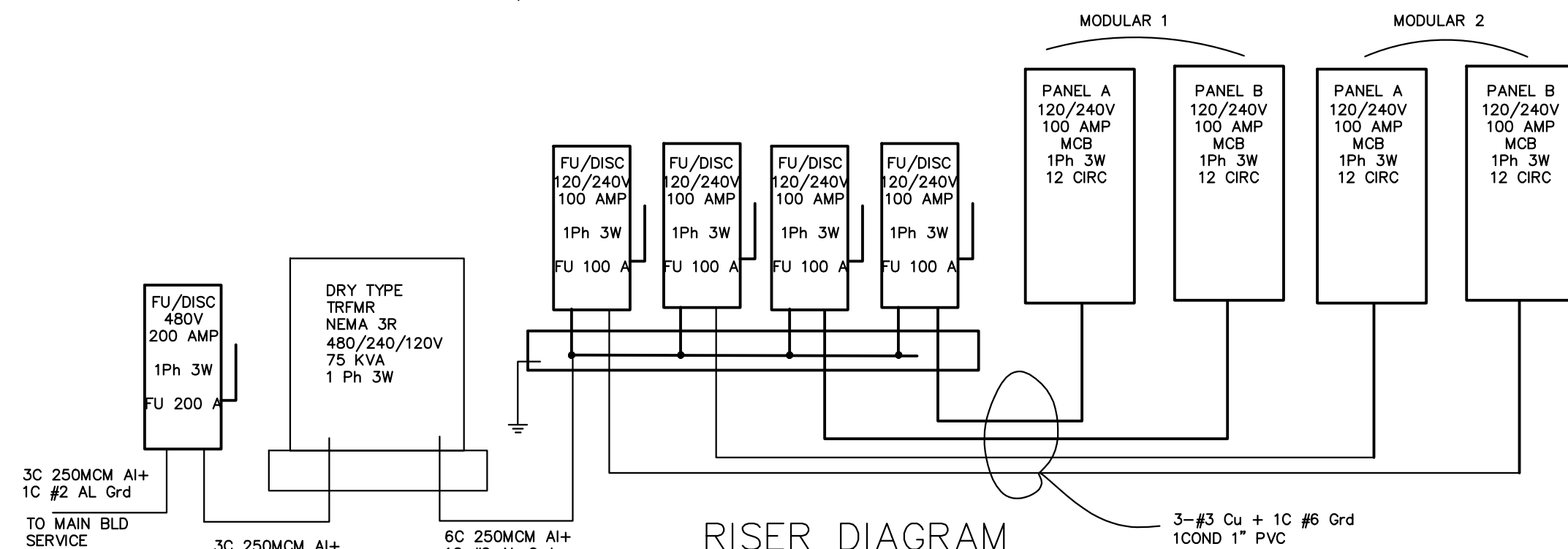


MODULAR FLOOR PLAN

SCALE 1/8" = 1 Ft



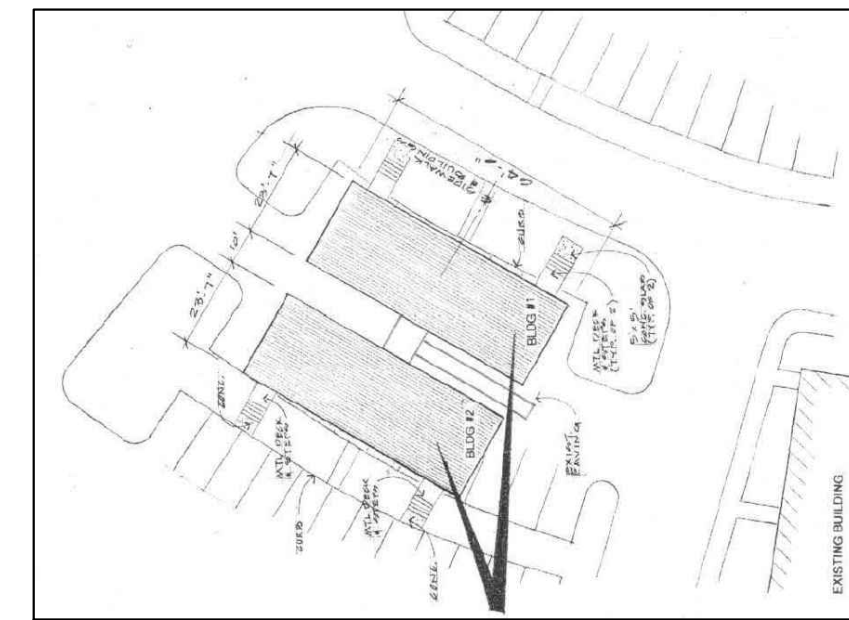
RISER DIAGRAM

3-#3 Cu + 1C #6 Grd
1COND 1" PVC

TOTAL CONNECTED LOAD:	
PAN A	19.2 KVA
PAN B	19.2 KVA
PAN A	19.2 KVA
PAN B	19.2 KVA
TOTAL	76.8 KVA
I = 76.8 KVA /240V = 320 Amp	

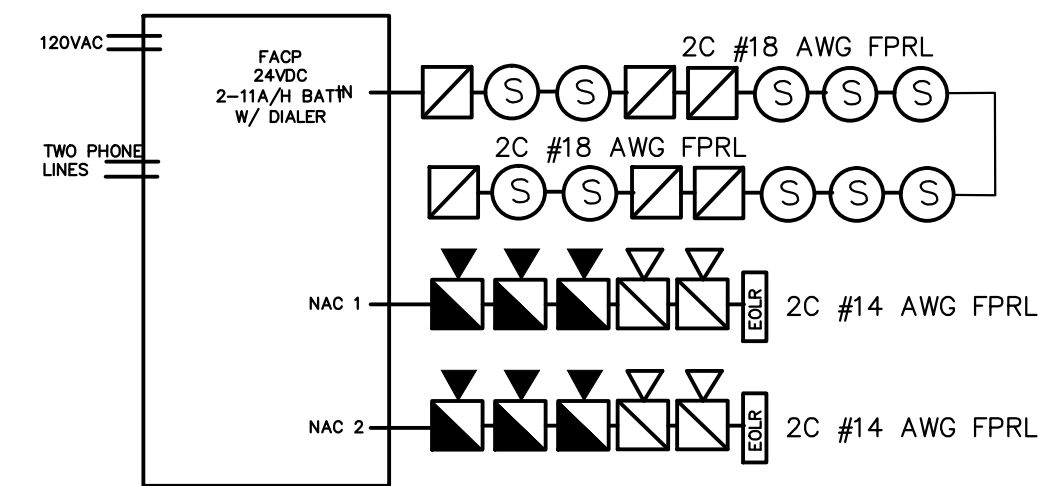
GENERAL NOTES

1. ALL BONDING AND GROUND PER N.E.C., STATE AND CITY LOCAL CODES, WHICHEVER IS THE MOST STRINGENT.
2. MISCELLANEOUS INCIDENTAL ITEMS NOT SHOWN ON DRAWINGS OR MENTIONED IN SPECIFICATIONS, THAT REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM(S), SUCH AS CLAMPS, HANGERS, FASTENERS, BUSHINGS, NIPPLES, TAGS, NAME-PLATES, ETC., SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
3. PROVIDE CONDUIT AND SEALS AT ANY LOCATION IN WHICH CONDUITS OR CABLES PASS THROUGH FIRE WALLS AND FLOORS. INSTALLATION TO MAINTAIN INTEGRITY AND RATING OF FIRE WALLS.
4. VERIFY ALL EQUIPMENT WITH SPEC. BOOK AND CUT SHEET POSTED ON JOB SITE PRIOR TO ANY ROUGH-IN.
5. CONTRACTOR SHALL RUN POWER FEED FROM MDP PANEL TO MODULAR SERVICE PANEL IN CONDUIT ON BUILDING AND DIRECT BURIED OUTSIDE OF BUILDING.



KEY PLAN

NTS



RISER DIAGRAM

DEVICE SPECIFICATIONS

Quantity	Symbol	Description
1	■	Silent Knight Fire Alarm Control Panel 120VAC WITH AUTOMATIC PHONE DIALER MODEL 5700XL 24 V DC or equivalent
4	□	Fire Alarm addressable Pull Station Silent Knight Cat# SK-PULL or equivalent
6	◀	Audio Visual Alarm System Sensor Cat# P2R 24VDC or equivalent Mount 80" AFF per NFPA 72 art. 4-4.4 and sect. 4.28.3 ADAAG
4	◀	Visual Alarm System Sensor Cat# SR 24VDC or equivalent Mount 80" AFF per NFPA 72 art. 4-4.4 and sect. 4.28.3 ADAAG
10	○	Addressable Smoke Detector Silent Knight Cat# SK-PHOTO or equivalent

FIRE ALARM GENERAL NOTES

1. The Fire Alarm system shall be maintained in accordance with the requirements of 2016 NFPA 72 Chapter 14.
2. The system shall be tested in accordance with 2017 OBC and 2016 NFPA 72 code. All tests shall be conducted in the presence of the code official. All tests shall be conducted at the expense of the owner or the owner's representative.
3. The contractor shall provide the code official with a certificate indicating that the system was installed in compliance with the 2017OBC and the appropriate tests have been conducted in accordance with 2016 NFPA 72 Chapter 14.4.
4. The system shall be of an approved type and shall be installed in accordance with the provisions of the 2017 OBC and 2016 NFPA 72
5. Manual fire alarm boxes shall be located within 5' from the entrance to each exit 2016 NFPA 72 sect. 17.14.4
6. The height of manual fire alarm boxes shall be minimum of 42" and a maximum of 48" from floor level to the activating handle or lever of the box. Manual fire alarm boxes shall be red in color 2016 NFPA 72 sect. 17.14.4
7. The primary and secondary power supply shall be provided in accordance with 2016 NFPA 72 10.5
8. All wiring shall conform to the requirements of 2016 NFPA 72
9. The alarm notification appliances shall be activated by all of the following where provided: (a) smoke detectors, (b) manual fire alarm boxes
10. The system shall be addressable in accordance to 2016 NFPA 72
11. Alarm notification appliances of an approved type shall be provided. Audible alarm notification appliances shall provide a distinctive sound which shall not be used for any purpose other than a fire alarm. Such device shall provide a sound pressure level of 15 DBA above the average ambient sound level in every occupied space within the building. The maximum sound pressure for an audible alarm shall not exceed 120 DBA at the minimum hearing distance from the audible appliance. Visible alarm notification appliances shall be provided in accordance to the provisions of ADAAG and 2016 NFPA 72
13. Existing primary power from existing panel. Secondary power 24VDC 2-11AH batteries
14. Overcurrent protection on secondary power supply shall comply with 2016 NFPA 72 sect. 10.5.5.4
15. The system shall transmit , via phone lines, the alarm and trouble signals to an approved central station system 2016 NFPA sect 26.3.

STATE OF OHIO ENGINEERED DRAWINGS

Kevin M. Finn, P.E., Inc.
1716 Elkhart Rd., Suite 1
Goshen, IN 46526
OH PE Lic. # 60371
OH Firm Registration # 04292

BY: Sapa Extrusions, llc. (REDD Team)
DELHI, LA
1-800-779-5509

RE: URS RAMP SYSTEMS WITH 42/34 VERTICAL PICKET RAILS



TABLE OF CONTENTS FOR A 42" VERTICAL PICKET RAMP & LANDING SYSTEM

PAGE CONTENTS	DATE	PAGE
COVER SHEET & NOTES	1-11-17	COVER
PLAN VIEW OF RAMP SYSTEMS	1-11-17	1-1A
RAMP DETAILS	1-11-17	2-6
STAIR CROSS SECTION/DETAILS	1-11-17	7-8
WALKWAY DETAILS	1-11-17	9
LEG CONNECTION DETAIL	1-11-17	10

2017 OH BUILDING-CODE
WIND SPEED - 115 MPH, EXP. C
SEISMIC DESIGN CATEGORY - C
MINIMUM TIE-DOWN RATED AT 400LBS
ALONG RIM RAIL SPACED 10' O.C.
MAXIMUM SPACING

GENERAL NOTES:

- ALUMINUM RAMP, LANDING AND STAIR SECTIONS SHALL BE A RIGID, FREE-SPAN DESIGN
- DESIGN OF THE ALUMINUM STRUCTURES SHALL CONFORM TO THE 2005 EDITION OF THE ALUMINUM ASSOCIATION SPECIFICATIONS AND GUIDELINES FOR ALUMINUM STRUCTURES.
- ALL ALUMINUM CONSTRUCTION USING 6000 SERIES ALUMINUM ALLOYS. STRUCTURAL MEMBERS TO BE 6061-T6, 6063-T6 AND 6005-T5 ALUMINUM ALLOY.
- ALUMINUM WILL BE STANDARD MILL FINISH UNLESS OTHERWISE NOTED
- WELDING SHALL BE IN ACCORDANCE WITH ANSI/AWS D1.2/D1.2M-2014 GAS METAL ARC WELDING (GMAW) PROCESS BY EXPERIENCED OPERATORS
- ALL FASTENERS TO BE 18-8 (SERIES 304) STAINLESS STEEL UNLESS OTHERWISE NOTED
- LANDING, RAMP AND STAIR SECTIONS ARE TO BE ENGINEERED FOR A 100 PSF LIVE LOAD
- LANDING AND RAMP WALKING SURFACES SHALL BE DESIGNED FOR A MINIMUM CONCENTRATED VERTICAL LOAD OF 300 LBS APPLIED EVENLY OVER A 12" x 12" AREA. STAIR TREADS SHALL BE DESIGNED TO WITHSTAND A MINIMUM CONCENTRATED LOAD OF 300 LBS OVER A 4 SQUARE INCH AREA.
- RAMP AND LANDING GUARDRAILS TO BE 42 INCH MINIMUM HEIGHT UNLESS OTHERWISE SPECIFIED
- HANDRAIL ASSEMBLIES AND GUARDRAILS SHALL BE DESIGNED TO RESIST A LOAD OF 50 PLF APPLIED IN ANY DIRECTION AT THE TOP OF THE RAIL.
- HANDRAIL ASSEMBLIES AND GUARDRAILS SHALL BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 LBS, APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP OF THE RAIL. THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH THE LOADS SPECIFIED IN THE PRECEDING PARAGRAPH.
- INTERMEDIATE RAILS (ALL THOSE EXCEPT HANDRAILS), BALUSTERS AND PANEL FILLERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTALLY APPLIED NORMAL LOAD OF 50 LBS ON AN AREA EQUAL TO 1 SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS.
- GUARDRAIL SYSTEMS SHALL BE DESIGNED SO THAT A 4 (FOUR) INCH SPHERE CANNOT PASS THROUGH ANY OPENING.
- DECK SURFACE SHALL BE A SLIP RESISTANT, EXTRUDED ALUMINUM DECKING WITH A TRIPLE I-BEAM SELF-MATING DESIGN.
- ALL SURFACES, MEMBERS AND THEIR WELDED JOINTS SHALL BE SMOOTH AND FREE FROM SHARP OR JAGGED EDGES.

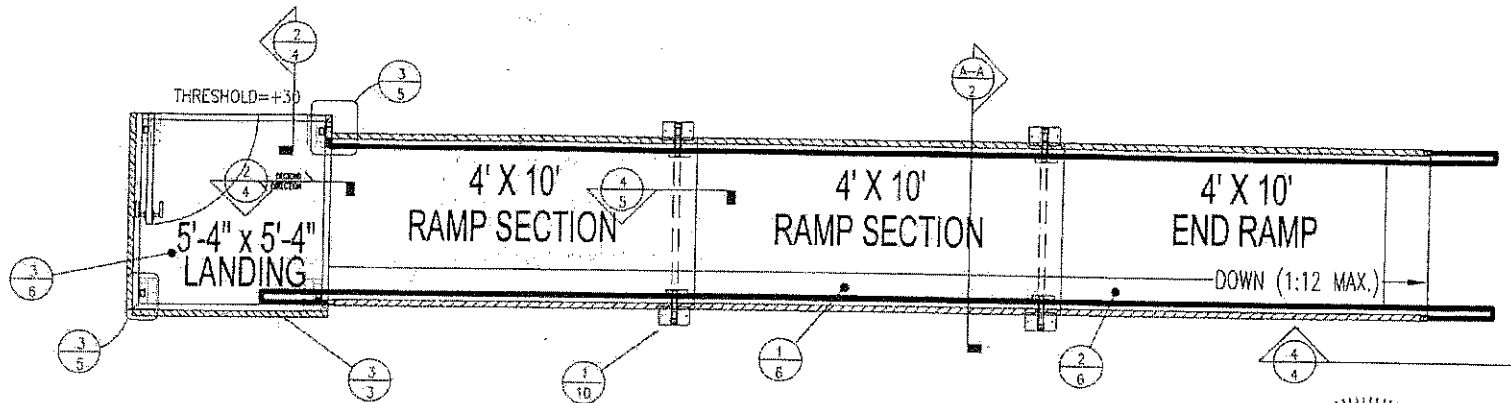
State of Ohio
Professional Engineer
Kevin M. Finn, P.E.
License No. 60371
Commission Expires 12/31/2017

State of Ohio
Professional Engineer
Kevin M. Finn, P.E.
License No. 60371
Commission Expires 12/31/2017

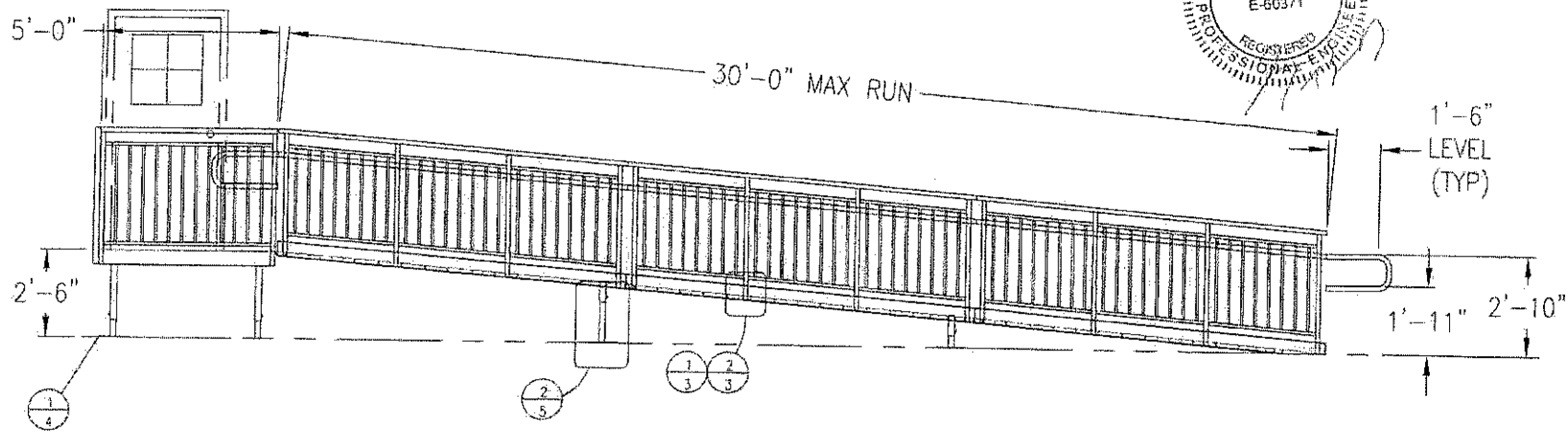
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ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

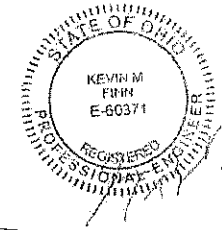
1/12/2017
DATE PLOTTED
1
1/12/2017
DATE PLOTTED
1
1/12/2017
DATE PLOTTED
1
COVER



PLAN VIEW - 42/34 RAMP SYSTEM



ELEVATION VIEW: 42/34 VP ALUMINUM ACCESS RAMP SYSTEM



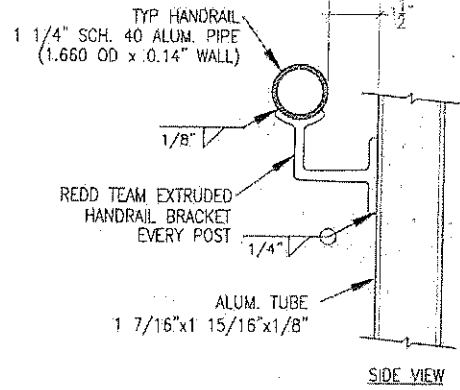
Creating the future. Sapa Extrusions, Inc.
 125 S. Harbor Drive
 Piquette, MI 48675-1508
 Phone: 1-800-775-5508
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 125 S. Harbor Drive
 Piquette, MI 48675-1508
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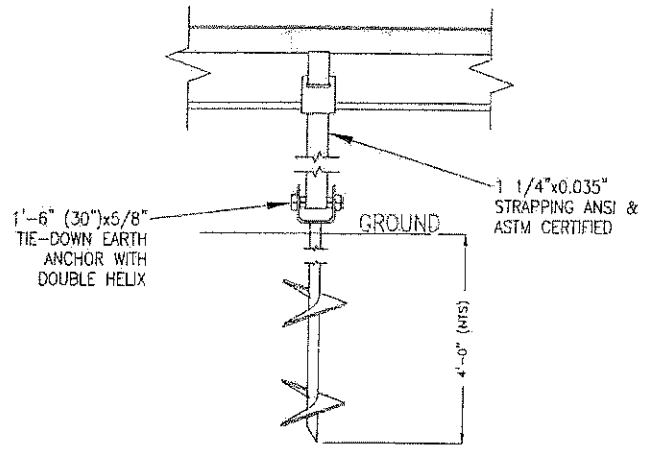
STATE OF OHIO
 ENGINEERED DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42 HIGH VERTICAL PICKET GUARDRAIL

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DESIGNED BY	DMO ENG Layout
CHECKED BY	R - 1
APPROVED BY	DMG
SHEET NUMBER	01

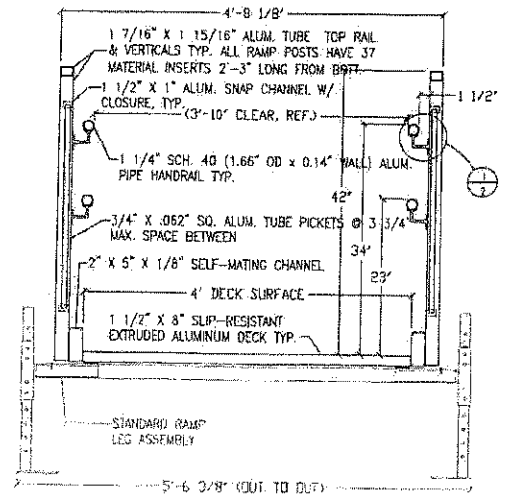
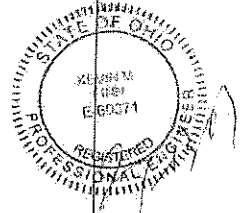


NOTE:
HANDRAIL SHALL BE SMOOTH
WITH NO SHARP EDGES,
AT CONNECTIONS

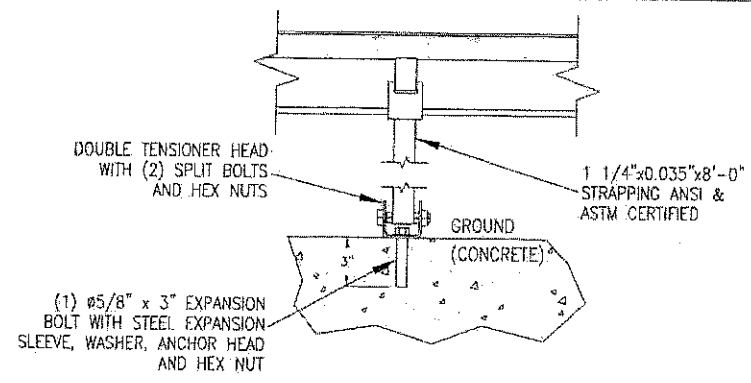
1
2 **DETAIL**
34" RAMP HANDRAIL
SCALE: 3"=1'-0"



2
2 **DETAIL**
OPTIONAL EARTH ANCHOR
SCALE: 1 1/2"=1'-0"



A-A
2 **SECTION A-A**
RAMP CROSS SECTION
SCALE: 1 1/2"=1'-0"



3
2 **DETAIL**
OPTIONAL CONCRETE ANCHOR
SCALE: 1 1/2"=1'-0"

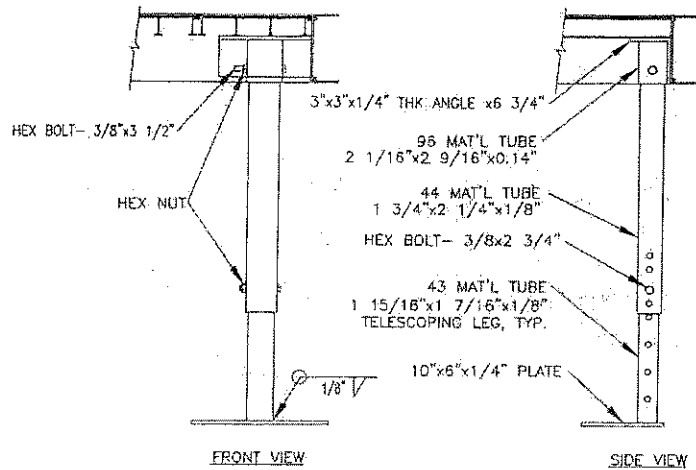
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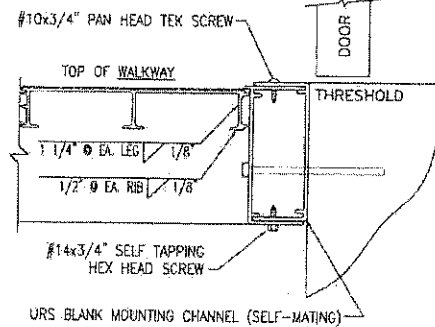
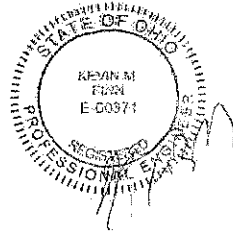
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ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/12/2017
JOB NO.:
DRAWN BY: CHD ENC
CHECKED BY: R-1
SCALE: TMS
SHEET NUMBER: 02

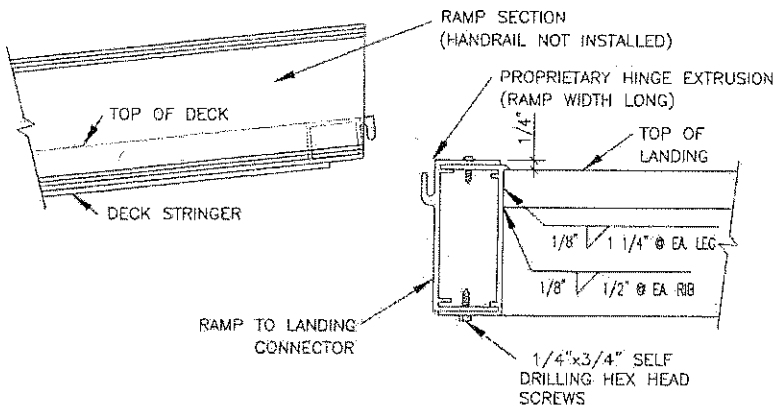


1
4 **DETAIL**
LANDING LEG ASSEMBLY
SCALE: 1 1/2"=1'-0"

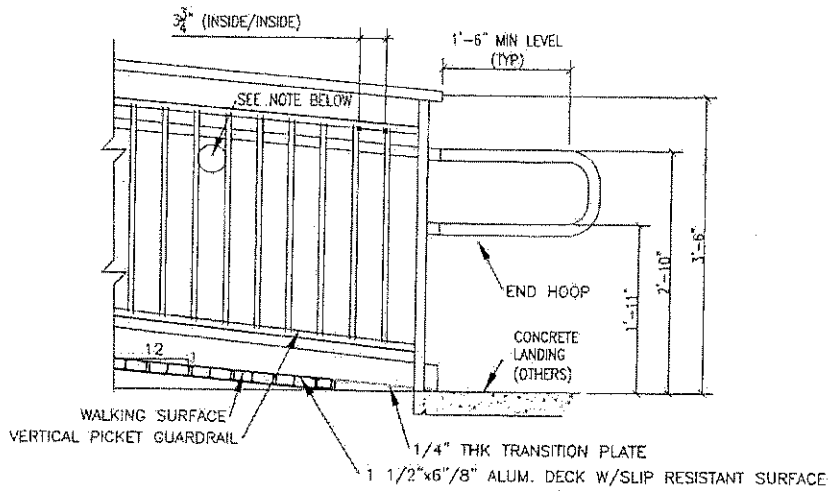


2
4 **SECTION**
WALKWAY OR LANDING TO BUILDING CONNECTION
SCALE: 3"=1'-0"

DIFFERENT TYPES OF ATTACHMENT:
 1.) FOR ATTACHMENT TO LIGHT GAGE METAL JOIST: THROUGH BOLT WITH 5/16" DIA. HEX-HEAD BOLT, FLAT WASHER, & 5/16" NUT. (12" O.C. MAX.)
 2.) FOR ATTACHMENT TO WOOD: 5/16" DIA. HEX-HEAD LAG SCREWS (12" O.C. MAX.)
 3.) FOR ATTACHMENT TO CONCRETE: 3/8" DIA. HEX-HEAD SLEEVE ANCHORS. (12" O.C. MAX.)



3
4 **SECTION**
RAMP TO LANDING CONNECTION
SCALE: 3"=1'-0"



NOTE:
NO OPENING WILL ALLOW A 4" SPHERE TO PASS THROUGH.

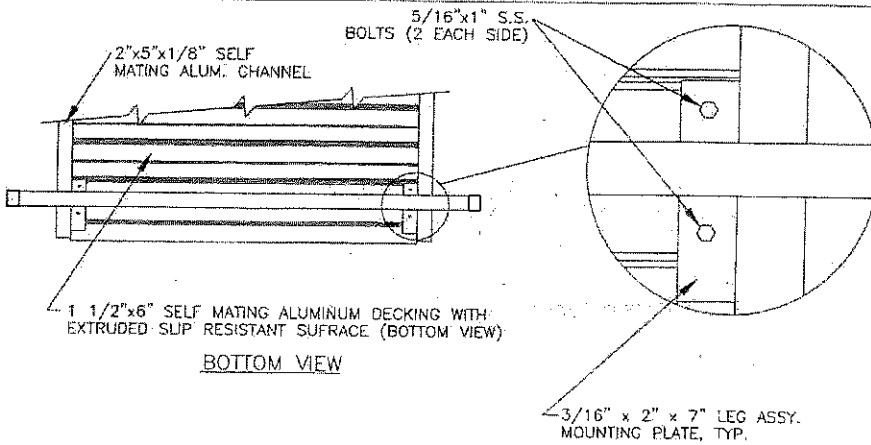
4
4 **DETAIL**
END RAMP (1:12 SLOPE)
SCALE: 3/4"=1'-0"

Kevin M. Ryan, P.E.
12450 Ridge Drive
Cincinnati, OH 45244
Phone: (513) 779-5500
Fax: (513) 779-1555

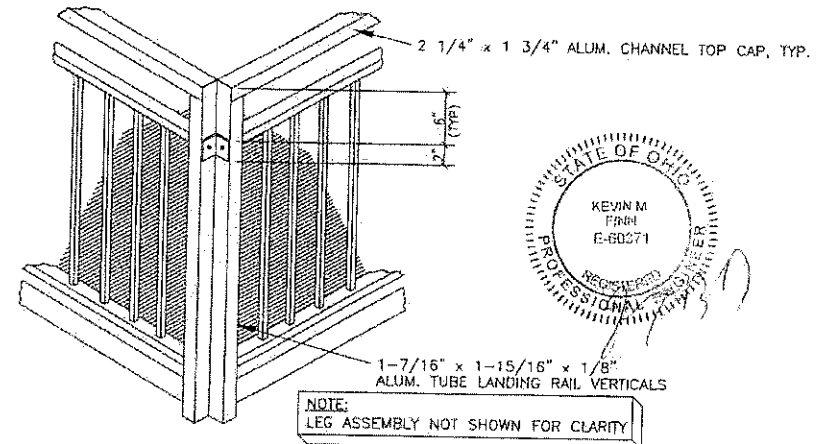
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ALUMINUM ACCESS RAMP SYSTEM
WITH 4\"/>

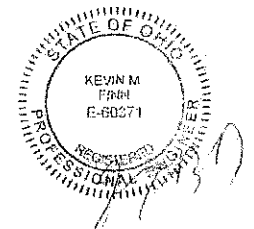
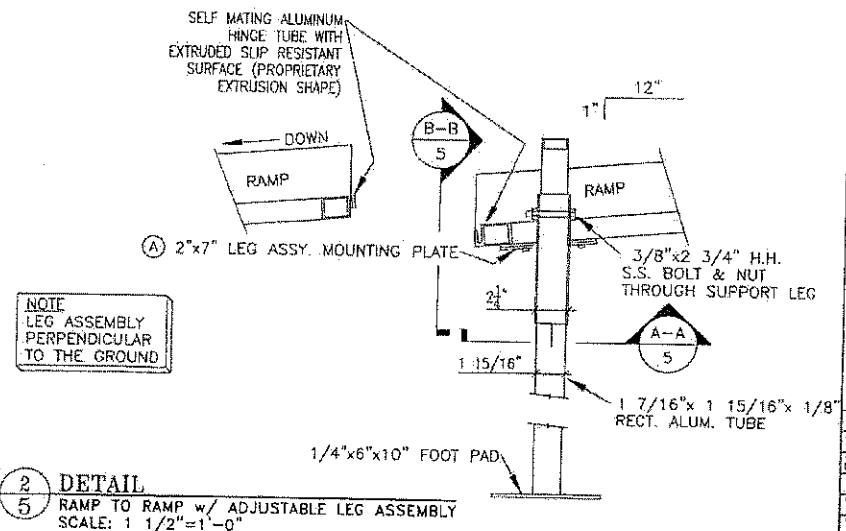
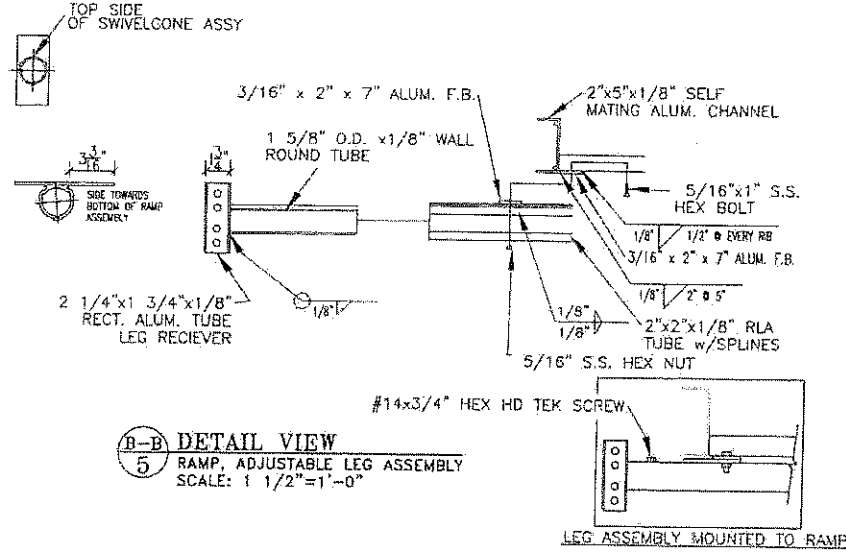
DATE	1/12/2017
BY	ENG Legend
APP'D	TWR
SHEET NUMBER	04



A-A
5 **DETAIL VIEW**
RAMP, ADJUSTABLE LEG ASSEMBLY
SCALE: 3/4"=1'-0"



3
5 **DETAIL**
LANDING RAIL CORNER CLIP
SCALE: 1"=1'-0"



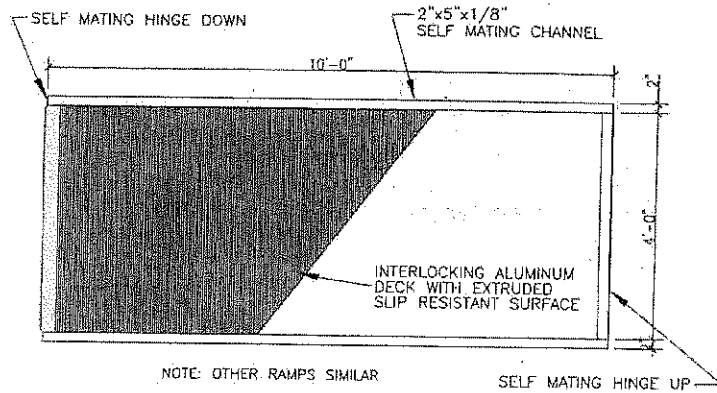
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1/4" = 1'-0"
1/8" = 1'-0"
1/16" = 1'-0"
1/32" = 1'-0"
1/64" = 1'-0"
1/128" = 1'-0"
1/256" = 1'-0"
1/512" = 1'-0"
1/1024" = 1'-0"

Scale: 1/2" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"
1/16" = 1'-0"
1/32" = 1'-0"
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1/256" = 1'-0"
1/512" = 1'-0"
1/1024" = 1'-0"

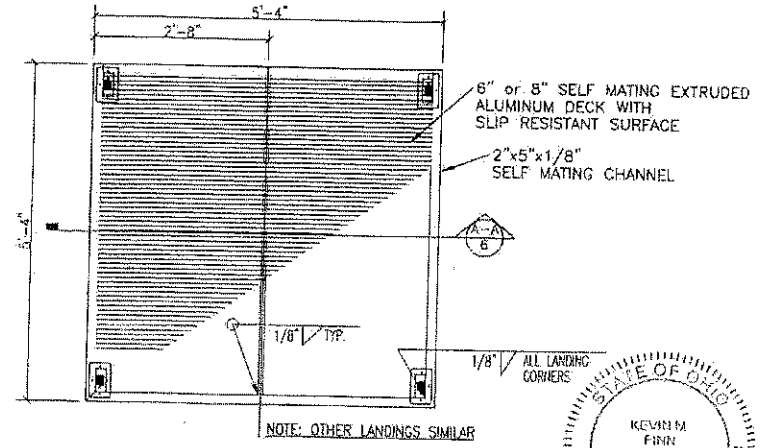
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STATE OF OHIO
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ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

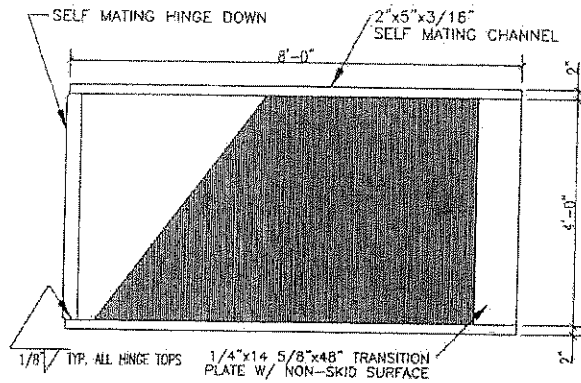
DATE: 1/12/2017
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SCALE: 1/2" = 1'-0"
SHEET NO.: 05



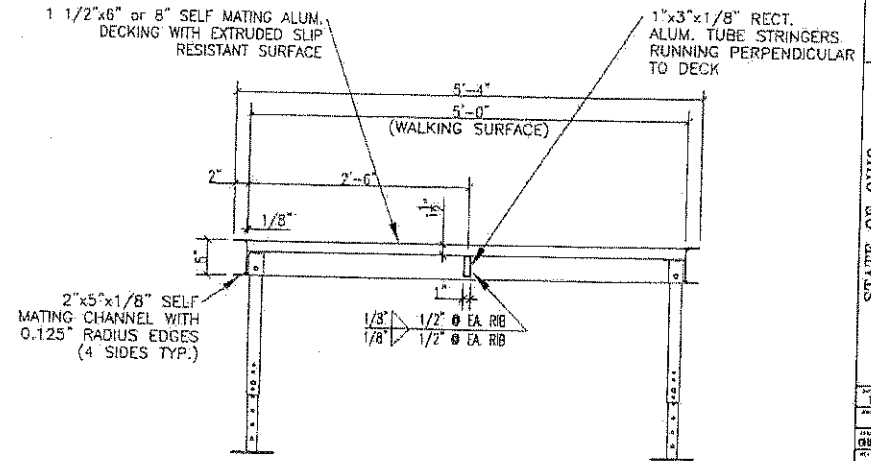
1
6 **DETAIL**
4'x8' OR 10' RAMP DETAIL
SCALE: 1/2"=1'-0"



3
6 **DETAIL**
5'-4" x 5'-4" LANDING
SCALE: 1/2"=1'-0"



2
6 **DETAIL**
4'x8' END RAMP DETAIL
SCALE: 1/2"=1'-0"



A-A
6 **SECTION VIEW**
LANDING CROSS SECTION
SCALE: 3/4"=1'-0"

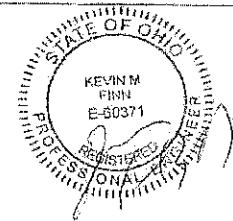
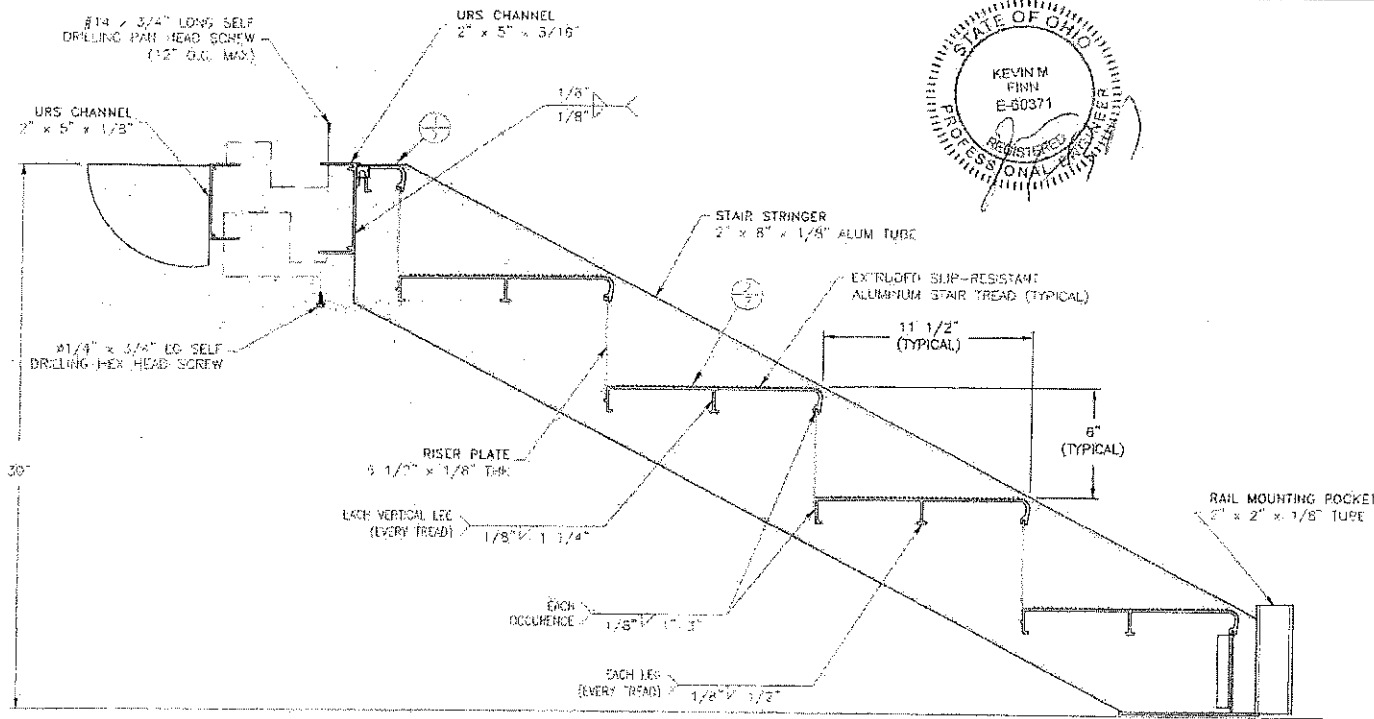
For the complete specifications, refer to the project manual or contact the manufacturer for product literature. The manufacturer's name and address should be provided in the project manual. The manufacturer's name and address should be provided in the project manual.

State of Ohio
Professional Engineer
Kevin M. Finn
E 60371

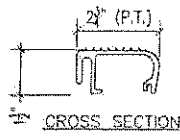
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ALUMINUM ACCESS RAMP SYSTEM
WITH 12" HIGH VERTICAL PICKET GUARDRAIL

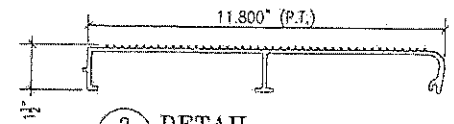
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GMD, INC. Logo
R - 1
TWR
SHEET NUMBER
06



SECTION C-C:
5P1006 STAIRWAY CROSS SECTION
(RAILINGS OMITTED FOR CLARITY)
SCALE: NTS



1
7 **DETAIL**
2 3/4" x 1 1/2" UPPER STAIR HINGE
SCALE: NTS

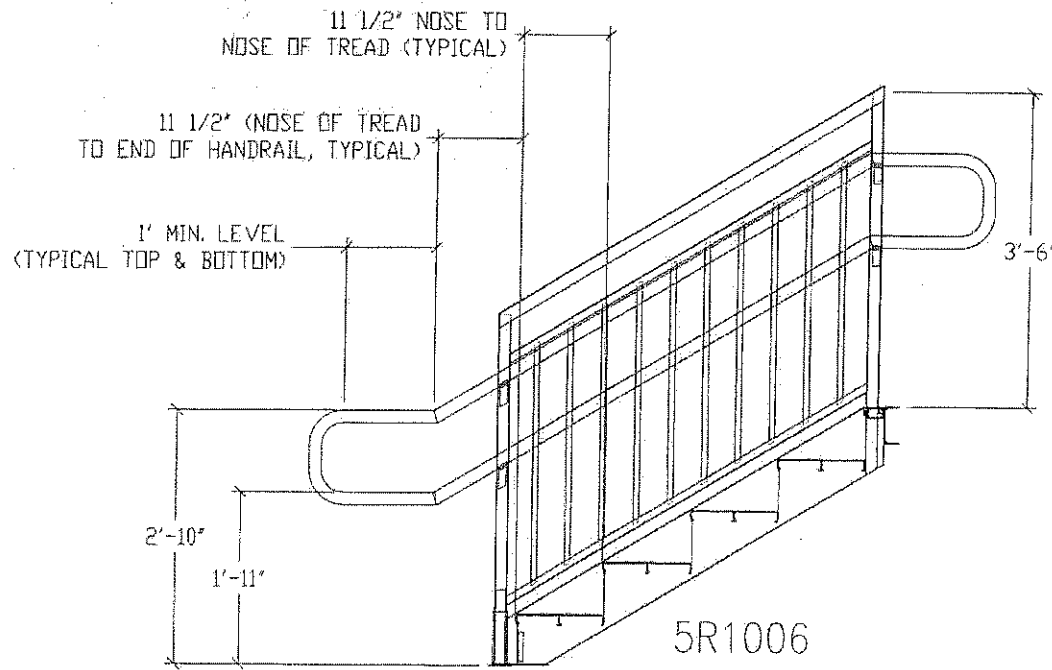


2
7 **DETAIL**
SLIP-RESISTANT STAIR TREAD
SCALE: NTS

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STATE OF OHIO
 ENGINEER DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42" HIGH VERTICAL PICKET GUARDRAIL

1/12/2017
 07



1 ELEVATION VIEW
 8 UPPER AND LOWER STAIR HOOP DETAILS
 SCALE: 3/4"=1'-0"

STATE OF OHIO
 ENGINEERED DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/13/2017
 DRAWN BY: DHD, SNC, Leland
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 TNS
 SHEET NUMBER: 08

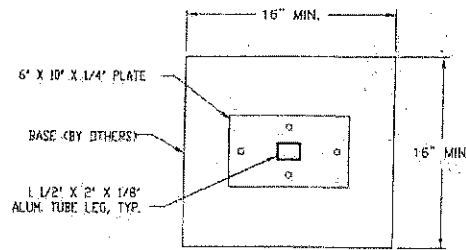
sapa:
 Sapa Structures, Inc.
 175 Science Drive
 Columbus, OH 43210
 Phone: (614) 891-5100
 Fax: (614) 891-4150

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OPTIONAL BEARING METHODS

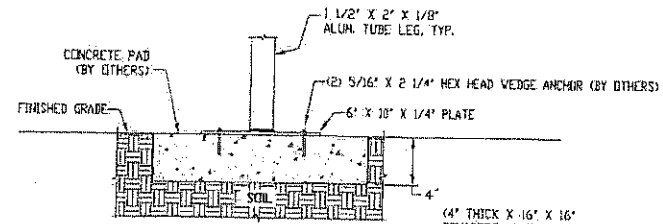
(WHEN SOIL CONDITIONS ARE FAVORABLE, OUR 6" X 10" LEG PAD IS ACCEPTABLE FOR BEARING DIRECTLY TO THE GROUND)
~~(5200 PSY SOIL BEARING CAPACITY)~~

EXISTING ASPHALT



1
10 PLAN VIEW
LANDING LEG ATTACHMENT
SCALE: NTS

NOTES:
1. WHEN RAMP AND LANDING SYSTEM IS NOT ANCHORED TO BUILDING, A CONCRETE PAD 16" X 16" X 4" IS REQUIRED FLUSH WITH FINISHED GRADE.

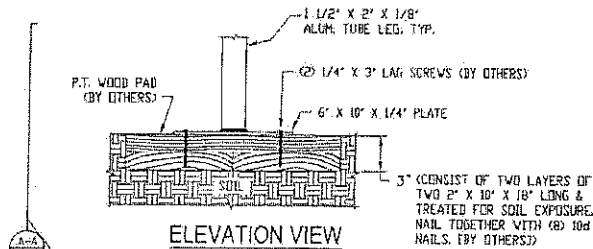


ELEVATION VIEW

4" THICK X 16" X 16" CONCRETE WHEN RAMP AND LANDING SYSTEM NOT ATTACHED TO BUILDING, BY OTHERS

OPTION #1: CONCRETE BASE

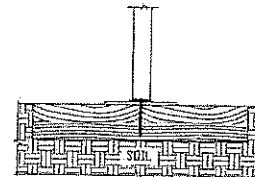
LANDING LEG ATTACHMENT
SCALE: NTS



ELEVATION VIEW

OPTION #2: WOOD BASE

LANDING LEG ATTACHMENT
SCALE: NTS

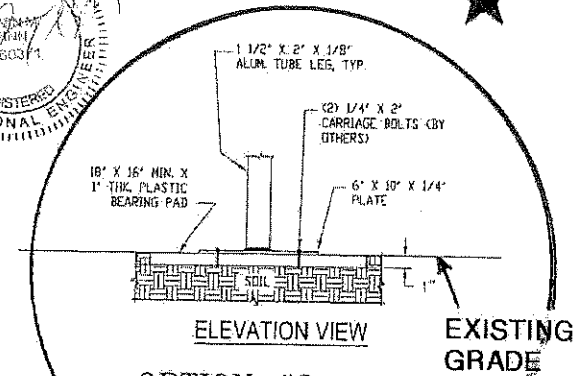
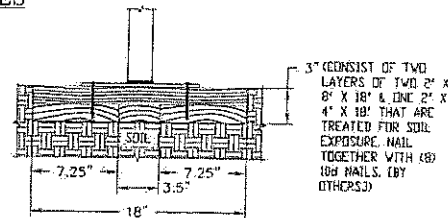
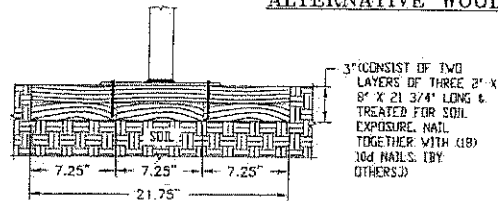


SIDE VIEW

SECTION A-A

LANDING LEG ATTACHMENT
SCALE: NTS

ALTERNATIVE WOOD BASES



ELEVATION VIEW

OPTION #3: PLASTIC BASE

LANDING LEG ATTACHMENT
SCALE: NTS

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Exp. 12/31/2015
Address: 123 Main St., Columbus, OH 43201

sapa:

STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/12/2017
DRAWN BY: J. Doe
CHECKED BY: J. Doe
SCALE: NTS
SHEET NUMBER: 10

STATE OF OHIO ENGINEERED DRAWINGS

Kevin M. Finn, P.E., Inc.
1716 Elkhart Rd., Suite 1
Goshen, IN 46526
OH PE Lic. # 60371
OH Firm Registration # 04292

BY: Sapa Extrusions, llc. (REDD Team)
DELHI, LA
1-800-779-5509

RE: URS RAMP SYSTEMS WITH 42/34 VERTICAL PICKET RAILS



TABLE OF CONTENTS FOR A 42" VERTICAL PICKET RAMP & LANDING SYSTEM

PAGE CONTENTS	DATE	PAGE
COVER SHEET & NOTES	1-11-17	COVER
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2017 OH BUILDING-CODE
WIND SPEED - 115 MPH, EXP. C
SEISMIC DESIGN CATEGORY - C
MINIMUM TIE-DOWN RATED AT 400LBS
ALONG RIM RAIL SPACED 10' O.C.
MAXIMUM SPACING

GENERAL NOTES:

1. ALUMINUM RAMP, LANDING AND STAIR SECTIONS SHALL BE A RIGID, FREE-SPAN DESIGN
2. DESIGN OF THE ALUMINUM STRUCTURES SHALL CONFORM TO THE 2005 EDITION OF THE ALUMINUM ASSOCIATION SPECIFICATIONS AND GUIDELINES FOR ALUMINUM STRUCTURES.
3. ALL ALUMINUM CONSTRUCTION USING 6000 SERIES ALUMINUM ALLOYS. STRUCTURAL MEMBERS TO BE 6061-T6, 6063-T6 AND 6005-T5 ALUMINUM ALLOY.
4. ALUMINUM WILL BE STANDARD MILL FINISH UNLESS OTHERWISE NOTED.
5. WELDING SHALL BE IN ACCORDANCE WITH ANSIIAWS D1.2/D1.2M-2014 GAS METAL ARC WELDING (GMAW) PROCESS BY EXPERIENCED OPERATORS
6. ALL FASTENERS TO BE 18-8 (SERIES 304) STAINLESS STEEL UNLESS OTHERWISE NOTED
7. LANDING, RAMP AND STAIR SECTIONS ARE TO BE ENGINEERED FOR A 100 PSF LIVE LOAD
8. LANDING AND RAMP WALKING SURFACES SHALL BE DESIGNED FOR A MINIMUM CONCENTRATED VERTICAL LOAD OF 300 LBS APPLIED EVENLY OVER A 12" x 12" AREA. STAIR TREADS SHALL BE DESIGNED TO WITHSTAND A MINIMUM CONCENTRATED LOAD OF 300 LBS OVER A 4 SQUARE INCH AREA.
9. RAMP AND LANDING GUARDRAILS TO BE 42 INCH MINIMUM HEIGHT UNLESS OTHERWISE SPECIFIED.
10. HANDRAIL ASSEMBLIES AND GUARDRAILS SHALL BE DESIGNED TO RESIST A LOAD OF 50 PLF APPLIED IN ANY DIRECTION AT THE TOP OF THE RAIL.
11. HANDRAIL ASSEMBLIES AND GUARDRAILS SHALL BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 LBS, APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP OF THE RAIL. THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH THE LOADS SPECIFIED IN THE PRECEDING PARAGRAPH.
12. INTERMEDIATE RAILS (ALL THOSE EXCEPT HANDRAILS), BALUSTERS AND PANEL FILLERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTALLY APPLIED NORMAL LOAD OF 50 LBS ON AN AREA EQUAL TO 1 SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS.
13. GUARDRAIL SYSTEMS SHALL BE DESIGNED SO THAT A 4 (FOUR) INCH SPHERE CANNOT PASS THROUGH ANY OPENING.
14. DECK SURFACE SHALL BE A SLIP RESISTANT, EXTRUDED ALUMINUM DECKING WITH A TRIPLE I-BEAM SELF-MATING DESIGN.
15. ALL SURFACES, MEMBERS AND THEIR WELDED JOINTS SHALL BE SMOOTH AND FREE FROM SHARP OR JAGGED EDGES.

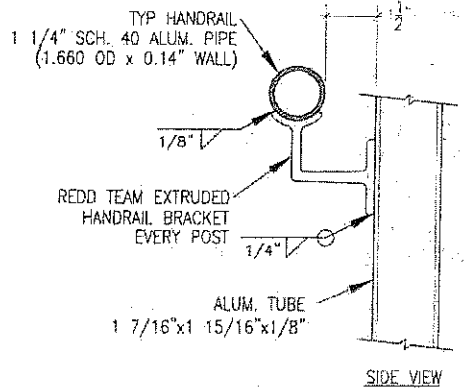
STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/11/17
SCALE: AS SHOWN
DRAWN BY: JMM
CHECKED BY: JMM
DATE: 1/11/17

sapa:

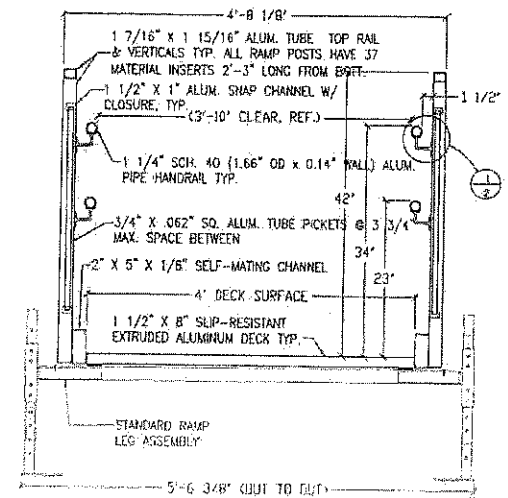
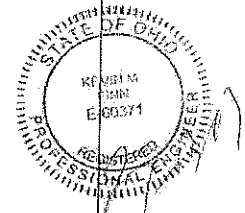
STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

1/12/2017
DATE
17
NO. OF SHEETS
1
SHEET NO.
1
COVER

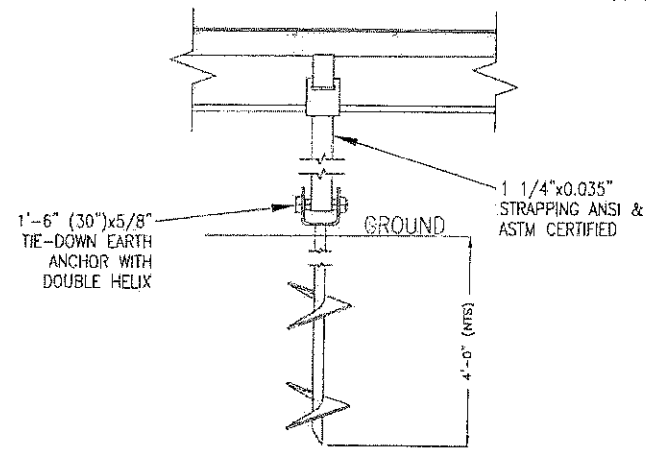


NOTE:
HANDRAIL SHALL BE SMOOTH
WITH NO SHARP EDGES,
AT CONNECTIONS

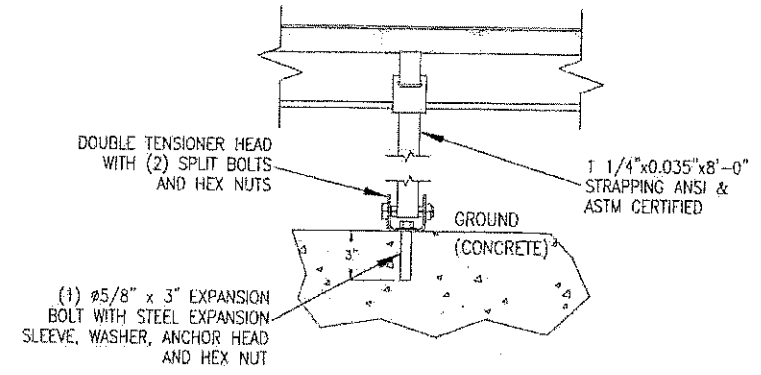
1
2 **DETAIL**
34" RAMP HANDRAIL
SCALE: 3"=1'-0"



A-A
2 **SECTION A-A**
RAMP CROSS SECTION
SCALE: 1 1/2"=1'-0"



2
2 **DETAIL**
OPTIONAL EARTH ANCHOR
SCALE: 1 1/2"=1'-0"



3
2 **DETAIL**
OPTIONAL CONCRETE ANCHOR
SCALE: 1 1/2"=1'-0"

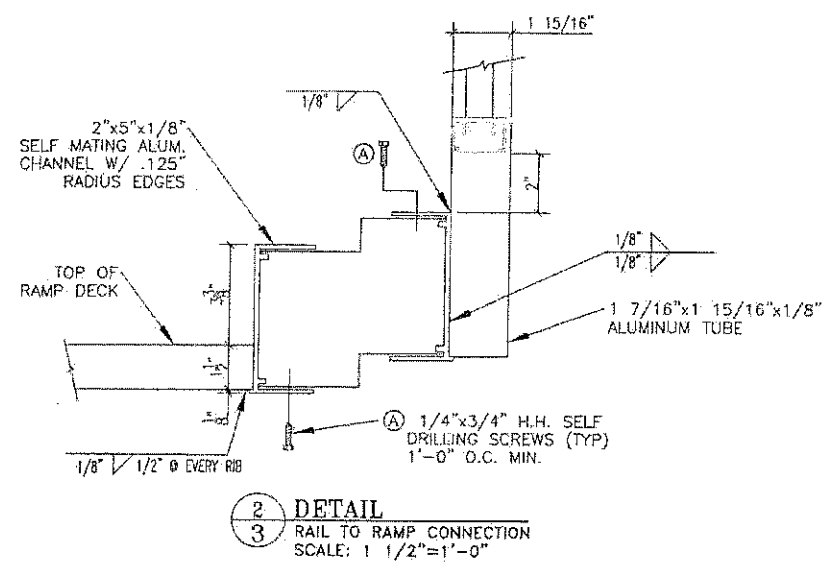
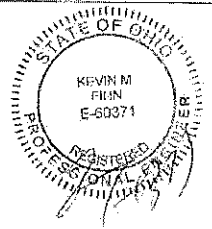
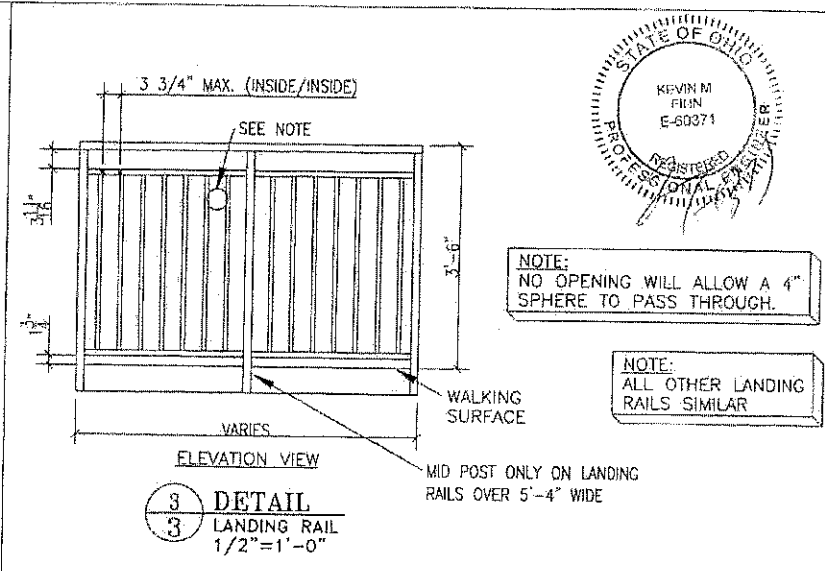
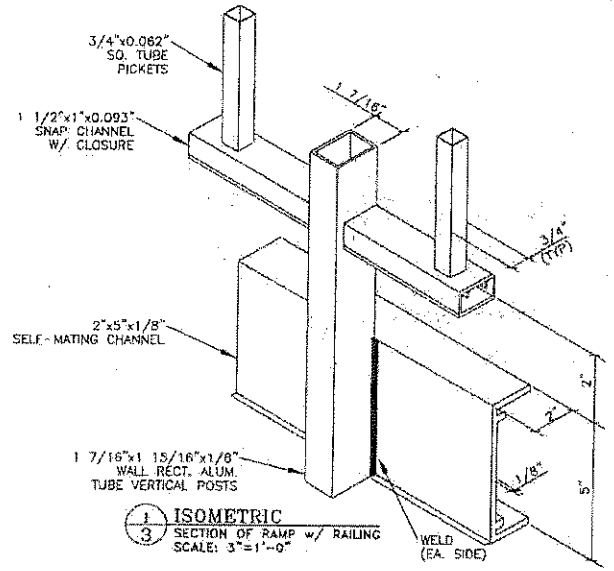
State of Ohio
Professional Engineer
No. 00271

State of Ohio
Professional Engineer
No. 00271

sapa:

STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

1/22/2017
030 ENC 2.mxd
R-1
TMB
SHEET NUMBER
02



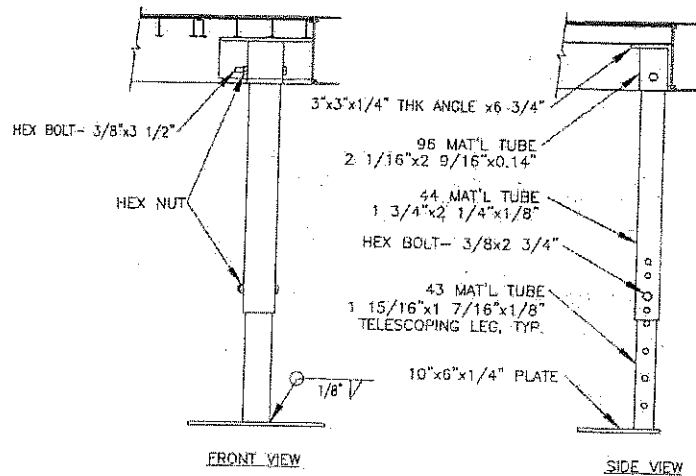
STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/12/2017
JOB NO.:
CHIO Dwg Layout
REV: R - 1
TITLE: TRB
PROJECT NO.:
SHEET NUMBER: 03

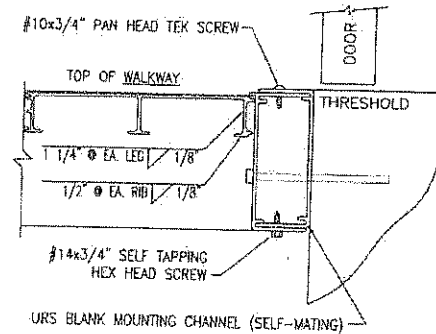
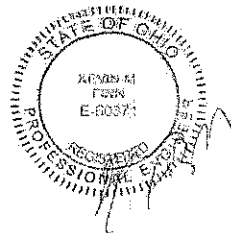
1800 S. LEXINGTON AVENUE, SUITE 100
COLUMBUS, OHIO 43260
PHONE: 614.291.1234
FAX: 614.291.1235
WWW.SAPA.COM

STATE OF OHIO
REGISTERED PROFESSIONAL ENGINEER
KEVIN M. FLINN
E-60371

sapa:

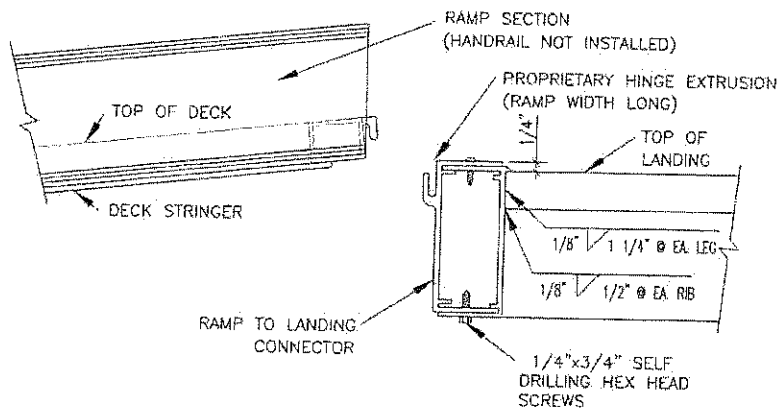


1
4 **DETAIL**
LANDING LEG ASSEMBLY
SCALE: 1 1/2"=1'-0"

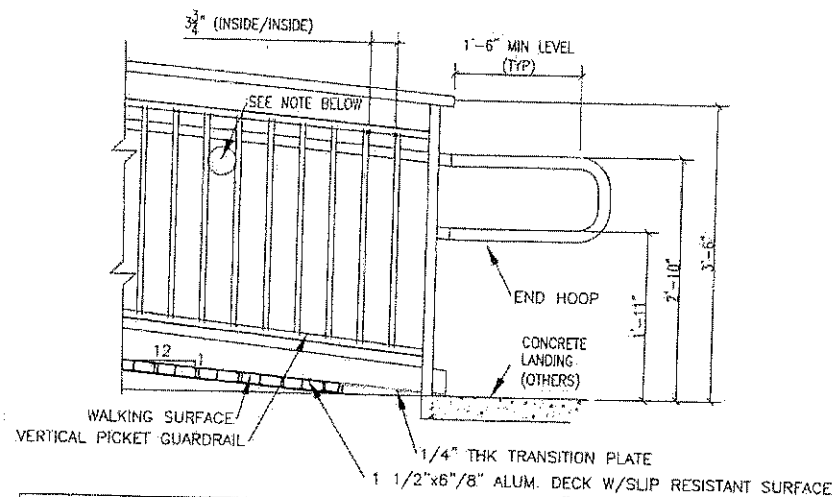


2
4 **SECTION**
WALKWAY OR LANDING TO BUILDING CONNECTION
SCALE: 3'=1'-0"

DIFFERENT TYPES OF ATTACHMENT:
 1.) FOR ATTACHMENT TO LIGHT GAGE METAL JOIST: THROUGH BOLT WITH 5/16" DIA. HEX-HEAD BOLT, FLAT WASHER, & 5/16" NUT. (12" O.C. MAX.)
 2.) FOR ATTACHMENT TO WOOD: 5/16" DIA. HEX- HEAD LAG SCREWS (12" O.C. MAX.)
 3.) FOR ATTACHMENT TO CONCRETE: 3/8" DIA. HEX- HEAD SLEEVE ANCHORS. (12" O.C. MAX.)



3
4 **SECTION**
RAMP TO LANDING CONNECTION
SCALE: 3"=1'-0"



NOTE:
NO OPENING WILL ALLOW A 4" SPHERE TO PASS THROUGH.

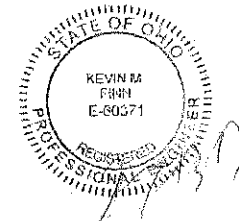
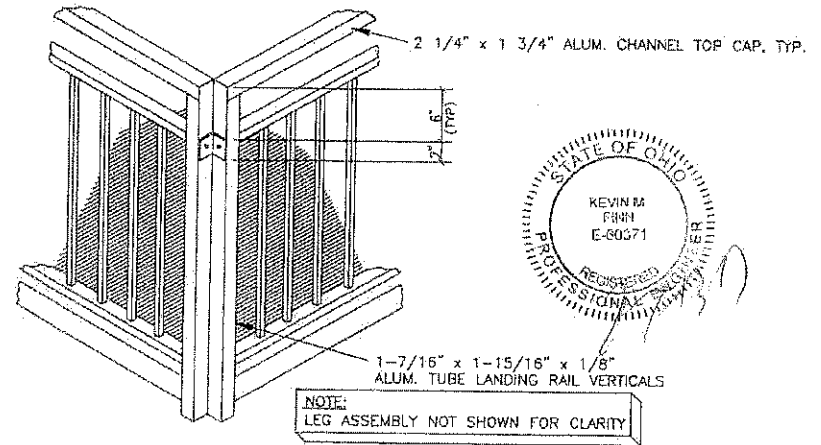
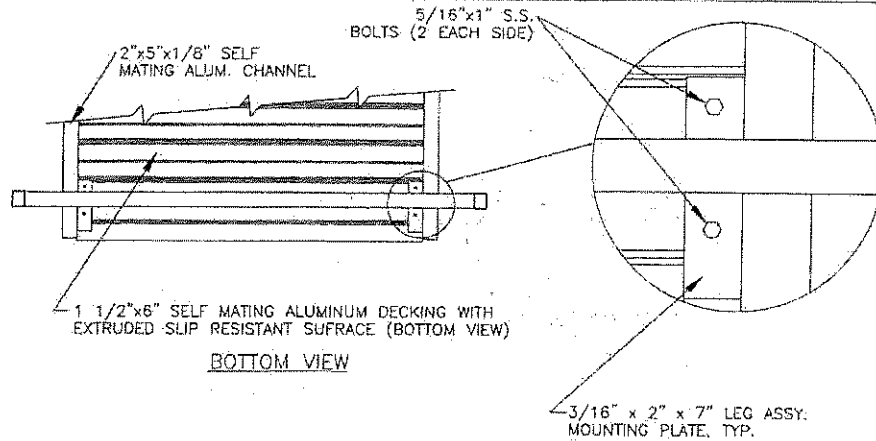
4
4 **DETAIL**
END RAMP (1:12 SLOPE)
SCALE: 3/4"=1'-0"

STATE OF OHIO
REGISTERED PROFESSIONAL ENGINEER
NO. E-00571
ROBERT M. FORM

sapa:

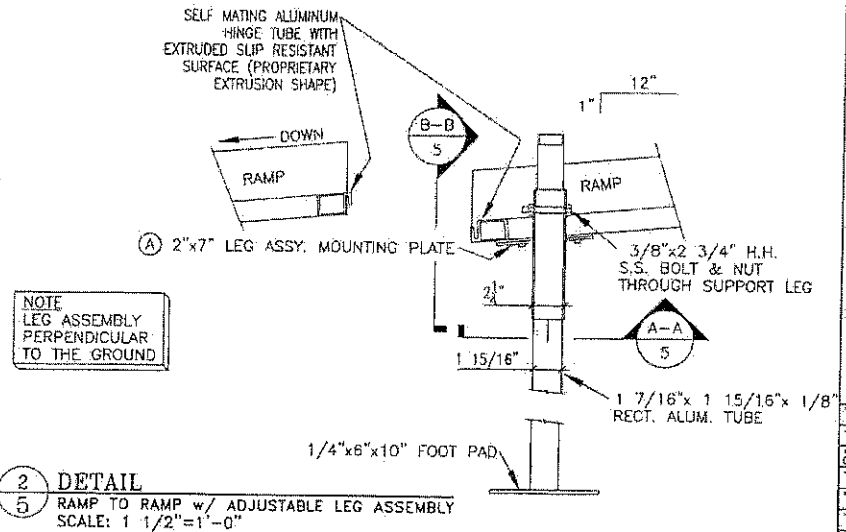
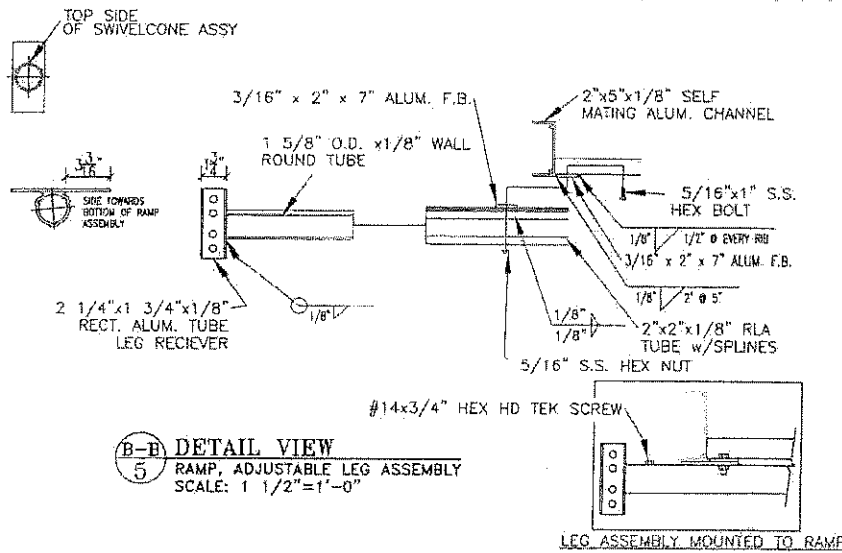
STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE: 1/12/2017
DRAWN BY: [blank]
CHECKED BY: [blank]
SCALE: R-1
SHEET NUMBER: 04



A-A
5 **DETAIL VIEW**
RAMP, ADJUSTABLE LEG ASSEMBLY
SCALE: 3/4"=1'-0"

3
5 **DETAIL**
LANDING RAIL CORNER CLIP
SCALE: 1"=1'-0"



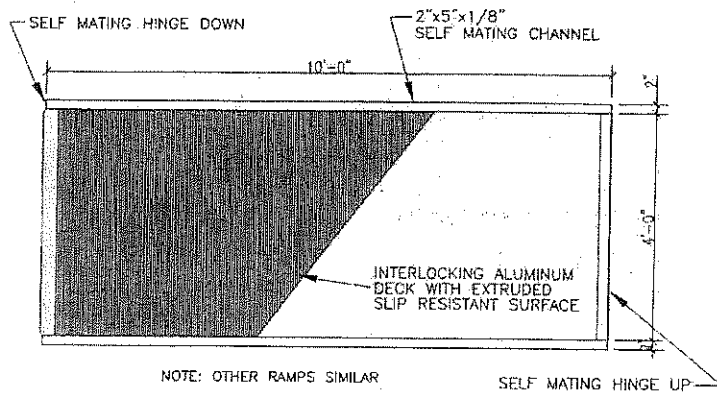
Engineering Services, Inc.
1255 Superior Blvd.
P.O. Box 114
Cincinnati, Ohio 45228
Phone: (513) 763-1144
Fax: (513) 763-1144

State of Ohio
Professional Engineer
Kevin M. FHH
E-60371

sapa:

STATE OF OHIO
ENGINEERED DRAWINGS
ALUMINUM ACCESS RAMP SYSTEM
WITH 42" HIGH VERTICAL PICKET GUARDRAIL

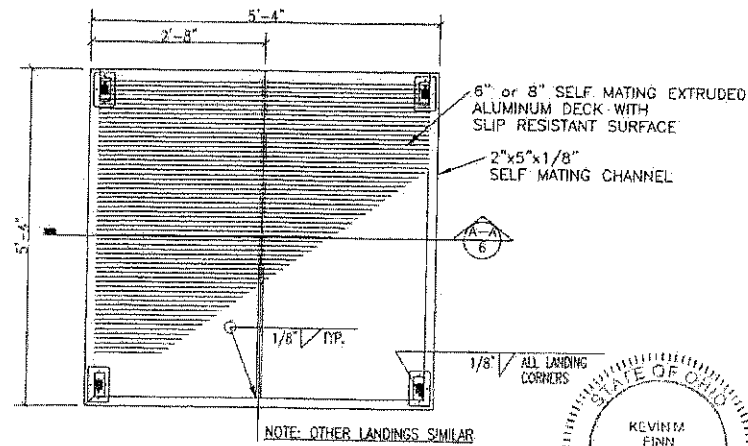
1/12/2012
CNS
R-1
TMB
05



NOTE: OTHER RAMPS SIMILAR

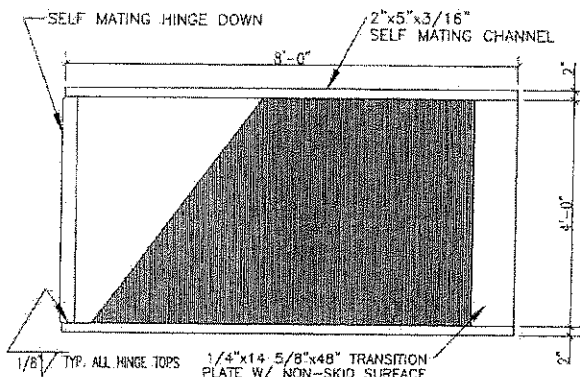
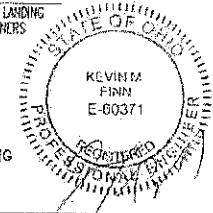
SELF MATING HINGE UP

1 **DETAIL**
6 4'x8' OR 10' RAMP DETAIL
 SCALE: 1/2"=1'-0"



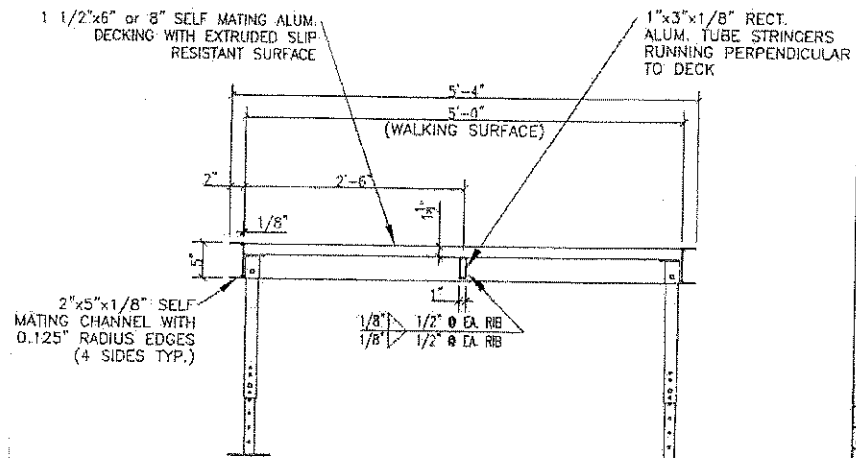
NOTE: OTHER LANDINGS SIMILAR

3 **DETAIL**
6 5'-4" x 5'-4" LANDING
 SCALE: 1/2"=1'-0"



NOTE: OTHER RAMPS SIMILAR

2 **DETAIL**
6 4'x8' END RAMP DETAIL
 SCALE: 1/2"=1'-0"



A-A **SECTION VIEW**
6 LANDING CROSS SECTION
 SCALE: 3/4"=1'-0"

State of Ohio
 ENGINEERED DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42" HIGH VERTICAL PICKET GUARDRAIL

1/12/2017

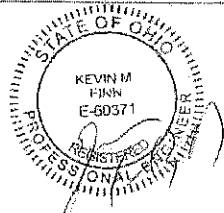
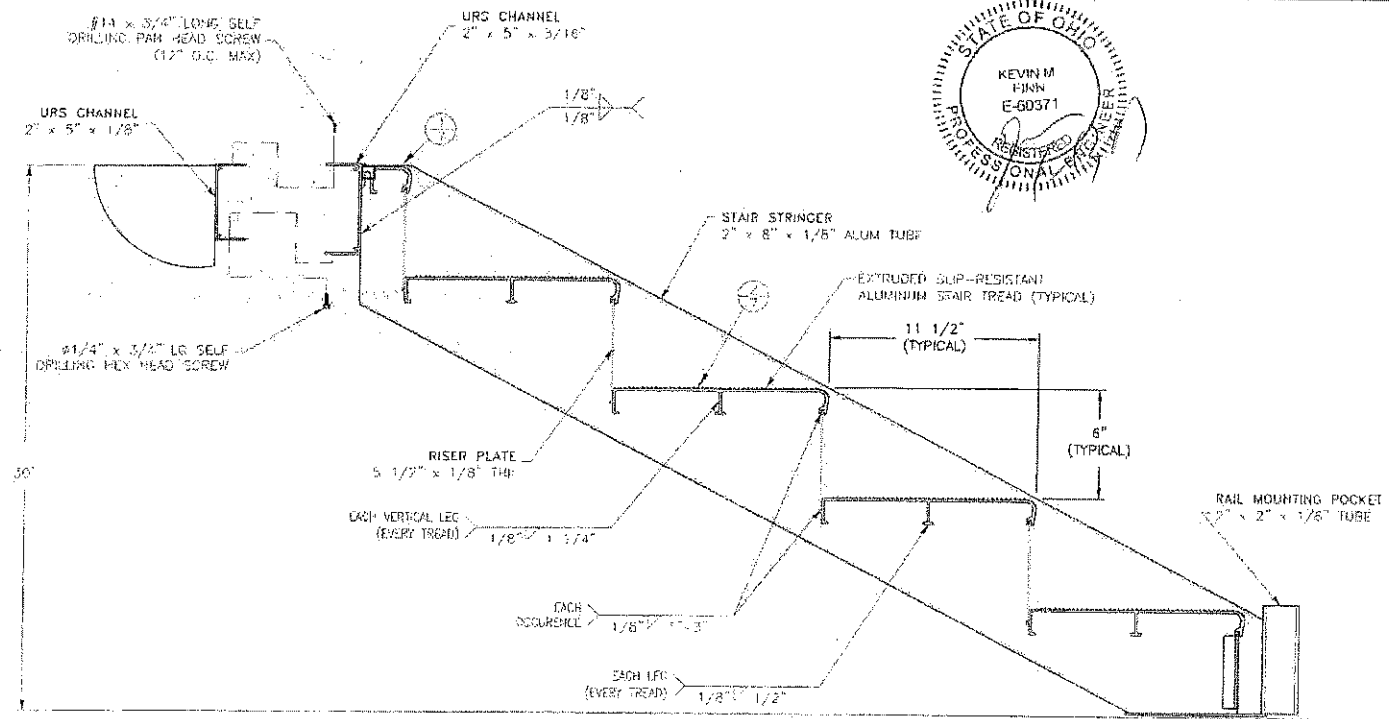
CHD INC. Lynch

R-1

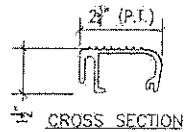
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sapa:

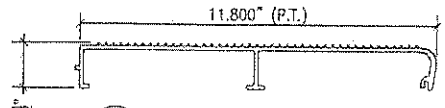
Kevin Finn
 112 Superior Drive
 Bldg. 13 7322
 Columbus, Ohio 43232
 Tel: 614.891.4200
 Fax: 614.891.4205



SECTION C-C:
 5R:006 STAIRWAY CROSS SECTION
 (RAILINGS OMITTED FOR CLARITY)
 SCALE: NTS



1
7 **DETAIL**
 $2 \frac{3}{4}" \times 1 \frac{1}{2}"$ UPPER STAIR HINGE
 SCALE: NTS



2
7 **DETAIL**
 SLIP-RESISTANT STAIR TREAD
 SCALE: NTS

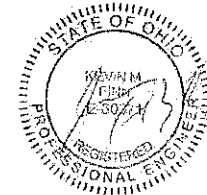
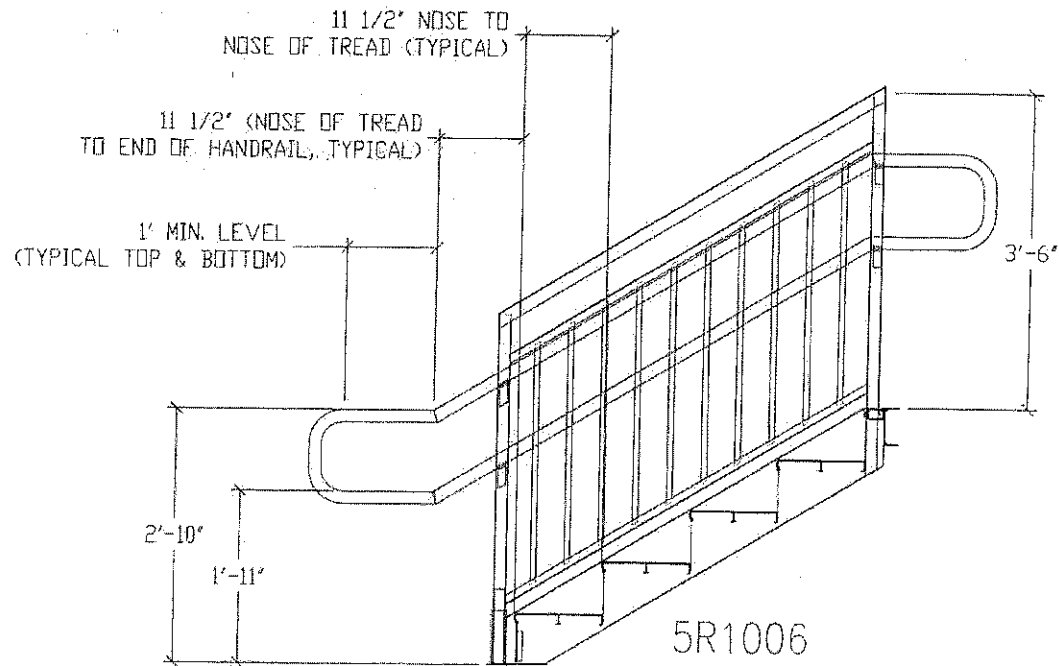
Kevin M Finn is a duly Licensed Professional Engineer in the State of Ohio. He is a member of the Ohio Society of Professional Engineers. His license number is E-60371.

Sapa Extrusions, Inc.
 2008 LA 1120
 P.O. Box 182007 / St. Louis, MO 63118
 Fax: 314-855-4556

sapa:

STATE OF OHIO
 ENGINEERED DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42" HIGH VERTICAL POCKET GUARDRAIL

DATE	1/12/2017
BY	DMG
CHECKED	DMG
PROJECT NUMBER	07



1 ELEVATION VIEW
 8 UPPER AND LOWER STAIR HOOP DETAILS
 SCALE: 3/4" = 1'-0"

State of Ohio
 PROFESSIONAL ENGINEER
 WILLIAM E. SAPA
 REG. NO. 12523

Sapa Engineers, Inc.
 135 Spitzer Drive
 P.O. Box 141127
 Columbus, OH 43214-0127
 Tel: 614.885.4889
 Fax: 614.885.4888

sapa:

STATE OF OHIO
 ENGINEERED DRAWINGS
 ALUMINUM ACCESS RAMP SYSTEM
 WITH 42" HIGH VERTICAL PICKET GUARDRAIL

DATE	1/12/2011
SCALE	
PROJECT	OHIO ENG License
NO.	R - 1
DATE	08/11/10
BY	DMS
CHECKED BY	
DATE	
PROJECT NUMBER	
08	

Soil Classification and Bearing Capacity

TABLE TO § 3285.202

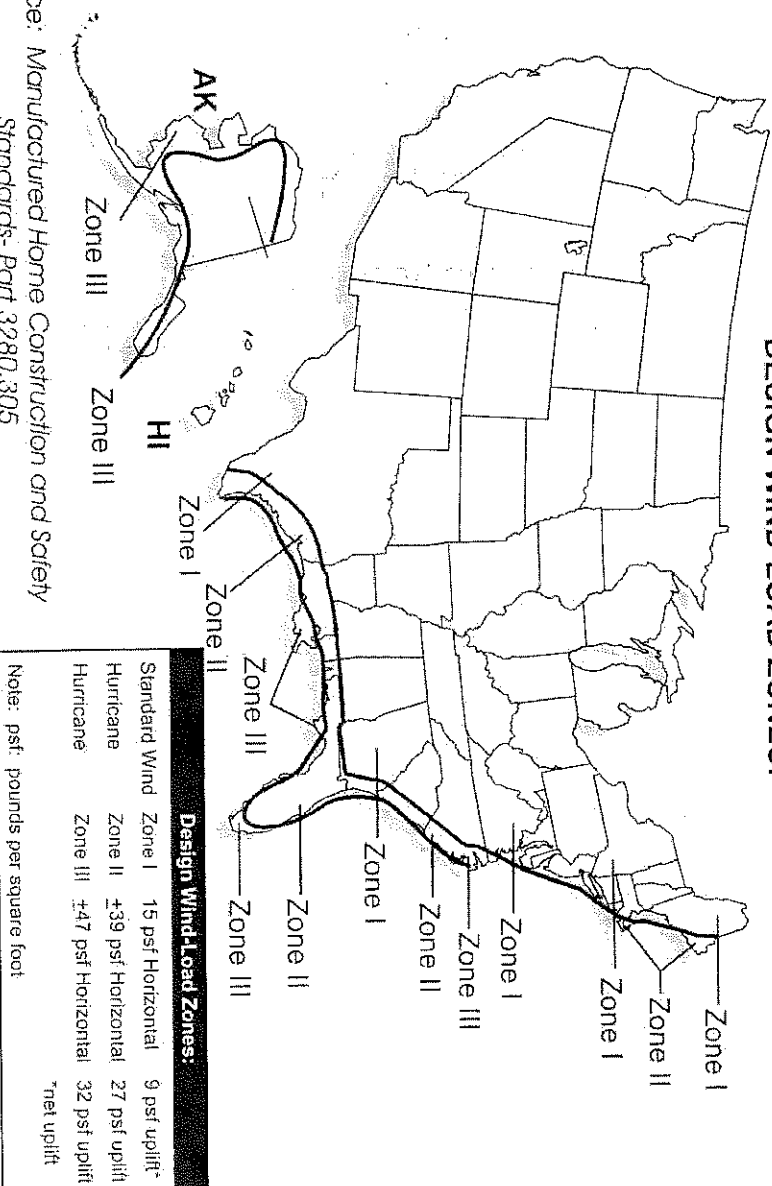
Soil classification	Soil description	Allowable soil bearing pressure (psf) ¹	Blow count ASTM D 1586-98	Torque probe ² value ⁴ (inch-pounds)
1 ASTM D 2487-00 or D 2489-00 (incorporated by reference, see § 3285.4)	Rock or hard pan	4000+	40+	More than 550.
2 GW, GP, SW, SP, GM, SM.	Sandy gravel and gravel, very fine dense sand; cemented sands; coarse gravel; cobbles; prograded silts; clays and coral.	2000	40+	More than 550.
3 GC, SC, ML, CL	Sand; silty sand; clayey sand; silty gravel; medium dense coarse sands; sandy gravel; and very stiff silt, sand clays.	1500	24-39	351-550.
4A CG, MH ²	Loose to medium dense sands; firm to stiff clays and silts; alluvial fills.	1000	18-23	276-350.
4B CH, MH ²	Loose sands; firm clays; alluvial fills.	1000	12-17	175-275.
5 OL, OH, PT	Uncompacted fill; peat; organic clays.	Refer to 3285.202(e)	0-11	Less than 175.

Notes:

- ¹ The values provided in this table have not been adjusted for overburden pressure, embedment depth, water table height, or settlement problems.
- ² For soils classified as CH or MH, without either torque probe values or blow count test results, selected anchors must be rated for a 4B soil.
- ³ The torque test probe is a device for measuring the torque value of soils to assist in evaluating the bearing capacity of the soil in which the ground anchor is placed. The shaft must be of suitable length for the full depth of the ground anchor.
- ⁴ The torque value is a measure of the load resistance provided by the soil when subject to the turning or twisting force of the probe.
- ^(f) If soil appears to be composed of peat, organic clays, or uncompacted fill, or appears to have unusual conditions, a registered professional geologist, registered professional engineer, or registered architect must determine the soil classification and maximum soil bearing capacity.

Source: Manufactured Home Construction and Safety Standards - Part 3285.202

DESIGN WIND-LOAD ZONES:



Source: Manufactured Home Construction and Safety Standards- Part 3280.305

Note: Prior to installation, refer to any local, state and federal regulations, to assure proper compliance. Soil test probe the anchor location in order to match the soil classification with the proper anchor.

Soil Classification Chart

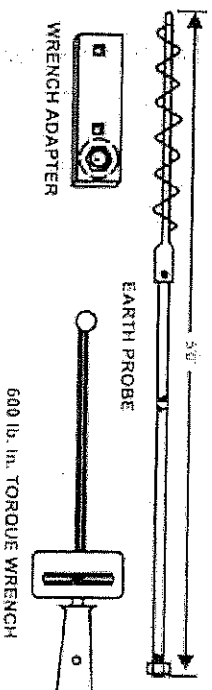
for Minute Man Anchors

Soil Class	Torque Probe Values	Recommended Minute Man Anchors & Stabilizers
1	NA	Cross Drive or Rock Anchor
2	551 Inch Pounds Up	4430 DH 4636 DH 636 DH 4450 DH
		4430 EZDH 4636 EZDH 636 EZDH GW-2
3	351 to 550 Inch Pounds	12" Stabilizer Plate Nu-Concept Stabilizer Cap
		4430 DH 4636 DH 636 DH 4450 DH
4A	276 to 350 Inch Pounds	4430 EZDH 4636 EZDH 636 EZDH GW-2
		12" Stabilizer Plate Nu-Concept Stabilizer Cap
4B	175 TO 275 Inch Pounds	4636 DH 4450 DH 650 DH
		4636 EZDH 12" Stabilizer Plate 17" Stabilizer Plate
5	Less Than 175 Inch Pounds	760 DH 860 DH 1060 DH
		17" Stabilizer Plate
		Call Minute Man Anchors 800-438-7277

Note:

Each state, county, municipality may require a specific anchor from the groups shown for each soil classification. Check local regulations before installation. Test soil with soil probe and torque wrench at the anchor location in order to match the proper anchor with soil soil classification. A stabilizer plate or certified stabilizing device must be used with DH anchors when the anchors are used to resist lateral loads.

Soil Test Probe and Torque Wrench



Warning: Before ground anchor installation or probing, determine that the anchor or probe locations around the home will not be close to any underground utilities. Failure to determine the location of electrical lines may result in serious personal injury.

Instructions

- Place tip of probe into ground where the anchor is to be located. Using a 15/16" hex socket with a ratchet, breaker bar, or electric drive machine, turn soil probe in a clockwise direction.
- Rotate probe into the soil to a depth equal to the length of the recommended anchor to be installed.
- To determine the soil classification:
 - Place wrench adapter onto torque wrench.
 - Insert hex portion of wrench adapter onto the top of the probe.
 - Support probe shaft with one hand while turning the probe steadily with the torque wrench. **Do not exceed 600 inch pounds when turning!**
 - Read torque value while turning torque wrench and probe clockwise.
 - Use Minute Man Anchors' Soil Classification Chart to cross reference probe readings and match the anchor model with the proper soil class at the site.



1344

Following is a list of Minute-Man Anchors with an allowable working load equal to or exceeding 3,150 lbs. and are capable of withstanding a 50% overload (4,725 lbs. total). Stabilizer devices must be used with anchors when anchors are used to resist horizontal forces. HUD Part 3280.506(f)

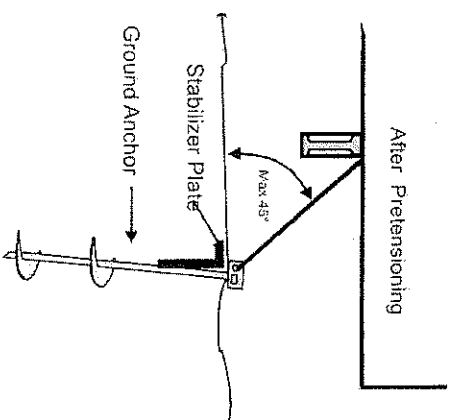
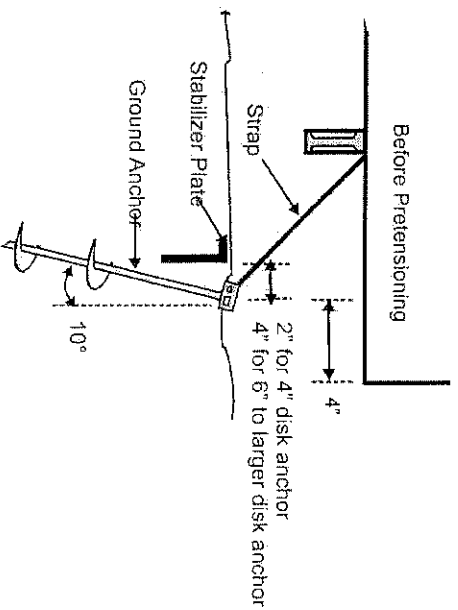
ITEM #	MARK	MODEL	DESCRIPTION	USE IN SOIL TYPE
1071	MMA-2	650-DH 5/8"	6" DISC, 50" ANCHOR	2,3,4(a)
1101	MMA-4	650-DH 3/4	6" DISC, 50" ANCHOR	2,3,4(a)
1131	MMA-28	636-DH 3/4	6" DISC, 36" ANCHOR	2,3
1241	MMA-30	4430-DH 5/8	DOUBLE 4" DISC, 30" ANCHOR	2,3
1271	MMA-6	4430-DH 3/4	DOUBLE 4" DISC, 30" ANCHOR	2,3
1349	MMA-35	36-XDH	36" CROSS DRIVE ANCHOR	1
1350	MMA-8	48-XDH	48" CROSS DRIVE ANCHOR	1
1390	MMA-BR	24 BA	BARB ROCK ANCHOR	1
1287	MMA-86	860-DH 3/4	8" DISC, 60" ANCHOR	4(b) (Fl.a.)
1288	MMA-71	1060-DH 3/4	10" DISC, 60" ANCHOR	4(b)
1291	MMA-75	760-DH 3/4	7" DISC, 60" ANCHOR	2,3,4(a),4(b)
1346	MMA-52	4636-DH 3/4	4" & 6" DISC, 36" ANCHOR	2,3,4(a)
1284	MMA-55	4450-DH 3/4	DOUBLE 4" DISC, 50" ANCHOR	2,3,4(a)
1592	MMA-92	4430-EZDH 3/4	DOUBLE 4" DISC, 30" EZ ANCHOR	2,3
1593	MMA-93	4636-EZDH 3/4	4" DISC, 6" DISC, 36" EZ ANCHOR	2,3,4
1594	MMA-94	636-EZDH 3/4	6" DISC, 36" EZ ANCHOR	2,3
1596	MMA-96	650-EZDH 3/4	6" DISC, 50" EZ ANCHOR	2,3
2390	MMA-18	THDH	DOUBLE HEAD TENSION DEVICE	SLAB
2391	MMA-18	THDHL S	DH TENSION DEVICE W/LAG	SLAB
1450	MMA-14	210-PDH	WET CONCRETE ANCHOR	SLAB
1445	MMA-42	210-JDH	SWIVEL HEAD WET CONCRETE ANCHOR	SLAB
1322	MMA	G W2	G W 2 SOIL ANCHOR	2,3
2200	MMA-SD2A		STABILIZER- 12"	2,3,4(a)
2202	MMA-SD2		STABILIZER- 17"	FLA, 2,3,4(a),4(b)
2211	N C1		NU CONCEPT STABILIZER CAP	2,3
2691	MMA-29	FCI W/S	FRAME CLAMP II W/STRAP	
2820	MMA-31	FRAME TIE	LONGITUDINAL FRAME TIE-8 BOLT	FLA.
2822	MMA-34	FRAME TIE	LONGITUDINAL FRAME TIE-4 BOLT	
2700	MMA-32	BUC/W S	BUCKLE W/STRAP	
2801	MMA-33	FCI (LOCKING)	LOCKING FRAME CLAMP II	
2704	MMA-71	CT/W S	CORNER TIE W/STRAP	
2706	MMA-71-C	CT/W S	CORNER TIE W/STRAP	
2709	MMA-71-C	CT/W S	CORNER TIE W/REG. STRAP	
2010	MMA	SBN	STRAP BOLT & NUT	

Revised 03/20/13

MINUTE MAN ANCHORS, INC.

INSTRUCTION FOR USING MINUTE MAN STABILIZING DEVICE

Minute Man stabilizing devices are designed for use with Minute Man anchors and intended to laterally restrict movement of the anchor through the soil.



1. Place the anchors approximately four inches to the inside of the exterior wall line of the home or a sufficient distance to avoid interference with the skirting (see above)
2. Hold the anchor at an angle of approximately 10 degrees off of vertical so that the head of the anchor is just outside the sidewall (see above)
3. Install the anchor to a depth of approximately one-third (1/3) the anchor length.

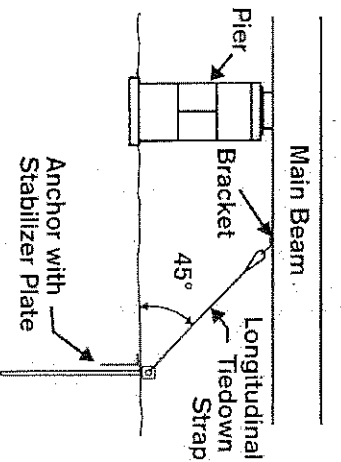
4. Place a stabilizer plate to the inside of the anchor shaft (side of shaft toward center of house) and the distance indicated from the shaft.

5. Drive the stabilizer plate into the ground until the top of the plate is 1" below the surface of the ground.
6. Install the anchor to its full depth.

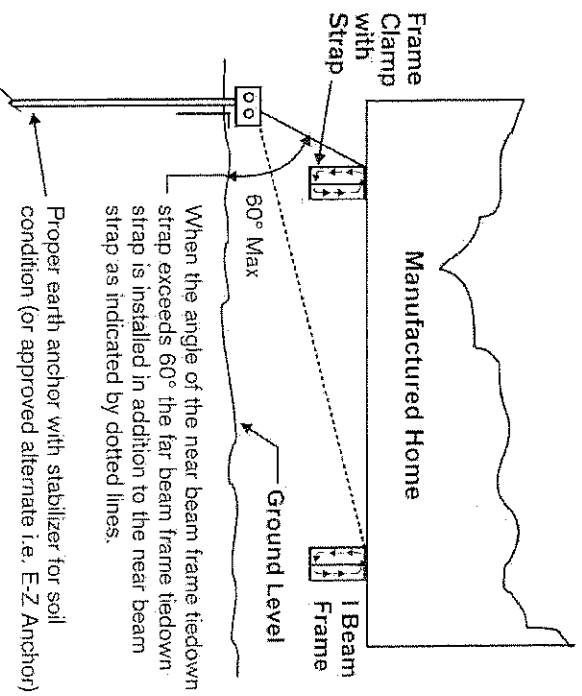
7. Pretension the anchor by pulling it up to the stabilizer plate. Pull the anchor approximately 1/2 inch more while it is in contact with the plate using the strap and take-up bolt to move the anchor head.

FRAME TIE TO ANCHOR

Longitudinal Frame Tie To Anchor

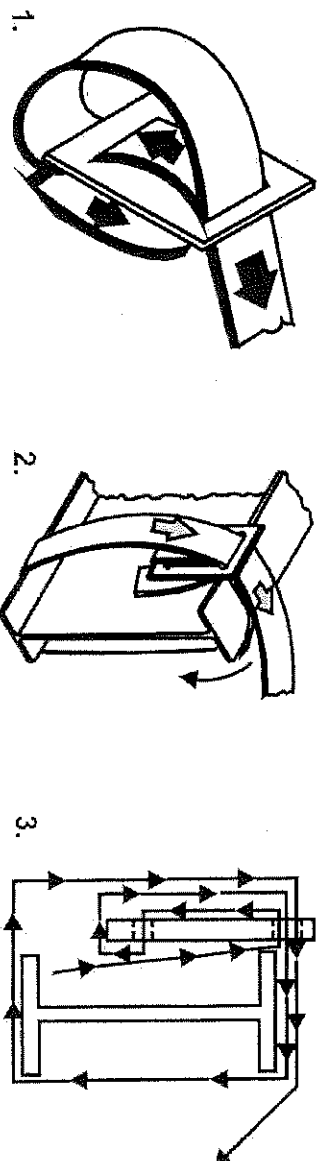


Lateral Frame Tie To Anchor



FRAME TIE INSTALLATION INSTRUCTIONS

Frame Tie With Buckle



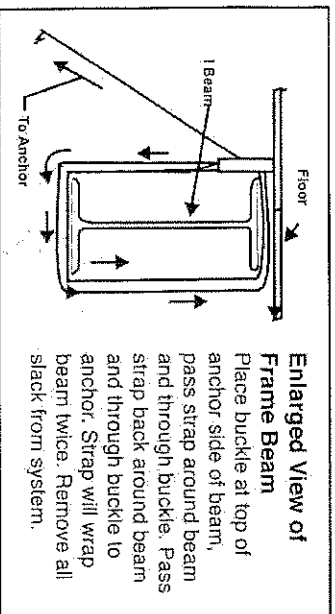
1. Thread sufficient length of frame tie strap through buckle as shown.

Next, thread long end of strap between frame and floor of home. Bring strap around frame and back through buckle as shown in diagram and fasten to anchor head.

Diagram showing strap in position around frame and through buckle. It is important to remove all slack from system.

Note: Use of a single buckle is an appropriate alternate.

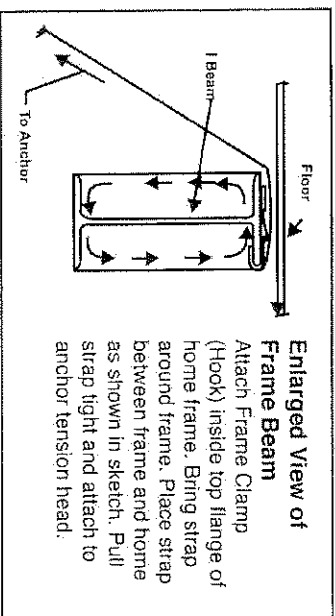
Single Slot Buckle With Strap



Enlarged View of Frame Beam

Place buckle at top of anchor side of beam, pass strap around beam and through buckle. Pass strap back around beam and through buckle to anchor. Strap will wrap beam twice. Remove all slack from system.

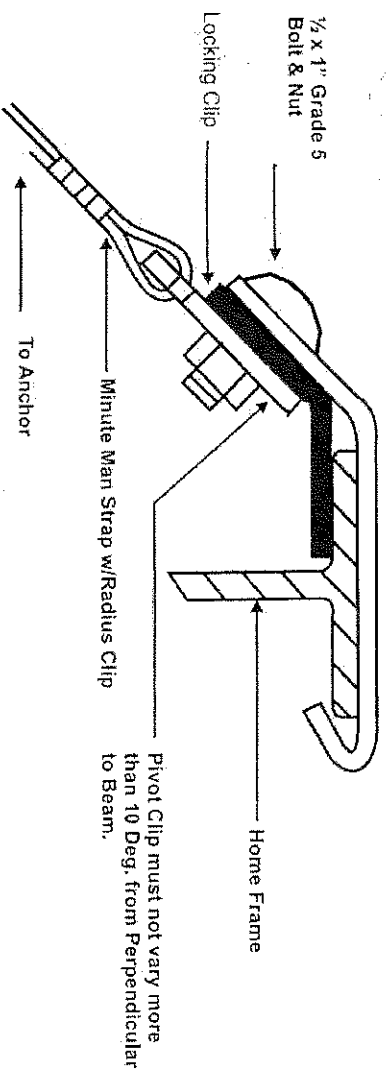
Frame Tie With Hook



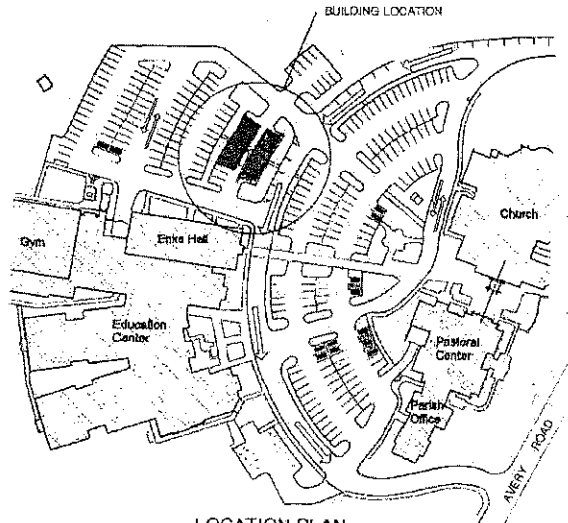
Enlarged View of Frame Beam

Attach Frame Clamp (Hook) inside top flange of home frame. Bring strap around frame. Place strap between frame and home as shown in sketch. Pull strap tight and attach to anchor tension head.

LOCKING FRAME CLAMP II MMA-33 ASSEMBLED UNIT



Pivot Clip must not vary more than 10 Deg. from Perpendicular to Beam.



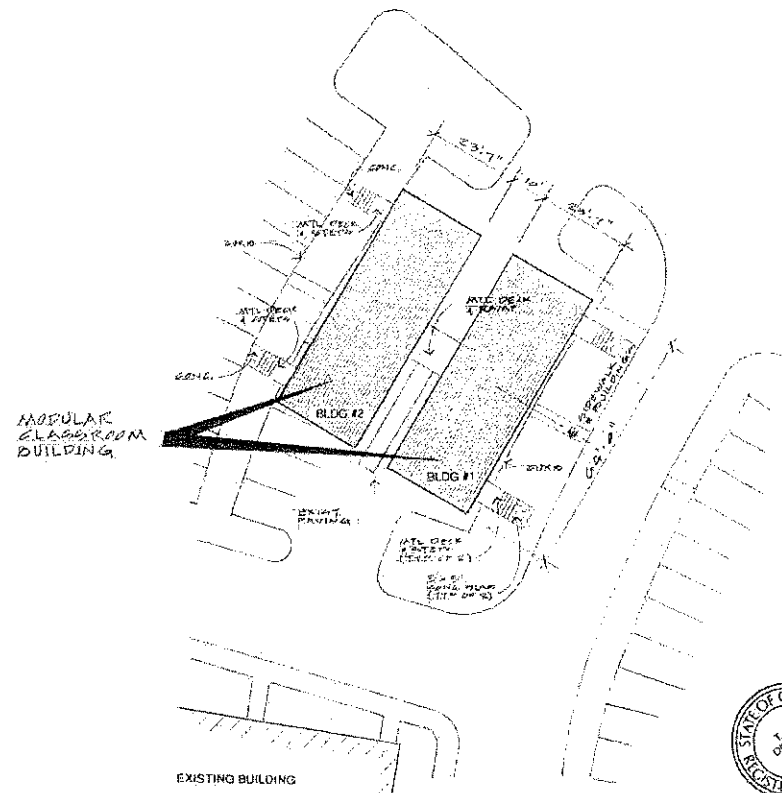
LOCATION PLAN

CODE DATA (2017 OBC)

Building Height	One Story
Use and Occupancy	E
Type of Construction	VB
Building Floor Area	1,505 SF
Occupant Load	50
Sprinkler System	No
Manual Fire Alarm System	Yes

GENERAL NOTES

1. All work to follow state and local building codes and zoning codes and/or other applicable codes.
2. All existing conditions, dimensions, etc. shall be verified prior to start of work. Notify Architect of discrepancies before proceeding with the work.
3. Prior to starting the work locate all existing underground, overhead, or hidden utilities. Relocate or re-route as required.
4. Remove all excess excavated material from the site unless directed otherwise by the Owner.
5. The Contractor shall call for foundation inspections, etc. and the final inspection as required to obtain the "CERTIFICATE OF OCCUPANCY".
6. All products used in the project shall be installed per manufacturer's specifications.
7. All contractors shall leave the site clean and free of debris and unused materials.



EXISTING BUILDING



SITE PLAN
SCALE: 1" = 20' - 0"



T. M. DECKER, ARCHITECT
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LANCASTER, OHIO 43130-4124
(614) 352-3182 (740) 277-6580 Fax

FOR
MODULAR CLASSROOM BUILDINGS

SAINT BRIGID OF KILDARE SCHOOL
7175 AVERY ROAD
DUBLIN, OHIO 43017



T.M. DECKER License #501
Expiration Date 12/31/2027

DATE: JULY 27, 2020
REVISIONS
PROJECT NO. 00012
SHEET NUMBER
A1

