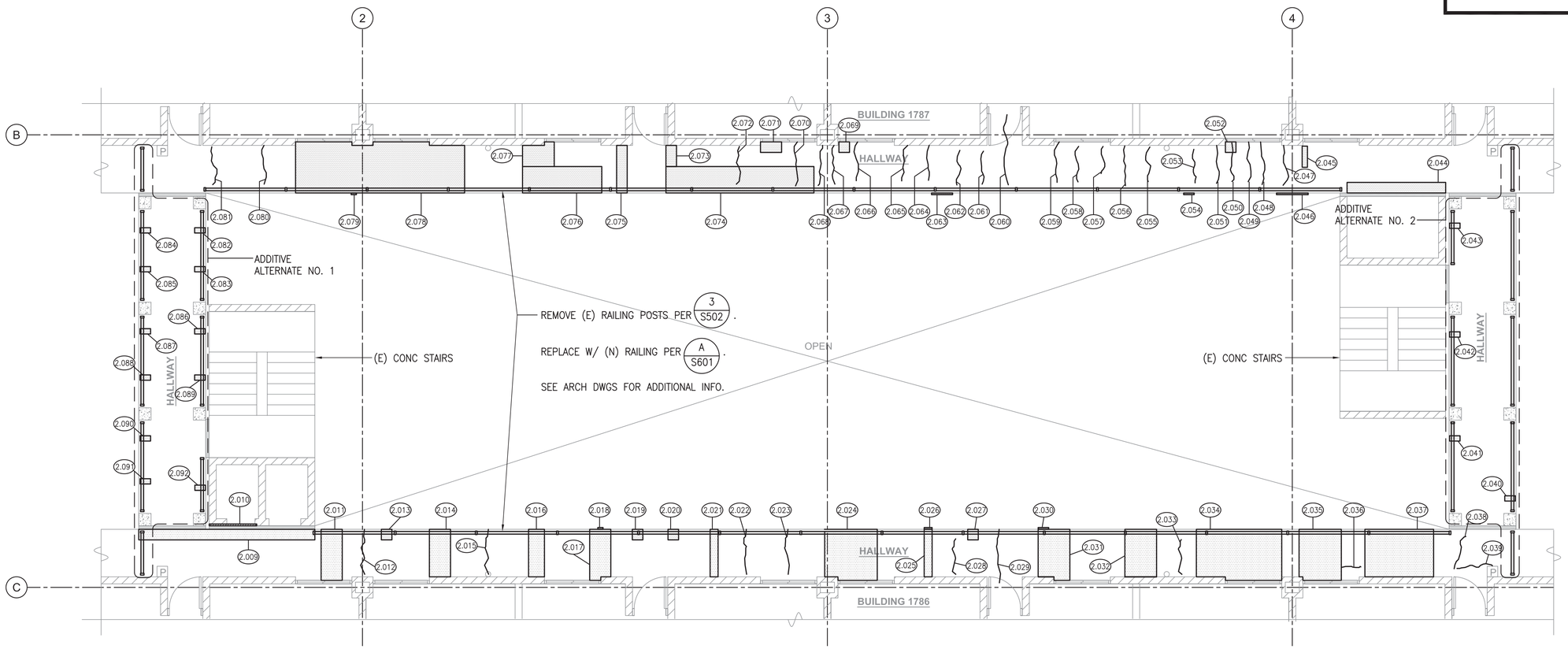
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SECOND LEVEL SOFFIT PLAN

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S102
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 14 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 SECOND LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
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LEGEND:

SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.

SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE

CRACK REPAIR

REPAIR NUMBER (X.XXX) LEVEL

REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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Norman K Nagamine
Signature

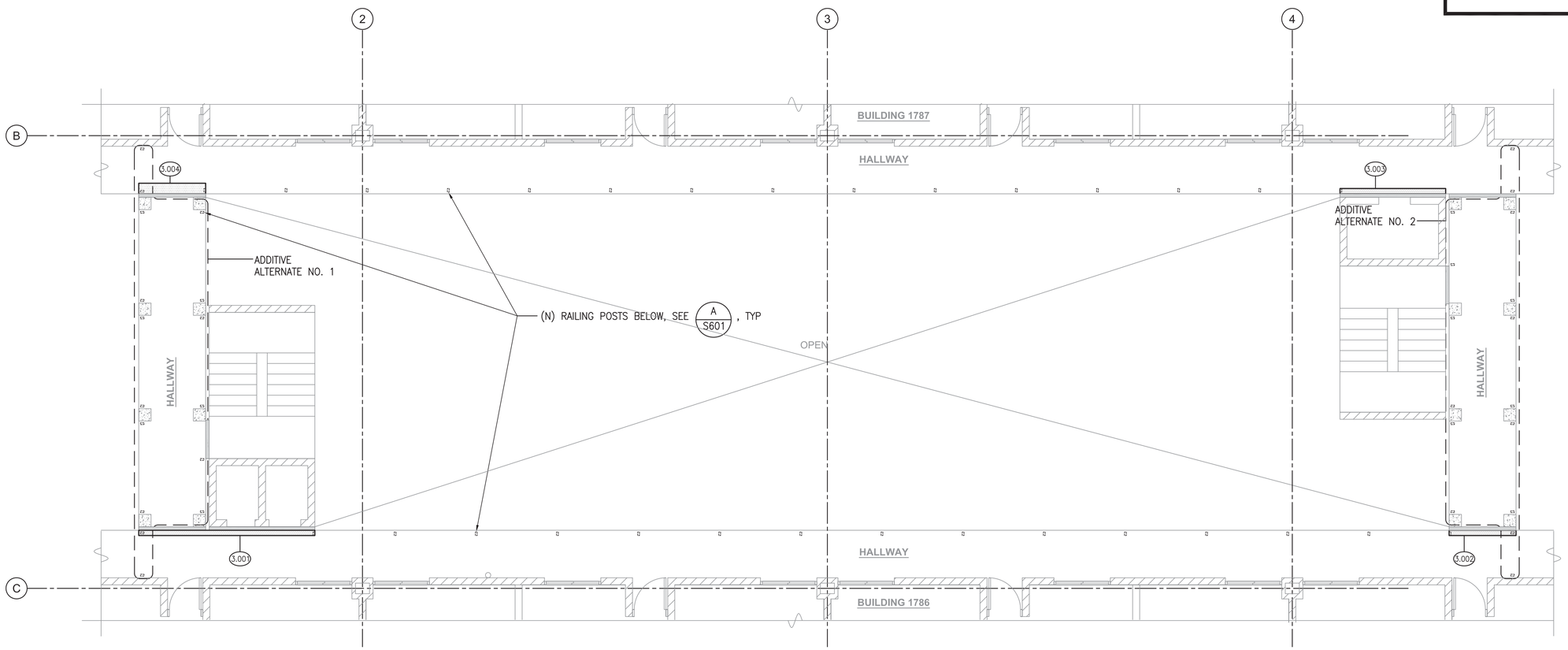
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SECOND LEVEL FLOOR PLAN

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S103
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 15 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 THIRD LEVEL SOFFIT PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, OPENINGS, SLOPES, DEPRESSIONS, ETC.
3. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, DUCTS, PIPES, CONDUITS, ETC.
4. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.

LEGEND:

SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.

SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE

CRACK REPAIR

REPAIR NUMBER (X.XXX) LEVEL

REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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Norman K. Nagamine
Signature

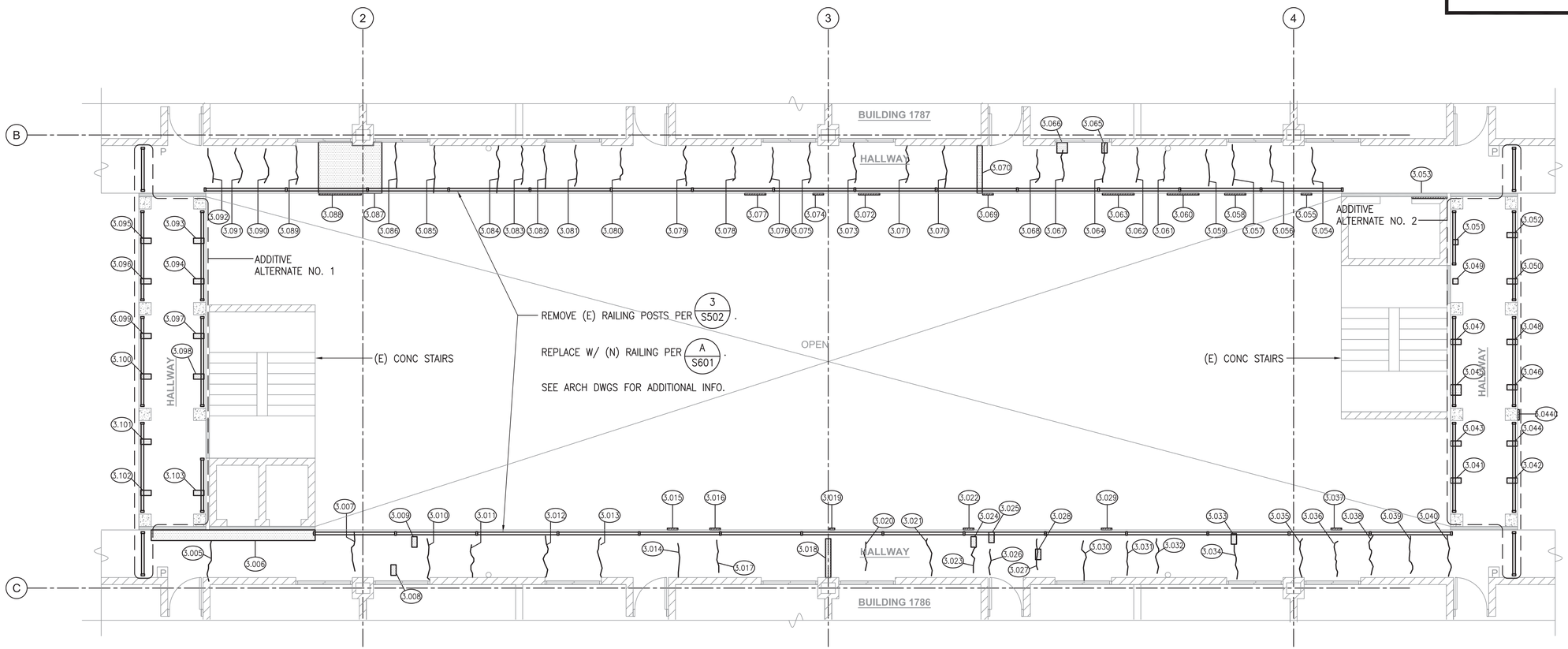
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

THIRD LEVEL SOFFIT PLAN

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S104
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 16 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 THIRD LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
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LEGEND:

- SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.
- SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE
- CRACK REPAIR
- REPAIR NUMBER (X.XXX) LEVEL — REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

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NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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Norman K Nagamine Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE ENGINEERING OFFICE

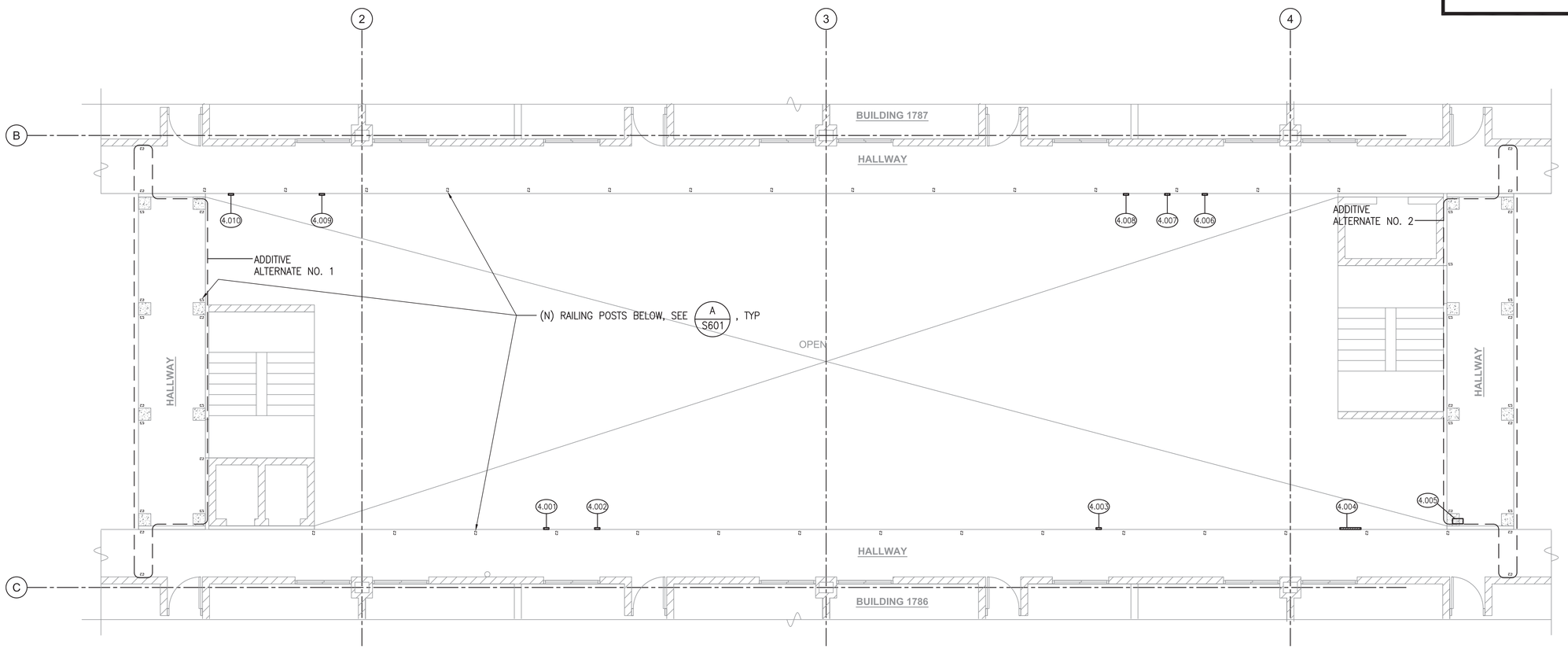
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

THIRD LEVEL FLOOR PLAN

NAGAMINE OKAWA ENGINEERS, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S105
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	17 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____



1 FOURTH LEVEL (ROOF) SOFFIT PLAN

SCALE: 3/16" = 1'-0"

NORTH

NOTES

1. REFER TO STRUCTURAL GENERAL NOTES ON SHEETS S001 AND S002 AND TYPICAL DETAILS ON SHEETS S501 THRU S505 FOR ADDITIONAL INFORMATION.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, OPENINGS, SLOPES, DEPRESSIONS, ETC.
3. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT, DUCTS, PIPES, CONDUITS, ETC.
4. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURE MEMBERS FROM EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION.

LEGEND:

SPALL OR DELAMINATION REPAIR IN CONCRETE SURFACE.

SPALL OR DELAMINATION REPAIR IN CONCRETE EDGE

CRACK REPAIR

REPAIR NUMBER (X-XXX) LEVEL

REPAIR NO. CORRESPONDING TO REPAIR SCHEDULE ON SHEET S505.

GRAPHIC SCALE:

0 1' 2' 4' 8' 16'

3/16"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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

Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

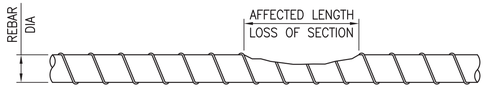
FOURTH LEVEL (ROOF) SOFFIT PLAN

NAGAMINE OKAWA ENGINEERS, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S106
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	18 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

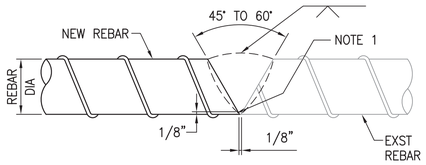
TABLE 1: MINIMUM REBAR DIAMETER AT SECTION LOSS	
REBAR SIZE	MINIMUM ACCEPTABLE DIAMETER AT SECTION LOSS
#3	5/16"
#4	7/16"
#5	1/2"
#6	5/8"
#7	3/4"
#8	13/16"
#9	15/16"
#10	1-1/16"



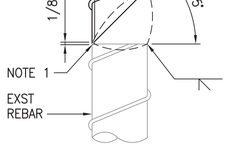
NOTE:

1. REMOVE HEAVY CORROSION AND SCALE FROM REBARS USING HAND TOOLS (EG: WIRE BRUSH) OR OTHER APPROVED METHODS.
2. IF REBAR DIAMETER AFTER CLEANING IS LESS THAN THAT SHOWN IN THE TABLE I ABOVE, REPAIR REBAR PER (2/S501).

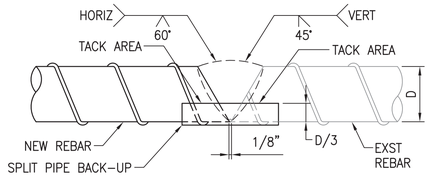
1 REBAR CLEANING AND LOSS OF SECTION
NOT TO SCALE



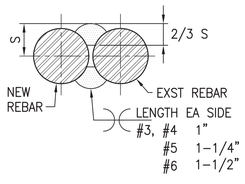
I–HORIZONTAL



III–VERTICAL



II–HORIZONTAL AND VERTICAL



IV–LAP SPLICE

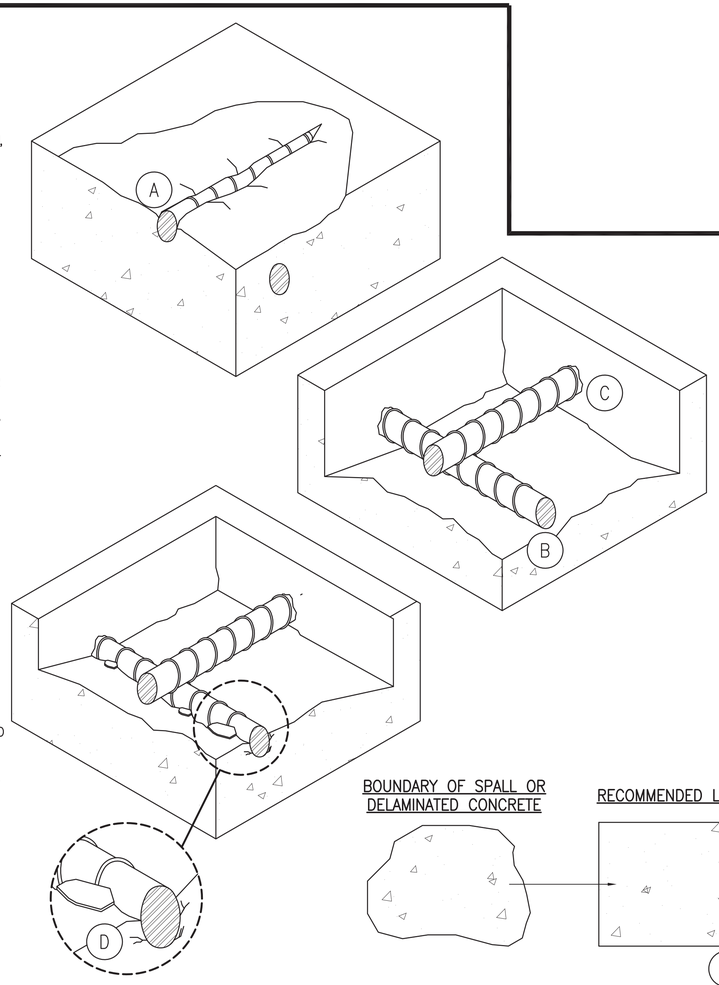
NOTE:

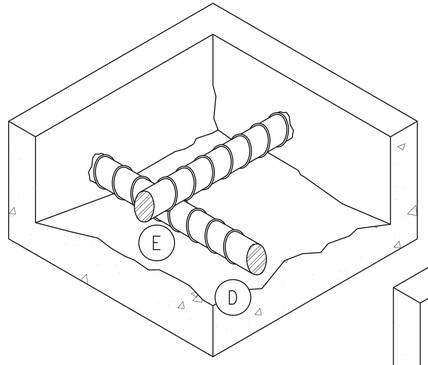
1. CHIP, GRIND OR GOUGE TO SOUND METAL BEFORE WELDING OTHER SIDE.
2. DETAIL I AND III FOR NO. 9 AND LARGER. DETAIL II FOR NO. 8 AND SMALLER. DETAIL IV FOR NO. 6 AND SMALLER.
3. E70 ELECTRODE FOR GR40, E90 ELECTRODE FOR GR60.
4. SEE AWS D1.4 FOR WELDING PROCESS AND OTHER DETAILS.

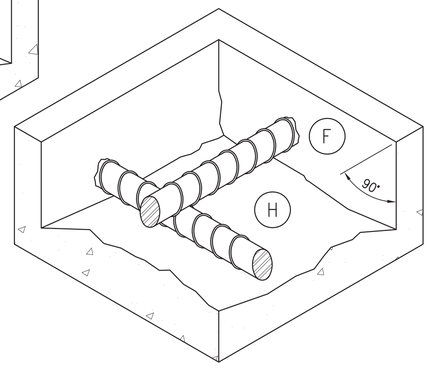
2 REBAR WELD SPLICE DETAIL
NOT TO SCALE

CONCRETE REPAIR NOTES

1. REFER TO BUILDING PLANS ON SHEETS S101 THRU S106 AND REPAIR SCHEDULES ON SHEET S505 FOR APPROXIMATE SIZE AND LOCATION OF EACH REQUIRED REPAIR.
2. SPALLS AND DELAMINATIONS ARE INDICATED AS "SPALLS" SINCE THE REPAIRS ARE THE SAME.
3. CONCRETE REPAIR SHALL BE IN CONFORMANCE WITH THE "CONCRETE REPAIR MANUAL", 2ND EDITION, INTERNATIONAL CONCRETE REPAIR INSTITUTE UNLESS OTHERWISE INDICATED.
4. CLEANING AND REPAIR OF REINFORCING STEEL SEE (1/S501) AND (2/S501).
5. EXPOSING AND UNDER CUTTING OF REINFORCING STEEL:
   - (A.) HAMMER SOUNDING TO LOCATE EXTENT OF DELAMINATED AREAS. IF CONCRETE SOUNDS "HOLLOW" OR IS CRACKED, REMOVE DETERIORATED CONCRETE. USE CHIPPING HAMMER LESS THAN 30# OR OTHER CONTRACTING OFFICER APPROVED METHODS TO REMOVE LOOSE OR DELAMINATED CONCRETE ABOVE CORRODED REINFORCING STEEL. DO NOT DAMAGE SOUND CONCRETE.
   - (B.) ONCE INITIAL REMOVALS ARE MADE, PROCEED WITH THE UNDERCUTTING OF ALL EXPOSED CORRODED BARS. UNDERCUTTING SHALL PROVIDE CLEARANCE FOR UNDER BAR CLEANING AND FULL BAR CIRCUMFERENCE BONDING TO SURROUNDING CONCRETE, AND TO SECURE THE REPAIR STRUCTURALLY. PROVIDE MINIMUM 3/4" CLEARANCE BETWEEN EXPOSED REBARS AND SURROUNDING CONCRETE OR 1/4" LARGER THAN THE LARGEST AGGREGATE IN REPAIR MATERIAL, WHICHEVER IS GREATER.
   - (C.) CONCRETE REMOVALS SHALL EXTEND ALONG THE BARS TO LOCATIONS ALONG THE BAR FREE OF BOND INHIBITING CORROSION, AND WHERE THE BAR IS WELL BONDED TO SURROUNDING CONCRETE.
   - (D.) IF NON–CORRODED REINFORCING STEEL IS EXPOSED DURING THE UNDERCUTTING PROCESS, CARE SHALL BE TAKEN NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR SHALL BE REQUIRED.
   - (E.) ANY REINFORCEMENT WHICH IS LOOSE SHALL BE SECURED IN PLACE BY TYING TO OTHER SECURED BARS OR BY OTHER CONTRACTING OFFICER APPROVED METHODS. APPLY HIGH–MODULUS EPOXY OVER BARS AND ALLOW TO HARDEN.
6. EDGE AND SURFACE CONDITIONING OF CONCRETE:
   - (F.) AT EDGE LOCATIONS, PROVIDE RIGHT ANGLE CUTS TO THE CONCRETE SURFACE WITH A SAWCUT 1/2" OR LESS AS REQUIRED TO AVOID CUTTING REINFORCING STEEL. DO NOT FEATHER EDGE.
   - (G.) REPAIR CONFIGURATIONS SHOULD BE KEPT AS SIMPLE AS POSSIBLE, PREFERABLY WITH SQUARED CORNERS.
   - (H.) AFTER REMOVALS AND EDGE CONDITIONING ARE COMPLETE, EXISTING CONCRETE SURFACE SHALL BE CLEAN, ROUGHENED AND SURFACE SATURATED DRY PRIOR TO RECEIVING PATCH MATERIAL. REMOVE BOND INHIBITING MATERIALS (DIRT, CONCRETE SLURRY, LOOSELY BONDED AGGREGATES) USING HAND TOOLS (EG: WIRE BRUSH) OR OTHER CONTRACTING OFFICER APPROVED METHODS. BLASTING USING ABRASIVE MEDIA OR WATER IS NOT ALLOWED. CHECK THE CONCRETE SURFACES AFTER CLEANING TO INSURE THAT SURFACE IS FREE FROM ADDITIONAL LOOSE AGGREGATE, OR THAT ADDITIONAL DELAMINATION ARE NOT PRESENT. APPLY CONCRETE BOND COAT BEFORE APPLICATION OF PATCHING MATERIAL PER MANUFACTURER RECOMMENDATIONS.
7. SEE NOTES ON SHEET S001 THRU S002 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.



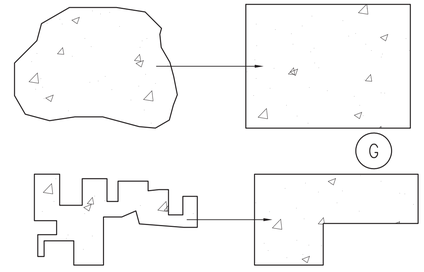




3 SURFACE PREPARATION OF SPALLED CONCRETE AND CORRODED REBARS
NOT TO SCALE

BOUNDARY OF SPALL OR DELAMINATED CONCRETE

RECOMMENDED LAYOUT



SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479–S HAWAII, U.S.A

License Expiration Date 04–30–18

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Norman K Nagamine
Signature

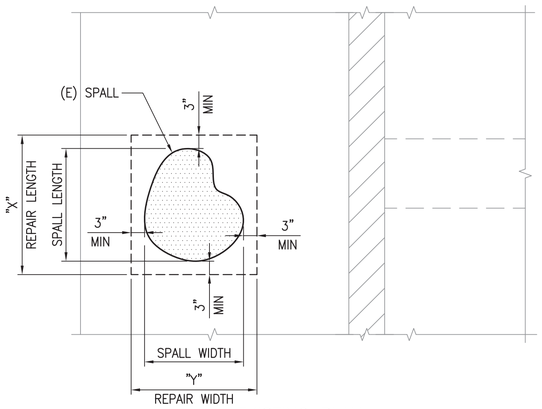
STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

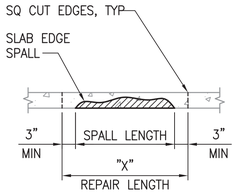
CONCRETE REPAIR DETAILS

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO.	DRAWING NO.
DESIGNED BY: JO	CHECKED BY: NN	CA-1605-C	S501
DRAWN BY: JQ	APPROVED BY: NN	DATE: APRIL 2017	SHEET 19 OF 24 SHTS.
SCALE: AS INDICATED			

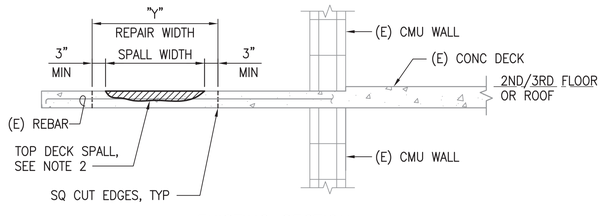
FILE_____ DRAWER_____ FOLDER_____



EXISTING PLAN



EXISTING ELEVATION



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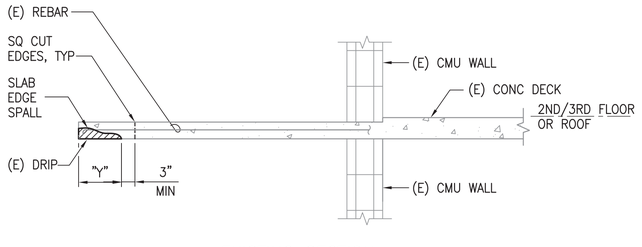

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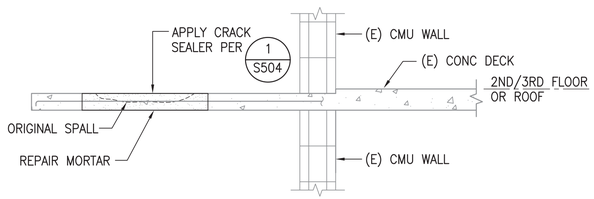


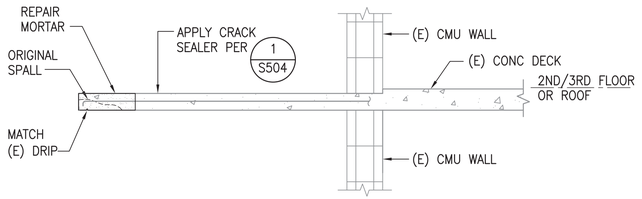
REPAIR SECTION

NOTES:

1. SPALLS AND DELAMINATIONS ARE CALLED OUT AS "SPALLS" SINCE THE REPAIRS ARE THE SAME.
2. FULL DEPTH SLAB REPLACEMENT SHALL BE DONE AT LOCATIONS WHERE TOP DECK REPAIR EXCEEDS HALF THE THICKNESS OF THE SLAB.
3. SEE CONCRETE REPAIR NOTES AND DETAILS ON SHEET S001 AND S501.
4. REPLACE CORRODED REBARS WHERE REQUIRED PER TABLE 1 ON SHEET S501.

1 SLAB OVERHANG - TOP DECK REPAIR DETAIL

SCALE: 3/4" = 1'-0"



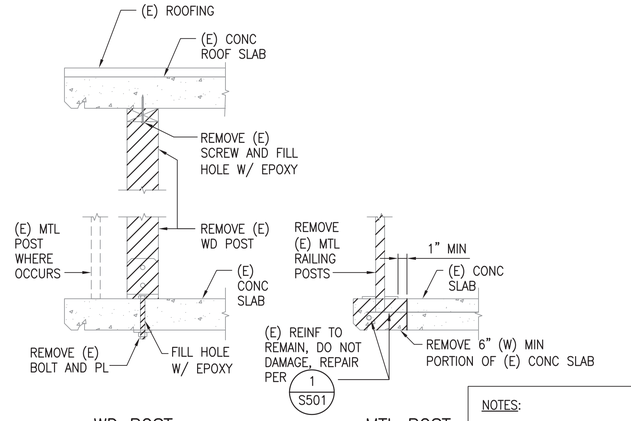
REPAIR SECTION

NOTES:

1. SPALLS AND DELAMINATIONS ARE CALLED OUT AS "SPALLS" SINCE THE REPAIRS ARE THE SAME.
2. SEE CONCRETE REPAIR NOTES AND DETAILS ON SHEET S001 AND S501.
3. REPLACE CORRODED REBARS WHERE REQUIRED PER TABLE 1 ON SHEET S501.

2 SLAB OVERHANG - EDGE REPAIR DETAIL

SCALE: 3/4" = 1'-0"



WD POST MTL POST

NOTES:

1. SEE PLANS ON SHEETS S101 THRU S106 AND REPAIR SCHEDULES ON S505 FOR ADDITIONAL REPAIRS NOT SHOWN.
2. SEE 2 S502 FOR CONCRETE DETAIL.

3 DETAIL

SCALE: 1 1/2" = 1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A.

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Norman K. Nagamine Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE ENGINEERING OFFICE

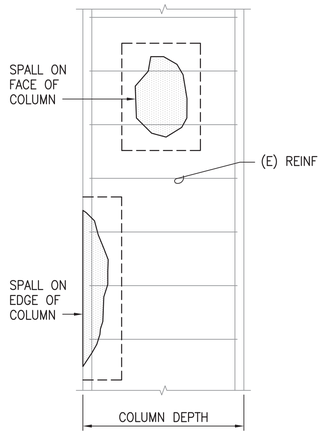
YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

SLAB OVERHANG REPAIR DETAILS

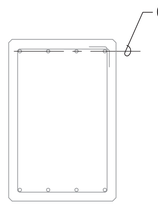
NAGAMINE OKAWA ENGINEERS, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S502
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	20 OF 24 SHTS.
SCALE: AS INDICATED			

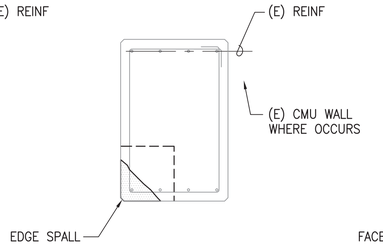
FILE_____ DRAWER_____ FOLDER_____



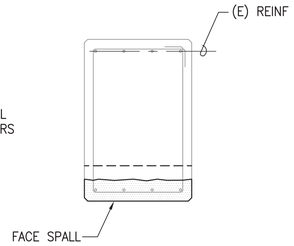
COLUMN ELEVATION



TYP (E) COLUMN PLAN



PLAN



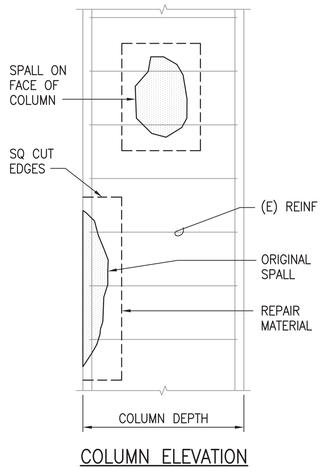
PLAN

NOTES:

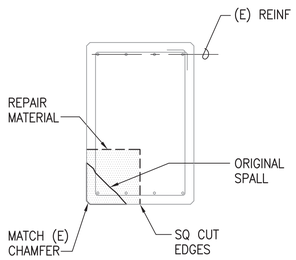
1. SPALLS AND DELAMINATIONS ARE CALLED OUT AS "SPALLS" SINCE THE REPAIRS ARE THE SAME.
2. SEE CONCRETE REPAIR NOTES AND DETAILS ON SHEETS S001, S002 AND S501.
3. REPLACE CORRODED REBARS WHERE REQUIRED PER TABLE 1 ON S501.

1 COLUMN SPALLS - EXISTING CONDITIONS

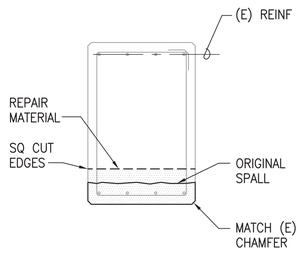
NOT TO SCALE



COLUMN ELEVATION



PLAN



PLAN

NOTE: SEE 1/S503

2 COLUMN SPALL REPAIRS

NOT TO SCALE

SUBMITTAL: FINAL

Revision Schedule

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NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

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Norman K Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

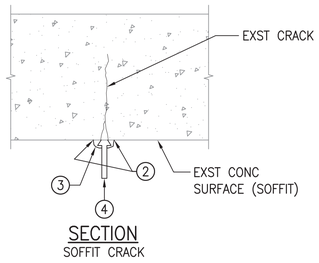
COLUMN REPAIR DETAILS

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S503
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 21 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____

CONCRETE SOFFIT CRACK REPAIR AT SOFFIT:

1. SEE STRUCTURAL REPAIR PLANS AND SCHEDULE FOR LOCATION OF CRACKS TO BE REPAIRED.
2. LIGHTLY TAP THE EXISTING CONCRETE ADJACENT TO THE CRACK. IF THE CONCRETE SOUNDS "HOLLOW", CHIP OFF THE SURFACE AND ANY DELAMINATED CONCRETE AND REPAIR AS A SPALL PER 1/S502; OTHERWISE, PROCEED TO STEP 3 BELOW.
3. CLEAN THE EXISTING CONCRETE SURFACE ALONG THE CRACK OF ALL LOOSE, BOND INHIBITING AND OTHER DELETERIOUS MATERIALS, INCLUDING ANY EXISTING CRACK SEALANT BY USE OF HAND TOOLS. SEAL THE CRACK WITH THE SURFACE CAP SEALANT AND INSTALL THE PRESSURE INJECTION PORTS OVER THE CRACK AT A MAXIMUM INTERVAL OF 12" ON CENTERS. ENSURE CAP SEALANT COMPLETELY BRIDGES CRACK.
4. WITH STEADY PRESSURE, PRESSURE INJECT THE EPOXY BEGINNING WITH THE INJECTION PORT AT ONE END OF THE CRACK (BOTTOM OF THE CRACK FOR VERTICAL CRACKS). WHEN EPOXY EMERGES FROM THE NEXT ADJACENT PORT, MOVE TO THE NEXT ADJACENT PORT AND CONTINUE WITH THE EPOXY INJECTION.
5. AFTER THE EPOXY HAS CURED, REMOVE THE INJECTION PORTS AND CAP SEALANT.
6. FINISH CONCRETE SURFACE TO MATCH EXISTING AND APPLY CONCRETE SEALER FLUSH AND SMOOTH WITH SLAB SOFFIT.



SECTION
SOFFIT CRACK

CONCRETE CRACK REPAIR AT TOP SLAB:

1. SEE STRUCTURAL REPAIR PLANS AND SCHEDULE FOR LOCATION OF CRACKS TO BE REPAIRED.
2. LIGHTLY TAP THE EXISTING CONCRETE ADJACENT TO THE CRACK. IF THE CONCRETE SOUNDS "HOLLOW", CHIP OFF THE SURFACE AND ANY DELAMINATED CONCRETE AND REPAIR AS A SPALL PER 1/S502; OTHERWISE, PROCEED TO STEP 3 BELOW.
3. SEAL THE CRACKS ON THE SLAB SOFFIT TO PREVENT LEAKAGE OF THE EPOXY CRACK HEALER / PENETRATING SEALER. THE CRACK SURFACE SEALER SHALL BE REMOVED FLUSH AND SMOOTH WITH SLAB SOFFIT AFTER THE CRACK REPAIR IS COMPLETED.
4. AFTER ALL EXISTING SPALLS HAVE BEEN REPAIRED, CLEAN THE TOP SURFACE OF THE EXISTING SLAB. REMOVE DUST, LAITANCE, GREASE, OILS, FOREIGN PARTICLES, COATINGS AND DISINTEGRATED MATERIALS BY MECHANICAL MEANS, i.e. SANDBLASTING OR HIGH PRESSURE WATER JETTING. CONCRETE SURFACE SHALL BE DRY. GRAVITY FEED A LOW-VISCOSITY, MOISTURE TOLERANT, EPOXY CRACK HEALER / PENETRATING SEALER CONFORMING TO ASTM C881, TYPE I AND II, CLASS C SUCH AS SIKADUR 55 SLV INTO THE CRACKS. THE EPOXY CRACK HEALER / PENETRATING SEALER SHALL BE APPLIED TO THE CONCRETE SLAB SURFACE BY FLAT SQUEEGEE OR BROOM. SPREAD THE MATERIAL OVER THE SLAB AREA AND ALLOW TO POND OVER CRACKS. LET THE EPOXY PENETRATE INTO THE CRACKS AND REMOVE EXCESS EPOXY WITH ROLLER LEAVING NO VISIBLE SURFACE FILM.

1 TYPICAL CONCRETE CRACK REPAIR DETAIL
NOT TO SCALE

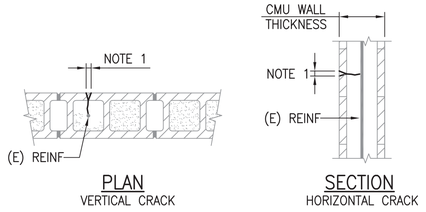
CMU CHIP/SPALL REPAIR NOTES:

1. REFER TO BUILDING PLANS AND ELEVATIONS ON SHEETS S101 THRU S106 AND REPAIR SCHEDULES ON SHEET S505 FOR APPROXIMATE SIZE AND LOCATION OF EACH REQUIRED CHIP/SPALL REPAIR.
2. CHIP-OFF THE FACE-SHELL TO SOUND BLOCK/GROUT BENEATH. THE EXISTING CMU SURFACE SHALL BE REMOVED TO A MINIMUM OF 1/2" DEEP THROUGHOUT AND VERTICAL SURFACES SHALL BE PROVIDED AT RIGHT ANGLES ALONG ALL SIDES OF THE CHIPPED AREA. CHIPPING SHALL BE PERFORMED WITH LOW-IMPACT CHIPPING GUNS AND CARE SHALL BE TAKEN TO AVOID OVER-CHIPPING AND/OR DAMAGING THE EXISTING REINFORCING STEEL. DO NOT USE HIGH-IMPACT BUSTERS TO CHIP THE EXISTING CMU.
3. IF CORRODED REINFORCING STEEL IS ENCOUNTERED, REMOVE THE LOOSE AND/OR DELAMINATED GROUT AROUND AND BEHIND THE BAR(S) TO PROVIDE A CLEARANCE OF 3/4" BETWEEN THE EXPOSED REINFORCING BAR(S) AND THE BASE GROUT. THE GROUT REMOVAL SHALL EXTEND ALONG THE LENGTH OF A CORRODED REINFORCING BAR TO LOCATIONS ALONG THE BAR FREE OF BOND INHIBITING CORROSION AND TO WHERE THE BAR IS BONDED TO SOUND SURROUNDING GROUT.
4. IF THE GROUT-TO-STEEL BOND OF NON-CORRODED REINFORCING BARS IS DAMAGED DURING THE CHIPPING PROCESS, THE CONCRETE SURROUNDING THESE BARS SHALL ALSO BE UNDERCUT AS NOTED IN STEP 3 ABOVE. IF NO REINFORCING STEEL IS EXPOSED FOLLOWING THE CHIPPING OPERATION, PROCEED TO STEP 6 BELOW.
5. CLEAN THE EXPOSED REINFORCING STEEL BARS FREE OF ALL CORROSION USING A POWER WIRE BRUSH, REMOVE ALL SCALE, OIL, DIRT AND OTHER BOND INHIBITING CONTAMINANTS AND APPLY THE ANTI-CORROSION EPOXY COATING TO ALL EXPOSED BAR SURFACES. ALLOW THE EPOXY TO HARDEN PER THE MANUFACTURER'S RECOMMENDATIONS. IF, AFTER CLEANING, THE DIAMETER OF AN EXISTING CORRODED REINFORCING BAR IS LESS THAN 75% OF ITS ORIGINAL DIAMETER, THE REPAIR SHALL FOLLOW DETAIL 3/S501.
6. ROUGHEN THE EXISTING GROUT BASE SURFACE AND CLEAN TO REMOVE ALL BOND INHIBITING LAITANCE. PREPARE THE EXISTING GROUT SURFACE BY APPLYING THE EPOXY BONDING AGENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHILE THE BONDING AGENT IS STILL TACKY, THOROUGHLY APPLY A SCRUB COAT INTO THE EXISTING GROUT, BEING ESPECIALLY CAREFUL AT THE CORNERS AND EDGES, AND APPLY AND CURE THE POLYMER MODIFIED CONCRETE REPAIR MORTAR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. GRIND HORIZONTAL AND VERTICAL SCORE LINES TO MATCH THE EXISTING CMU JOINTS, TYP.
8. SEE FIGURES OF REPAIR DETAIL 3/S501, SIMILAR.

2 CMU/CHIP/SPALL REPAIR NOTES
NOT TO SCALE

CMU CRACK REPAIR:

1. CHIP MIN 1/2" WIDE OBSERVATION SLOT AT 24" OC ALONG CRACK WITH LOW IMPACT CHIPPING GUN.
2. WHERE SPALLED FACE SHELL AND/OR SIGNS OF RUSTED REINFORCING IS ENCOUNTERED, REPAIR AS CMU CHIP/SPALL PER 2/S504, OTHERWISE PROCEED TO STEP 3.
3. CLEAN THE EXISTING CMU SURFACE ALONG THE CRACK OF ALL LOOSE, BOND INHIBITING, AND DELETERIOUS MATERIALS BY MECHANICAL MEANS.
4. FILL CRACK COMPLETELY WITH REPAIR MORTAR TO 1-1/4" MIN THICKNESS.
5. WHERE CRACK OCCURS WITHIN FACE SHELL, REPAIR MORTAR SHALL BE TOOLED FLAT. WHERE CRACK OCCURS ALONG JOINT, REPAIR MORTAR SHALL BE TOOLED TO MATCH EXISTING SCORE LINES. APPLY SEALER.



PLAN
VERTICAL CRACK

SECTION
HORIZONTAL CRACK

3 CMU CRACK REPAIR
NOT TO SCALE

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE
LICENSED PROFESSIONAL ENGINEER
NO. 5479-S
HAWAII, U.S.A.

License Expiration Date 04-30-18

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

Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

CONCRETE REPAIR DETAILS

NAGAMINE OKAWA ENGINEERS, INC.

DESIGNED BY:	CHECKED BY:	JOB NO.	DRAWING NO.
JO	NN	CA-1605-C	S504
DRAWN BY:	APPROVED BY:	DATE	SHEET
JQ	NN	APRIL 2017	22
SCALE: AS INDICATED			OF 24 SHTS.

FILE_____ DRAWER_____ FOLDER_____

1ST LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
1.001	5.5	1		
1.002			4.75	
1.003	9	1		
1.004	2	1		
1.005	1	1		
1.006	6	1		
1.007	2	1		
1.008	1	0.5		CMU WALL
1.009	1	2		COLUMN, ADDT ALT NO.1

2ND LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
2.001	10	1		
2.002			4.75	
2.003	0.5	0.5		
2.004	6	1		
2.005	NOT USED			
2.006	5	1		
2.007	8	1		
2.008	0.5	0.5		
2.009	16.75	1		
2.010	4.5	1		HEADER
2.011	2	5		
2.012			4.5	
2.013	1	1		
2.014	2	4.5		
2.015			4.5	
2.016	1.5	4.5		
2.017	2	5		
2.018	0.5	0.5		
2.019	1	1		
2.020	1	1		
2.021	1	4.5		
2.022			4.5	
2.023			4.75	
2.024	5	5		
2.025	1	4.5		
2.026	0.5	0.5		
2.027	1	1		
2.028			4.5	
2.029			5	
2.030	1	0.5		EDGE
2.031	3	5		EDGE
2.032	3	4.5		
2.033			4.5	
2.034	8	5		

2ND LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
2.035	4	5		
2.036			4.5	
2.037	6.5	4.5		
2.038			4.5	
2.039			4.5	
2.040	1	0.5		ADDT ALT NO.2
2.041	1	0.5		ADDT ALT NO.2
2.042	1	0.5		ADDT ALT NO.2
2.043	1	0.5		ADDT ALT NO.2
2.044	9.5	1		
2.045	0.5	2		
2.046	3	0.5		
2.047			4.5	
2.048			5	
2.049			5	
2.050			5	
2.051			5	
2.052	1	1		
2.053			4.5	
2.054	1	0.5		EDGE
2.055			4.5	
2.056			4.5	
2.057			5	
2.058			5	
2.059			5	
2.060			6.5	
2.061			4.5	
2.062			4.5	
2.063	2	0.5		EDGE
2.064			4.5	
2.065			4.5	
2.066			5	
2.067			4.5	
2.068			4.5	
2.069			5	
2.070			5	
2.071	2	1		
2.072			4.5	
2.073	2	1		
2.074	14	2.5		
2.075	1	4.5		
2.076	7.5	2.5		
2.077	3	2.5		
2.078	16	5		
2.079	0.5	0.5		EDGE
2.080			4.5	
2.081			4.5	
2.082	1	0.5		ADDT ALT NO.1
2.083	1	0.5		ADDT ALT NO.1
2.084	1	0.5		ADDT ALT NO.1
2.085	1	0.5		ADDT ALT NO.1
2.086	1	0.5		ADDT ALT NO.1
2.087	1	0.5		ADDT ALT NO.1
2.088	1	0.5		ADDT ALT NO.1
2.089	1	0.5		ADDT ALT NO.1
2.090	1	0.5		ADDT ALT NO.1
2.091	1	0.5		ADDT ALT NO.1
2.092	1	0.5		ADDT ALT NO.1

3RD LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
3.001	16.75	0.5		
3.002	6.5	0.5		
3.003	10	0.5		
3.004	6.5	1		
3.005			5	
3.006	15.5	1		
3.007	15.5	1		
3.008	0.5	1		
3.009	0.5	1		
3.010			5	
3.011			4.5	
3.012			4.5	
3.013			4.5	
3.014			4.5	
3.015	1	0.5		EDGE
3.016	1	0.5		EDGE
3.017	1	0.5		EDGE
3.018	0.5	3.75		
3.019	0.5	0.5		EDGE
3.020			5	
3.021			4.5	
3.022	1	0.5		EDGE
3.023			4.5	
3.024	0.5	1		
3.025	0.5	1		
3.026			4.5	
3.027			4.5	
3.028	0.5	1		
3.029	1	0.5		EDGE
3.030			5	
3.031			4.5	
3.032			4.5	
3.033	0.5	1		
3.034			5	
3.035			4.5	
3.036			5	
3.037	1	0.5		EDGE
3.038			4.5	
3.039			4.5	
3.040			4.5	
3.041	1	0.5		ADDT ALT NO.2
3.042	1	0.5		ADDT ALT NO.2
3.043	1	0.5		ADDT ALT NO.2
3.044	1	0.5		ADDT ALT NO.2
3.044C	1	1		COLUMN ADDT ALT NO.2
3.045	1	0.5		ADDT ALT NO.2
3.046	1	0.5		ADDT ALT NO.2
3.047	1	0.5		ADDT ALT NO.2
3.048	1	0.5		ADDT ALT NO.2
3.049	0.5	0.5		ADDT ALT NO.2
3.050	1	0.5		ADDT ALT NO.2
3.051	1	0.5		ADDT ALT NO.2
3.052	1	0.5		ADDT ALT NO.2
3.053	3	1		
3.054			4.75	
3.055	1	0.5		EDGE
3.056			4.75	
3.057			4.75	
3.058	2	0.5		EDGE
3.059			4.75	
3.060	3	0.5		EDGE
3.061			4.75	
3.062			4.75	
3.063	3	0.5		EDGE
3.064			4.75	

3RD LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
3.065	0.5	1		EDGE
3.066	1	1		EDGE
3.067			4.75	
3.068			4.75	
3.069	1	0.5		EDGE
3.070			4.75	
3.070	0.5	4.5		
3.071			4.75	
3.072	2	0.5		EDGE
3.073			4.75	
3.074	1	0.5		EDGE
3.075			4.75	
3.076			4.75	
3.077	2	0.5		EDGE
3.078			4.75	
3.079			4.75	
3.080			4.75	
3.081			4.75	
3.082			4.75	
3.083			4.75	
3.084			4.75	
3.085			4.75	
3.086			4.75	
3.087	6	5		
3.088	4	0.5		EDGE
3.089			4.75	
3.090			4.75	
3.091			4.75	
3.092			4.75	
3.093	1	0.5		ADDT ALT NO.1
3.094	1	0.5		ADDT ALT NO.1
3.095	1	0.5		ADDT ALT NO.1
3.096	1	0.5		ADDT ALT NO.1
3.097	1	0.5		ADDT ALT NO.1
3.098	1	0.5		ADDT ALT NO.1
3.099	1	0.5		ADDT ALT NO.1
3.100	1	0.5		ADDT ALT NO.1
3.101	1	0.5		ADDT ALT NO.1
3.102	1	0.5		ADDT ALT NO.1
3.103	1	0.5		ADDT ALT NO.1

4TH LEVEL REPAIR SCHEDULE

REPAIR NO.	SIZE (X) IN FT	SIZE (Y) IN FT	CRACK (L) IN FT	COMMENTS
4.001	0.5	0.5		EDGE
4.002	0.5	0.5		EDGE
4.003	0.5	0.5		EDGE
4.004	2	0.5		EDGE
4.005	1	0.5		EDGE
4.006	1	0.5		EDGE
4.007	1	0.5		EDGE
4.008	1	0.5		EDGE
4.009	1	0.5		EDGE
4.010	1	0.5		EDGE

REPAIR TOTALS

REPAIR TYPE	FIELD INSPECTION QUANTITIES FOR NUMBERED REPAIRS	BID QUANTITES
CONCRETE SPALLS	547 SF	610 SF
CONCRETE CRACKS	392 LF	450 LF
REBAR	547 LB	610 SF
CONCRETE CRACKS (INJECTION)	5 LF	20 LF
CONCRETE CRACKS (GRAVITY)	2400 SF	2400 SF

REPAIR TOTALS (ADDITIVE ALTERNATE NO.1)

REPAIR TYPE	FIELD INSPECTION QUANTITIES FOR NUMBERED REPAIRS	BID QUANTITES
CONCRETE SPALLS	13 SF	20 SF
REBAR	13 LB	20 LB

REPAIR TOTALS (ADDITIVE ALTERNATE NO.2)

REPAIR TYPE	FIELD INSPECTION QUANTITIES FOR NUMBERED REPAIRS	BID QUANTITES
CONCRETE SPALLS	9 SF	15 SF
REBAR	9 LB	15 LB

REFERENCE DRAWINGS:

FIRST LEVEL PLAN. S101

SECOND LEVEL PLANS. . . . . .S102 & S103

THIRD LEVEL PLANS. . . . . .S104 & S105

FOURTH (ROOF) LEVEL PLAN. S106

REPAIR DETAILS. . . . . .S501 THRU S504

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A

License Expiration Date 04-30-18

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

Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

REPAIR SCHEDULES

NAGAMINE OKAWA ENGINEERS, INC.

JOB NO. CA-1605-C

DRAWING NO. S505

DESIGNED BY: JO

CHECKED BY: NN

DRAWN BY: JQ

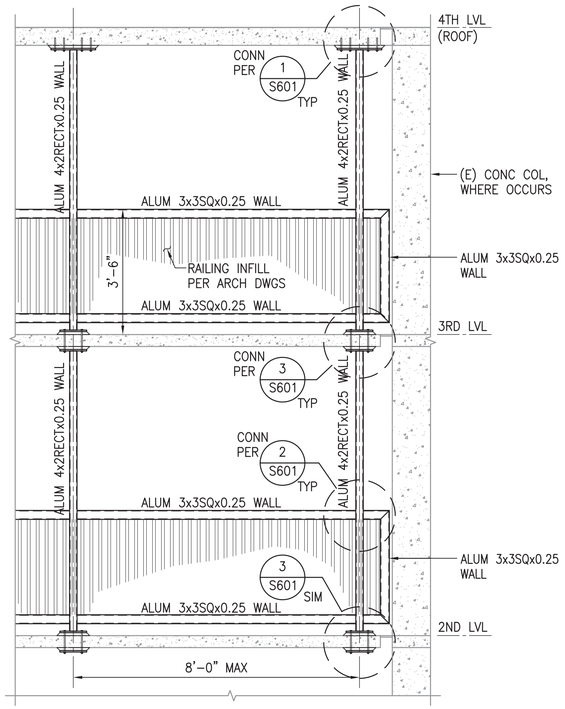
APPROVED BY: NN

DATE APRIL 2017

SCALE: AS INDICATED

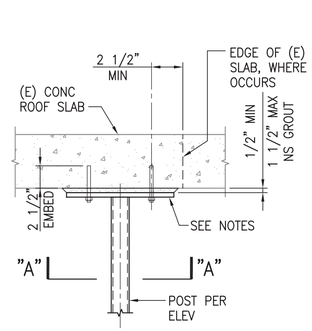
SHEET 23 OF 24 SHTS.

FILE_____ DRAWER_____ FOLDER_____

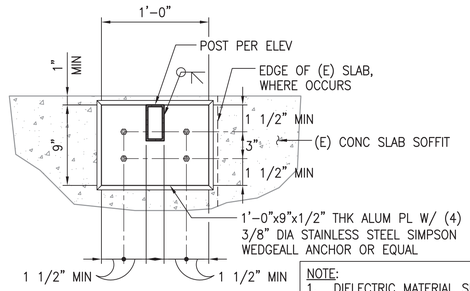


TYPICAL CONDITION END CONDITION

A RAILING ELEVATION
SCALE: 1/2" = 1'-0"



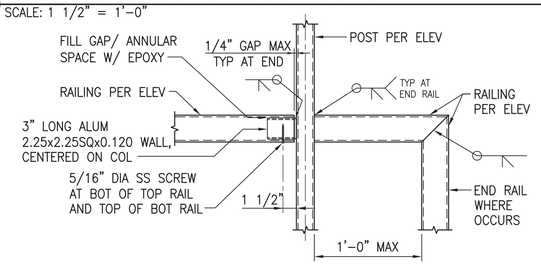
ELEVATION



PLAN –
SECTION "A"–"A"

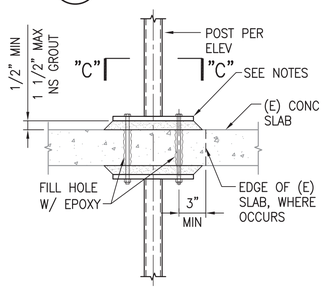
NOTE:
1. DIELECTRIC MATERIAL SHALL BE INSTALLED BETWEEN DISSIMILAR METALS IN CONTACT.
2. LOCATE ANCHOR LOCATIONS TO AVOID STEEL REINFORCING. SEE EPOXY NOTE 6 ON SHEET S001 FOR ADDITIONAL INFO.
3. CONTRACTOR OPTION TO FIELD DRILL HOLES IN PLATE.

1 ROOF POST BASE PLATE CONNECTION
SCALE: 1 1/2" = 1'-0"

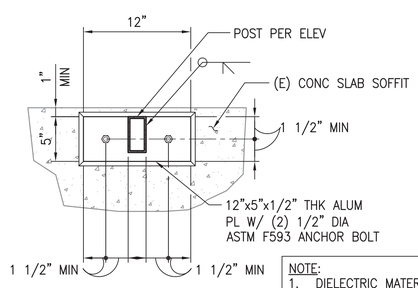


ELEVATION

2 RAILING CONNECTION
SCALE: 1 1/2" = 1'-0"



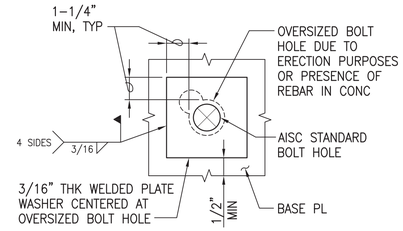
ELEVATION



PLAN –
SECTION "C"–"C"

NOTE:
1. DIELECTRIC MATERIAL SHALL BE INSTALLED BETWEEN DISSIMILAR METALS IN CONTACT.
2. LOCATE ANCHOR LOCATIONS TO AVOID STEEL REINFORCING. SEE EPOXY NOTE 6 ON SHEET S001 FOR ADDITIONAL INFO.
3. CONTRACTOR OPTION TO FIELD DRILL HOLES IN PLATE.

3 TYPICAL POST BASE PLATE CONNECTION
SCALE: 1 1/2" = 1'-0"



4 TYP PL WASHER AT OVERSIZED BOLT HOLE
NOT TO SCALE

NOTES:
1. SEE PLANS ON SHEETS S101 THRU S106 AND REPAIR SCHEDULES ON S505 FOR ADDITIONAL REPAIRS NOT SHOWN.
2. SEE DETAIL 2/S502 FOR CONCRETE REPAIR.

GRAPHIC SCALE:

0 6" 1' 2' 4' 6'
1/2"=1'-0"

0 3" 6" 1' 2'
1-1/2"=1'-0"

SUBMITTAL: FINAL

Revision Schedule

Rev #	Description	Date	Approved:

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A.

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Norman K. Nagamine
Signature

STATE OF HAWAII, DEPARTMENT OF DEFENSE
ENGINEERING OFFICE

YOUTH CHALLENGE ACADEMY (YCA)
B1786 AND B1787 RAILING REPLACEMENT, PHASE 1
STATE OF HAWAII, DEPARTMENT OF DEFENSE

NEW DETAILS

NAGAMINE OKAWA ENGINEERS, INC.		JOB NO. CA-1605-C	DRAWING NO. S601
DESIGNED BY: JO	CHECKED BY: NN		
DRAWN BY: JQ	APPROVED BY: NN	DATE APRIL 2017	SHEET 24 OF 24 SHTS.
SCALE: AS INDICATED			

FILE_____ DRAWER_____ FOLDER_____