



All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**BRACED CANTILEVER STACKED**

DESIGNED BY:  
KL

REVIEWED BY:  
AJV

DRAWN BY:  
GAB

ISSUE DATE:  
05 JAN 15

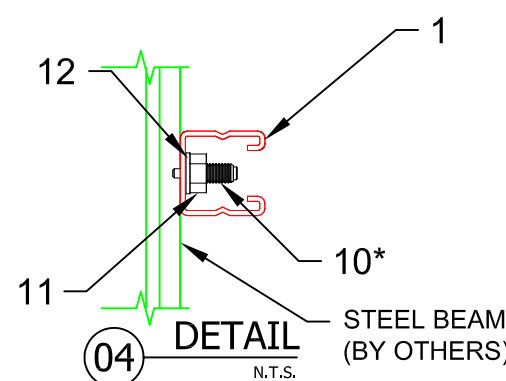
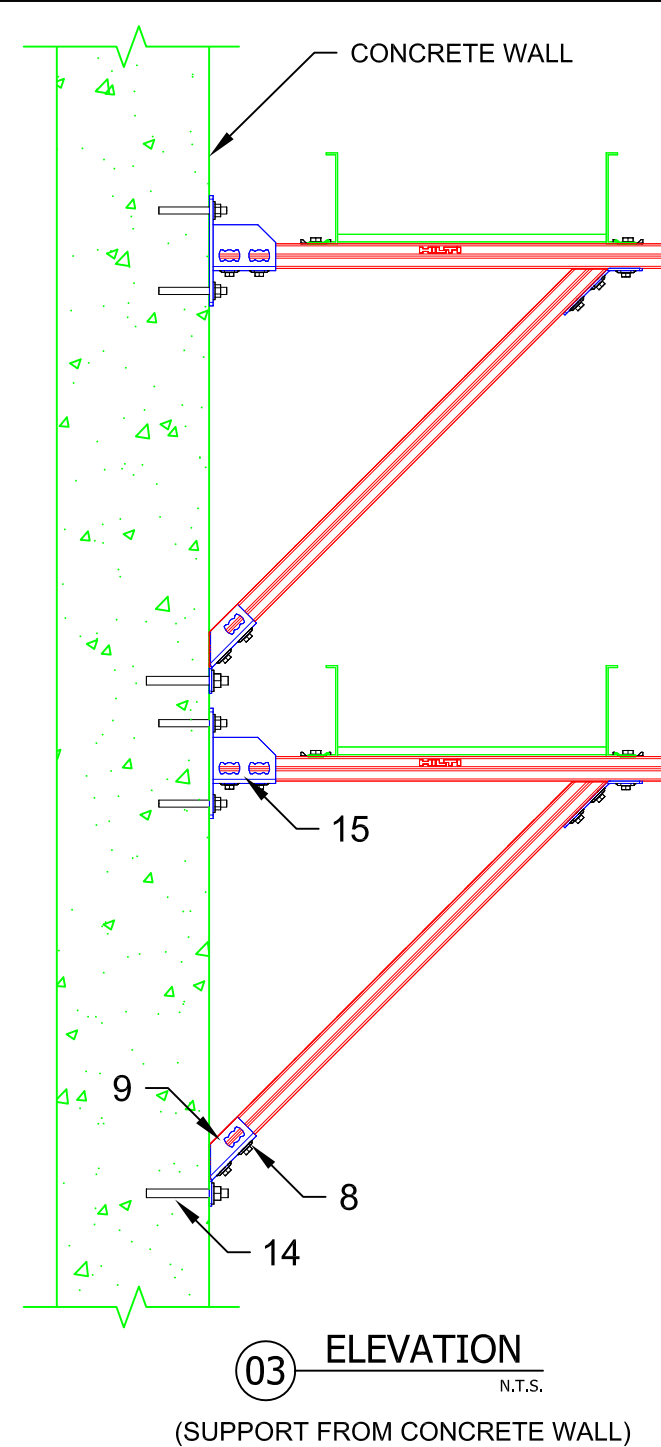
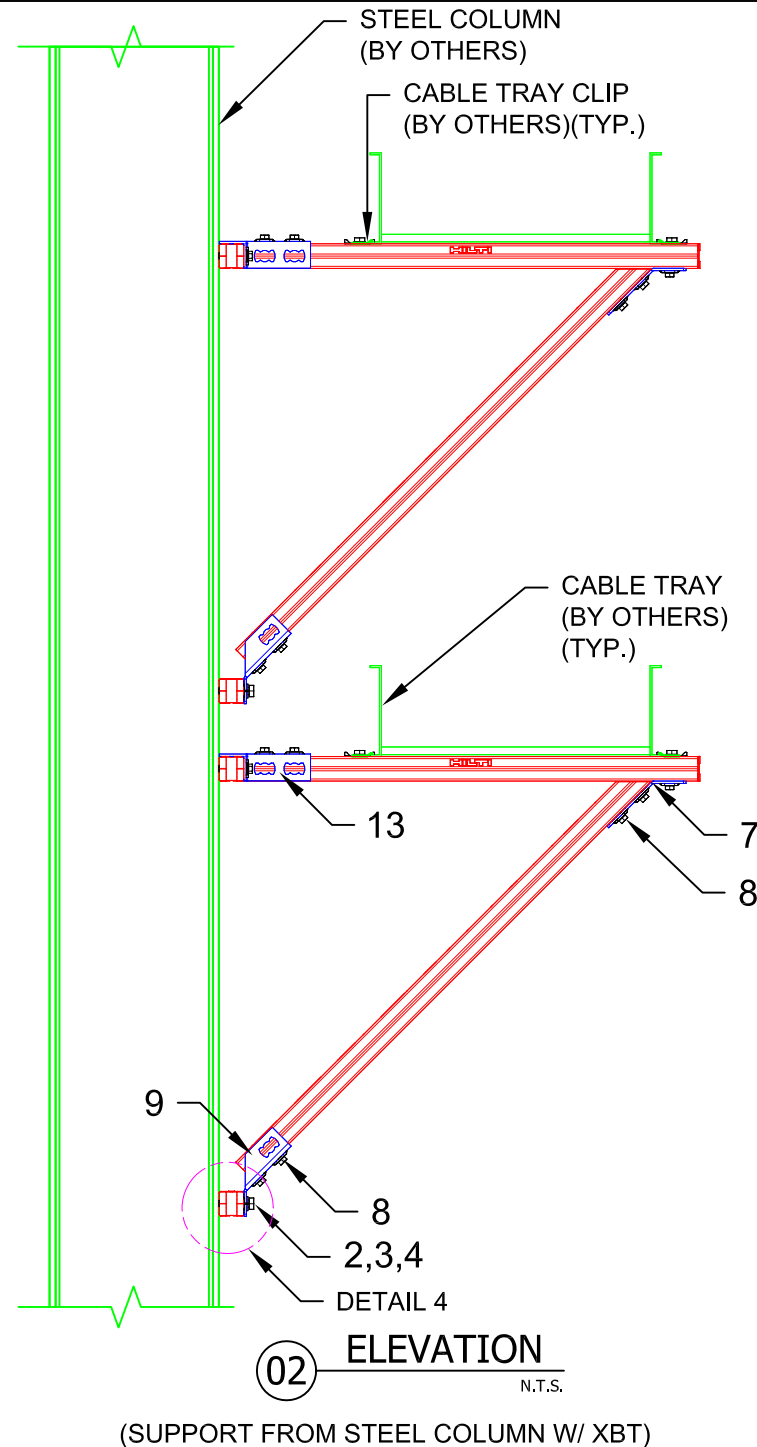
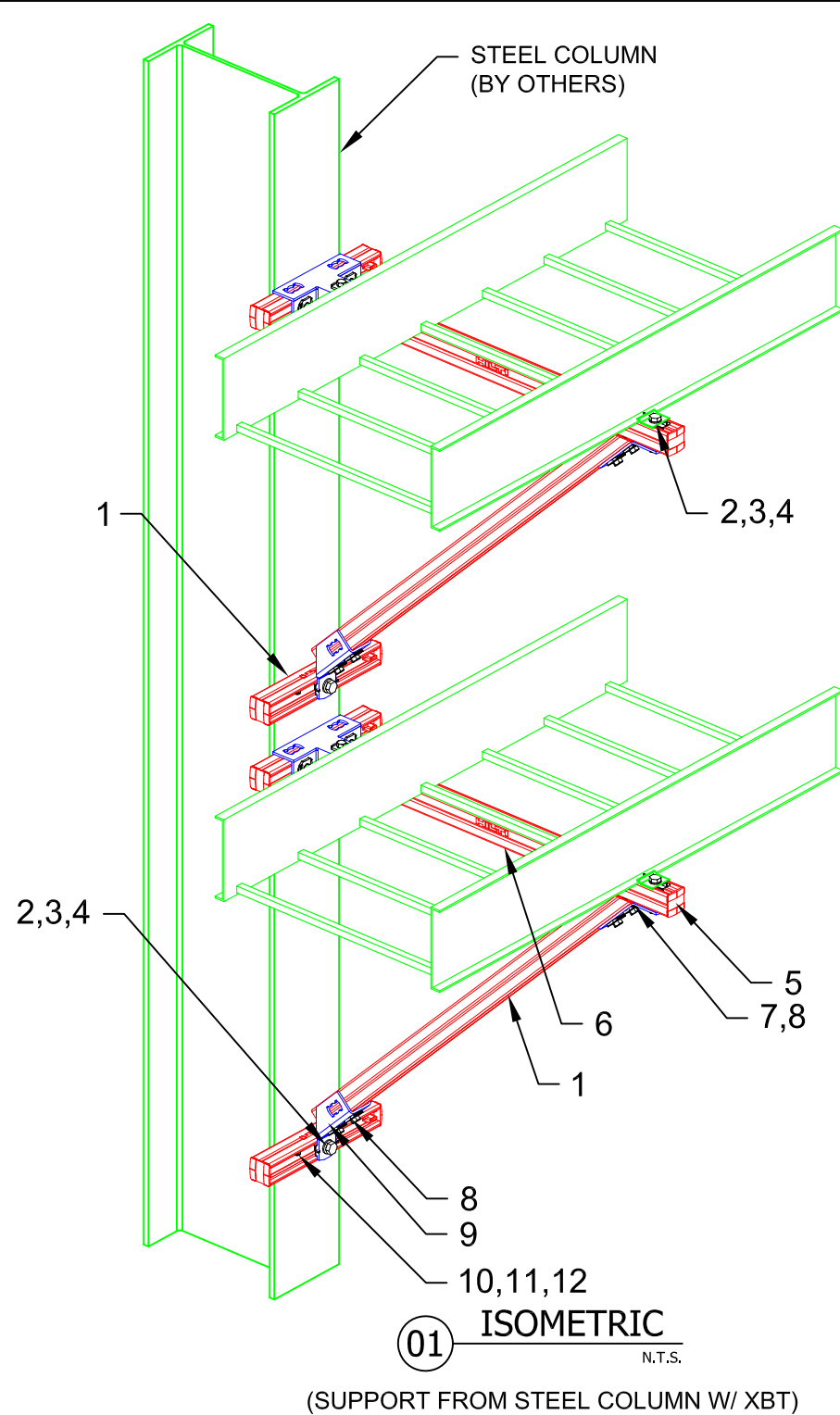
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NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-BC50-C/S**

DRAWING NUMBER: 01

SHEET: 1/1



**NOTE(S):**

1. PRELIMINARY NOT FOR CONSTRUCTION
2. DESIGN ASSUMPTIONS:
  - a. NO LOADS CONSIDERED - CONCEPT ONLY
  - b. LATERAL LOADS NOT CONSIDERED
  - c. BUILDING CODE: NOT SPECIFIED
  - d. CORROSION RESISTANCE REQD.: NOT SPECIFIED
2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.
3. \*MATERIAL THICKNESS IN STEEL BASE  $\geq 5/16"$ . MINIMUM EDGE DISTANCE AND MINIMUM SPACING ARE  $1/4"$  AND  $5/8"$  RESPECTIVELY.



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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**BRACED CANTILEVER STACKED**

DESIGNED BY: KL  
REVIEWED BY: AJV

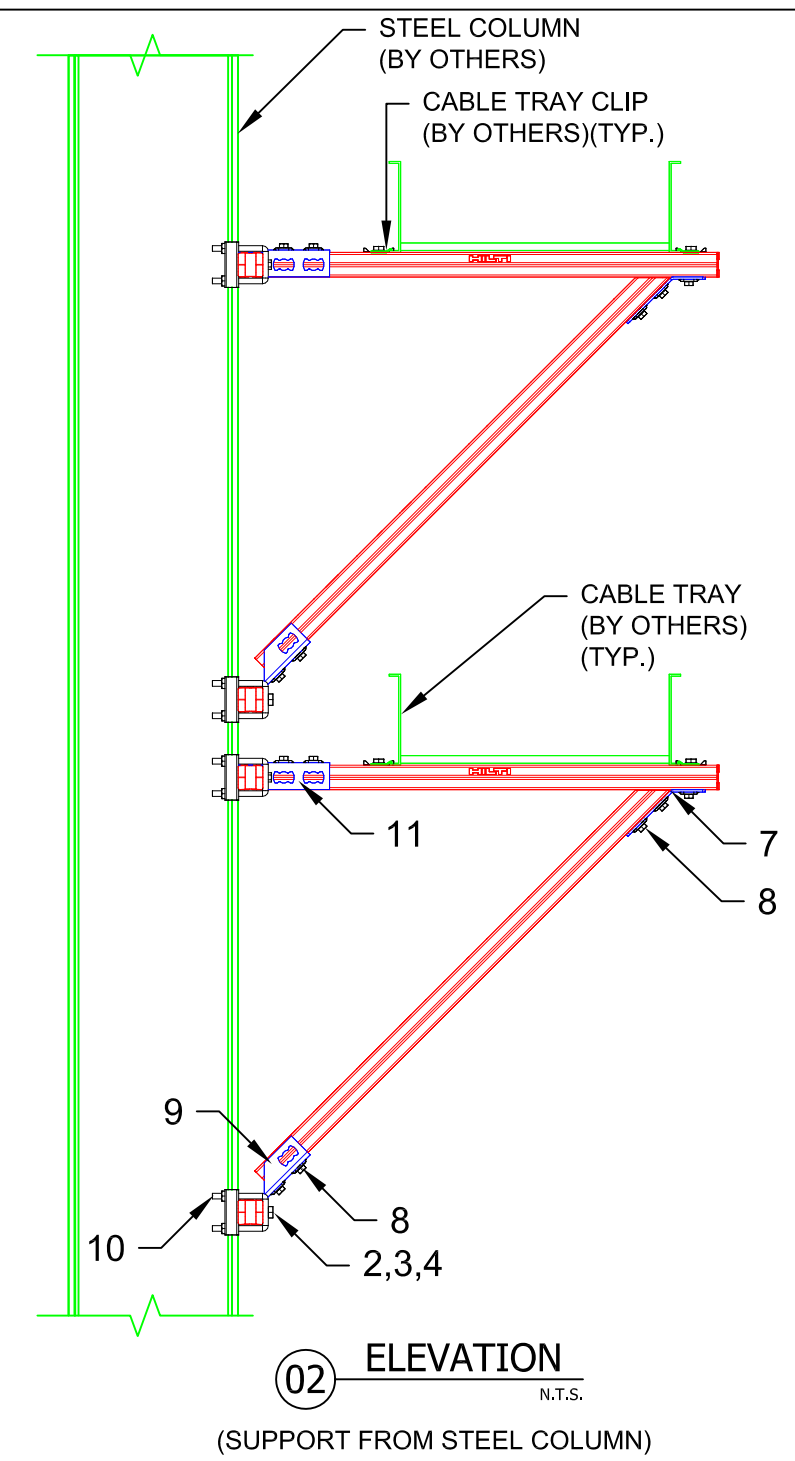
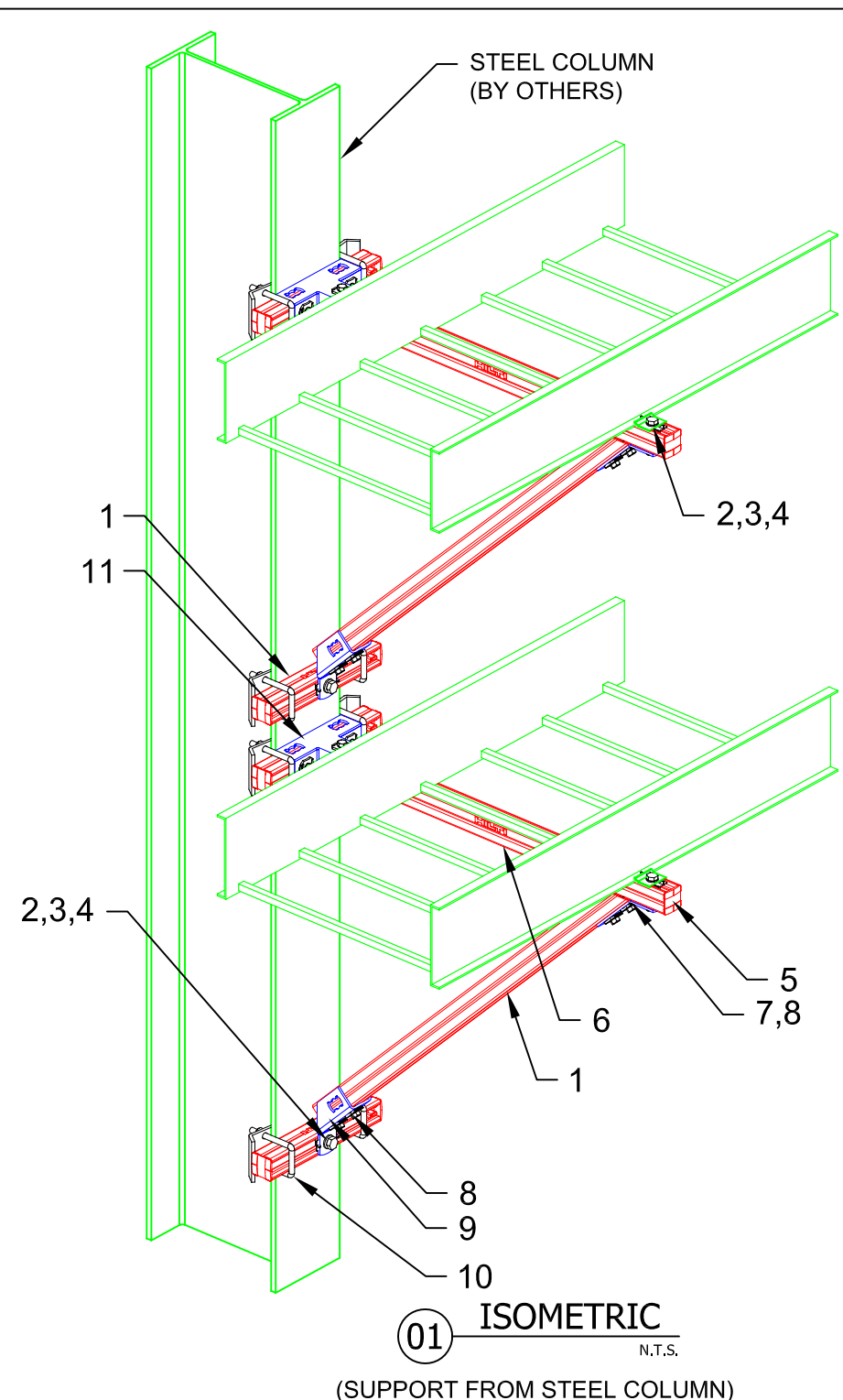
DRAWN BY: GAB  
ISSUE DATE: 05 JAN 15

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-BC51-S**

DRAWING NUMBER: 01  
SHEET: 1/1



No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F1/2"	50	AS REQ'D	377883
3	AS REQ'D	EA	HEX HEAD BOLT 1/2" x 1-1/4"	50	AS REQ'D	411767
4	AS REQ'D	EA	WASHER 1/2"	100	AS REQ'D	411758
5	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
6	AS REQ'D	EA	STRUT HS-1316-12/PG 10' B2B	1	AS REQ'D	2007081
7	AS REQ'D	EA	3-HOLE ANGLE MQW-3/45	20	AS REQ'D	369657
8	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
9	AS REQ'D	EA	RAIL SUPPORT MQP-45	10	AS REQ'D	369649
10	AS REQ'D	EA	STRUT BEAM CLAMP SBC (25/BOX)	25	AS REQ'D	258316
11	AS REQ'D	EA	CHANNEL TIE MQV-3/2 D	10	AS REQ'D	369640

NOTE(S):

- PRELIMINARY NOT FOR CONSTRUCTION
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
  - BUILDING CODE: NOT SPECIFIED
  - CORROSION RESISTANCE REQD.: NOT SPECIFIED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
- E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**BRACED CANTILEVER SINGLE - X-BT**

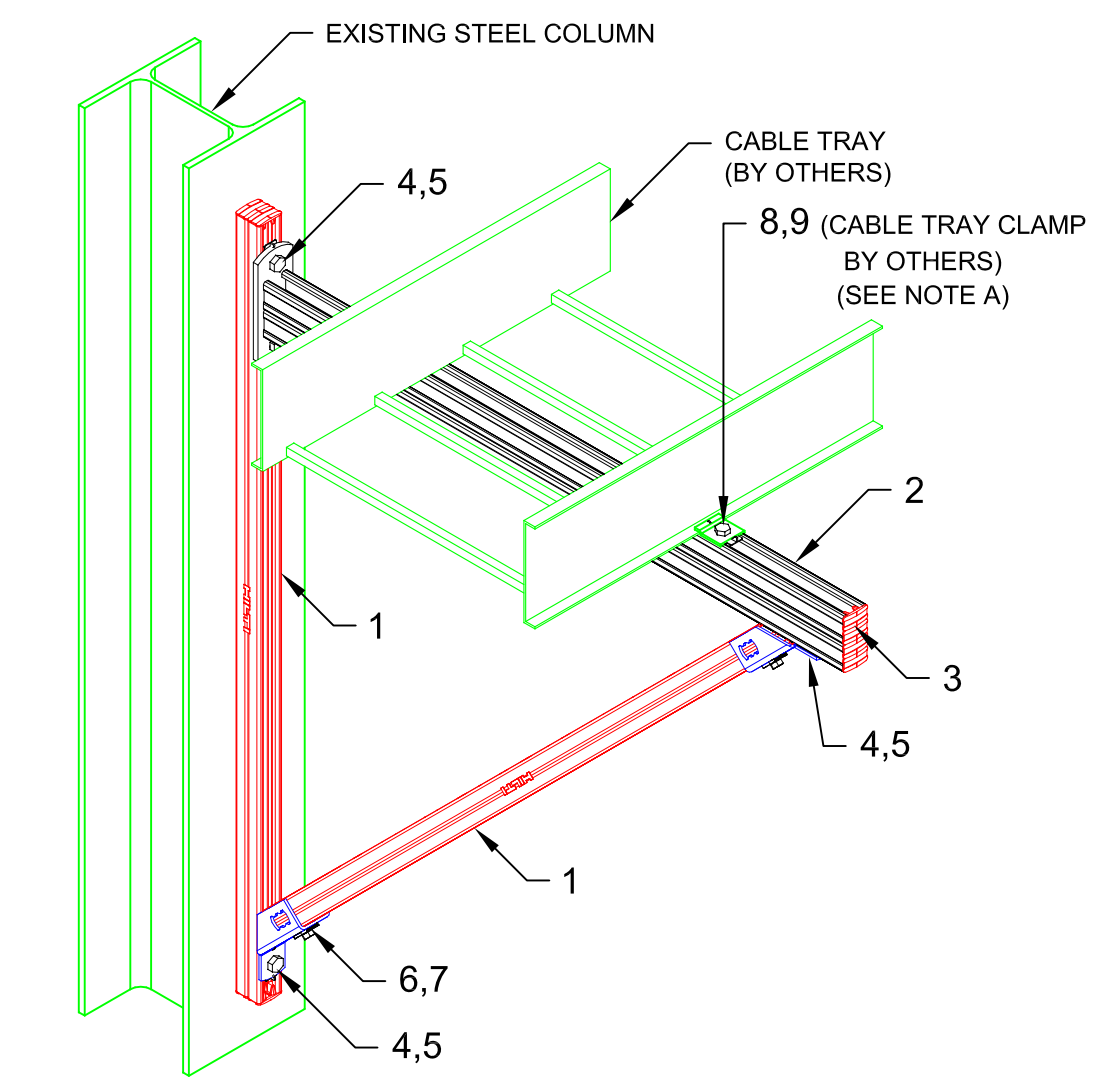
DESIGNED BY: KL	REVIEWED BY: AJV
DRAWN BY: GAB	ISSUE DATE: 05 JAN 15

REVISIONS:

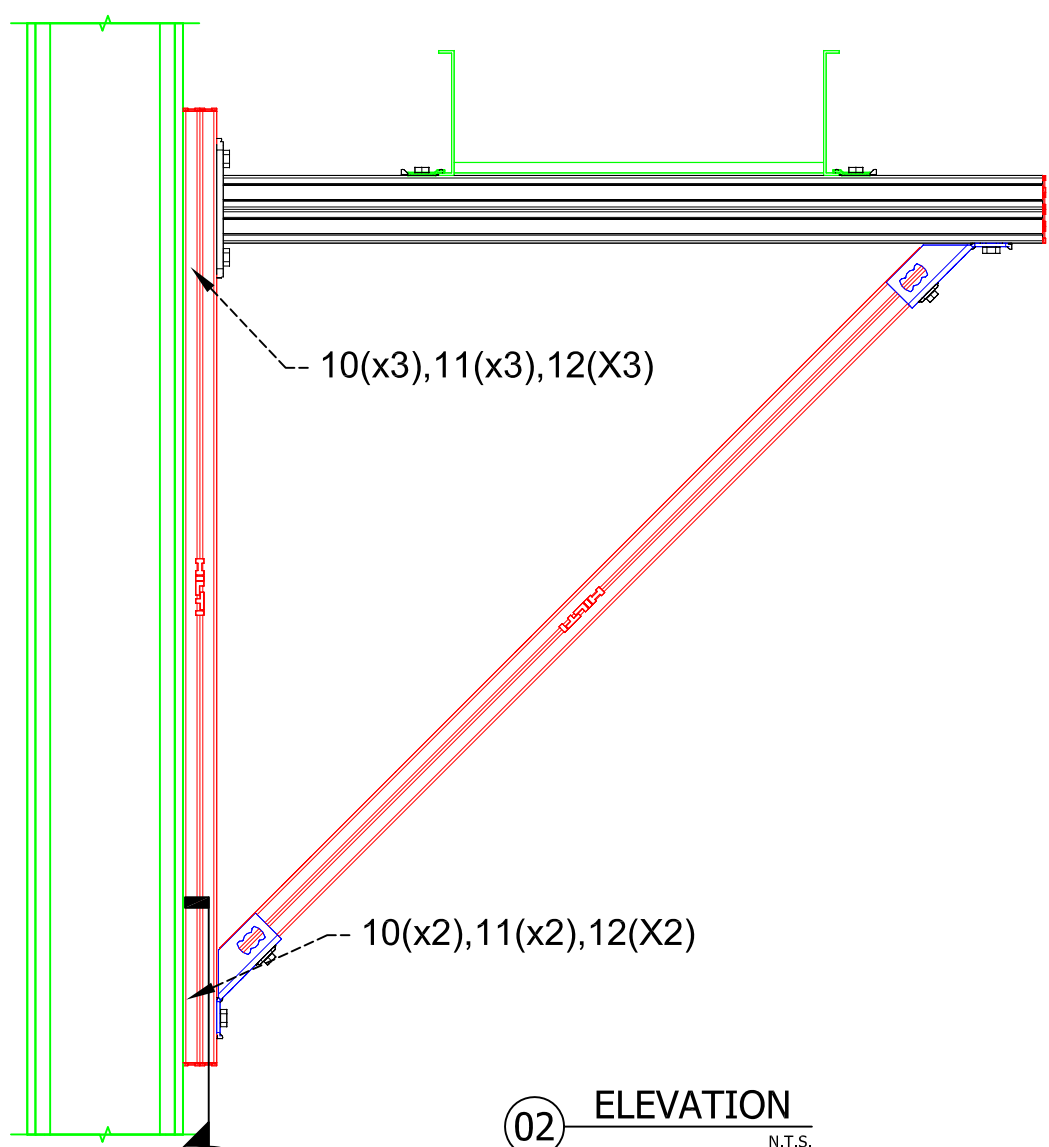
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A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-BC52-S**

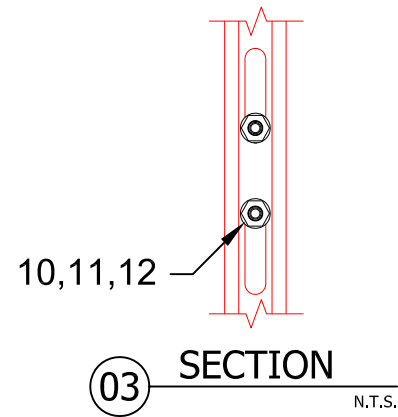
DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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**01 ISOMETRIC**  
N.T.S.  
ELEV. 02  
SHEET 1/1



**02 ELEVATION**  
N.T.S.



**03 SECTION**  
N.T.S.

**NOTE(S):**  
A. TRAY CLAMPS SHOWN ON OUTSIDE OF TRAY FOR CLARITY. PREFERRED LOCATION IS INSIDE OF TRAY.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT MS-1316-12/HDG 9'-10" (3M)	1	AS REQ'D	407569
2	1	EA	BRACKET MQK-41D/1000-F	1	1	304127
3	8	EA	CHANNEL END CAP MEK RED	50	1	244886
4	4	EA	HEX HEAD BOLT HDG 1/2"x1-1/2"	VARIES	VARIES	SPECIAL
5	4	EA	WING NUT MQM-F1/2"-F	25	1	304137
6	2	EA	RAIL SUPPORT MQP-45-F	10	1	304164
7	2	EA	CHANNEL CONNECTOR MQN	50	1	369623
8	2	EA	HEX HEAD BOLT HDG 3/8"x1"	VARIES	VARIES	SPECIAL
9	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
10	5	EA	X-BTW10-24-6 SN12-R	100	1	377076
11	5	EA	WASHER 3/8" SS316	200	1	411780
12	5	EA	HEX NUT STANDARD 3/8" SS316	100	1	411775

**NOTE(S):**  
1. PRELIMINARY NOT FOR CONSTRUCTION  
2. DESIGN ASSUMPTIONS:  
a. NO LOADS CONSIDERED - CONCEPT ONLY  
b. LATERAL LOADS NOT CONSIDERED  
c. BUILDING CODE: NOT SPECIFIED  
d. CORROSION RESISTANCE REQD.: HDG/SS  
3. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**BRACED CANTILEVER VERTICAL**

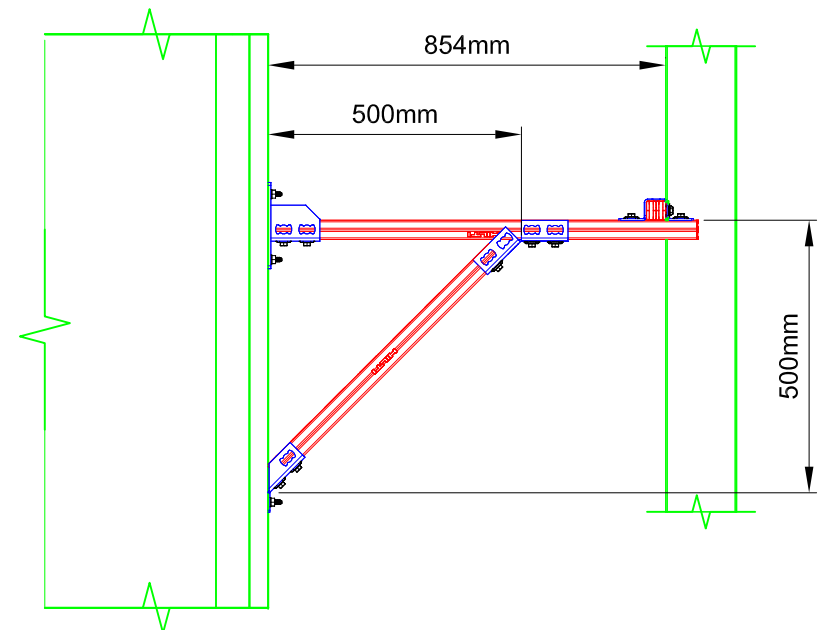
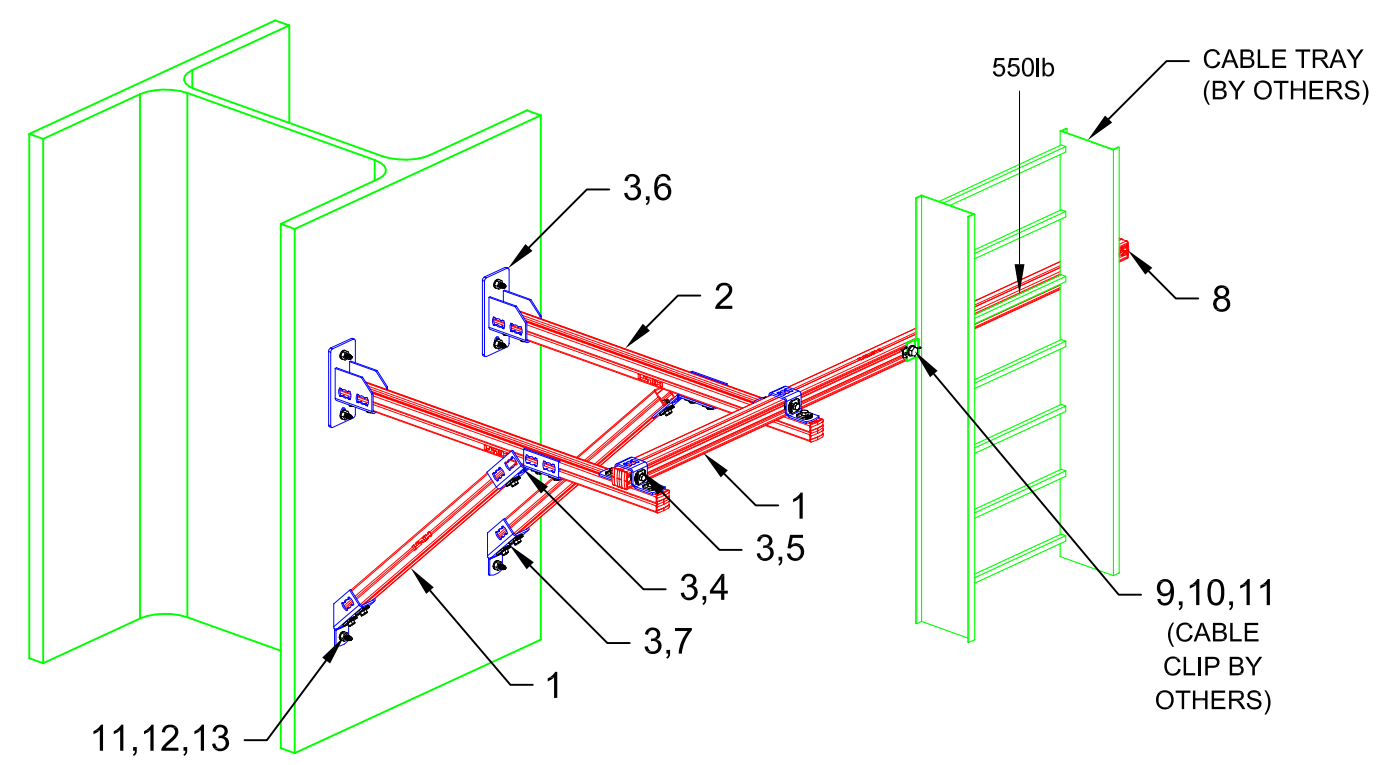
DESIGNED BY: KL	REVIEWED BY: AJV
DRAWN BY: GAB	ISSUE DATE: 05 JAN 15

REVISIONS:

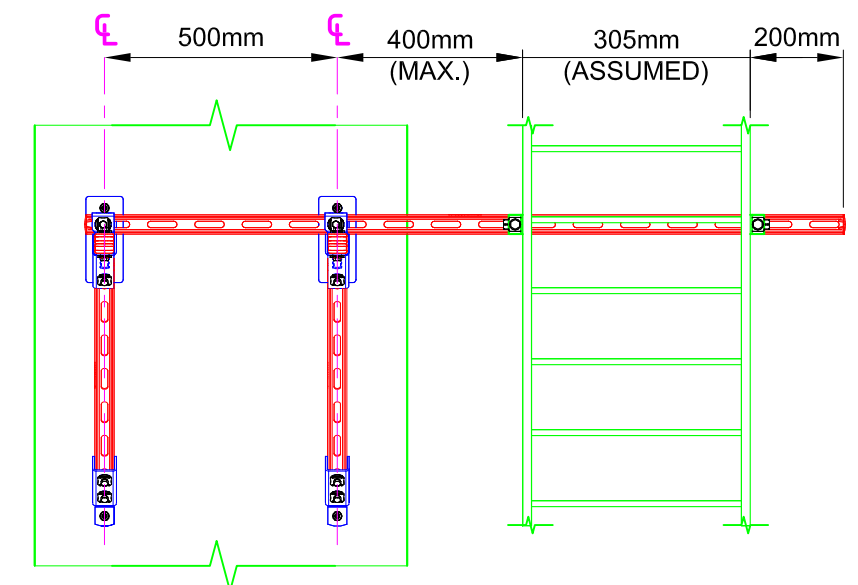
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A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-BC53-S**

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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02 ELEVATION N.T.S.



03 ELEVATION N.T.S.

01 ISOMETRIC N.T.S.

ELEV. 02  
SHEET 1/1

ELEV. 03  
SHEET 1/1

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	STRUT HS-1316-12/PG 10' B2B	1	AS REQ'D	2007081
3	20	EA	CHANNEL CONNECTOR MQN	50	1	369623
4	2	EA	8-HOLE ANGLE MQW-8/45	10	1	369660
5	2	EA	CLAMP MQB-41	10	1	369668
6	2	EA	RAIL SUPPORT MQP-21-72	12	1	369651
7	2	EA	RAIL SUPPORT MQP-45	10	1	369649
8	8	EA	CHANNEL END CAP MEK RED	50	1	244886
9	2	EA	WING NUT MQM-F3/8"	50	1	377882
10	2	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	1	411764
11	8	EA	WASHER 3/8"	200	1	411757
12	6	EA	WASHER 1/2"	100	1	411758
13	6	EA	HEX NUT-HEAVY DUTY 3/8"	100	1	411752
14	6	EA	X-BTW10-24-6 SN12-R	100	1	377076

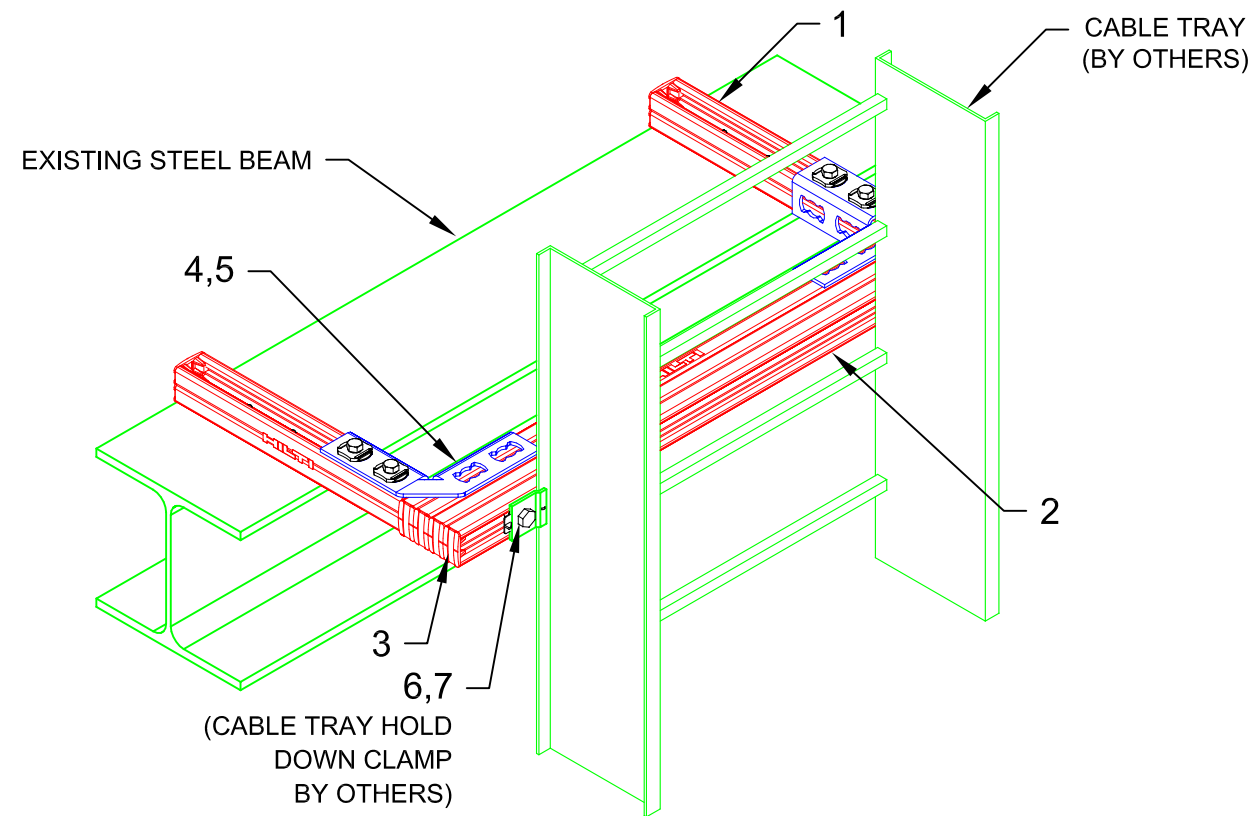
- NOTE(S):
- PRELIMINARY NOT FOR CONSTRUCTION
  - DESIGN ASSUMPTIONS:
    - DESIGN LOADS (STATIC, U.N.O.):  
DL: 550lb
    - LATERAL LOADS NOT CONSIDERED
    - BUILDING CODE: IBC 2006 / 2009 / 2012
    - CORROSION RESISTANCE REQD.: HDG / SS / EG
    - MAX. SUPPORT SPACING = NOT PROVIDED
  - ALL LOADS ASSUMED TO ACT AT CENTER OF PIPE(S), U.N.O.
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.
  - 12" CABLE TRAY (ASSUMED)

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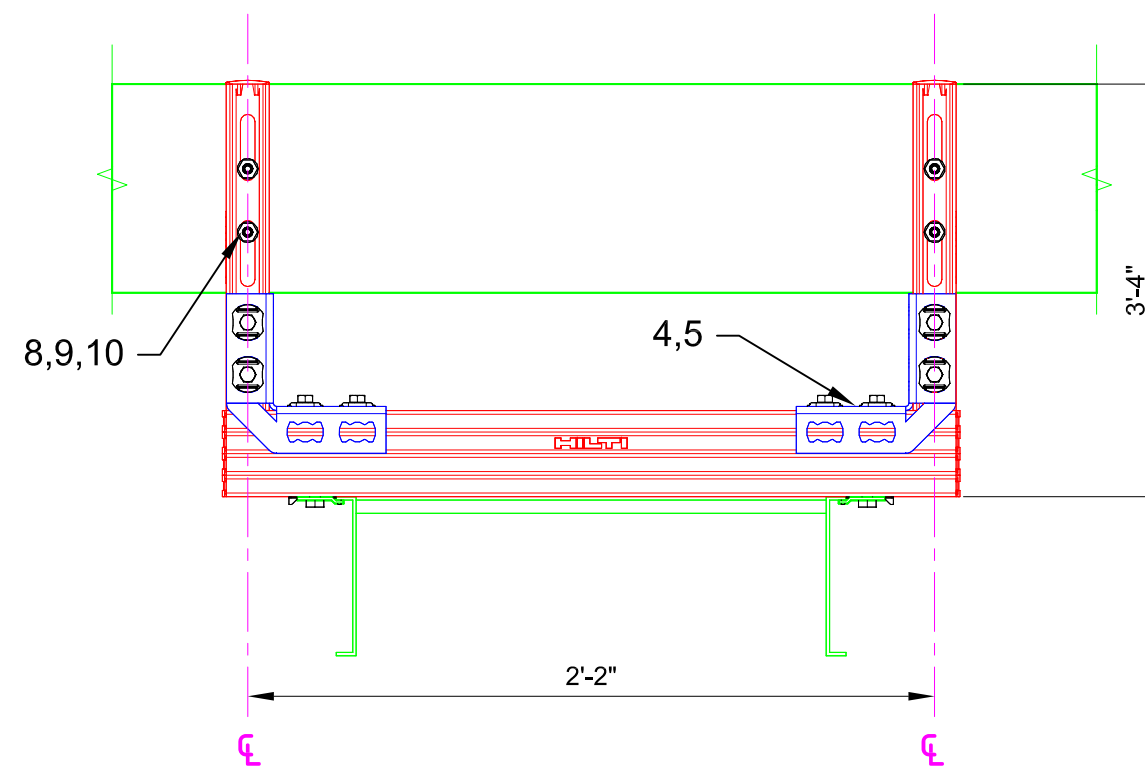




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**01** ISOMETRIC  
N.T.S.



**02** PLAN VIEW  
N.T.S.

TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**CANTILEVER - VERTICAL**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

BAP

ISSUE DATE:

04 DEC 14

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	04 DEC 14
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TYPICAL DETAIL NOMENCLATURE:

**CT-C50-S**

DRAWING NUMBER:

01

SHEET:

1/1

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
2	AS REQ'D	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQ'D	2007087
3	12	EA	CHANNEL END CAP MEK RED	50	1	244886
4	2	EA	8-HOLE ANGLE MQW-8/90-F	10	1	304175
5	8	EA	CHANNEL CONNECTOR MQN	50	1	369623
6	2	EA	HEX HEAD BOLT HDG 3/8"x1"	VARIES	VARIES	SPECIAL
7	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
8	4	EA	X-BTW10-24-6 SN12-R	100	1	377076
9	4	EA	WASHER 3/8" SS316	200	1	411780
10	4	EA	HEX NUT STANDARD 3/8" SS316	100	1	411775

**NOTE(S):**

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  - b. LATERAL LOADS NOT CONSIDERED
  - c. BUILDING CODE: NOT SPECIFIED
  - d. CORROSION RESISTANCE REQD.: NOT SPECIFIED
2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

### CABLE TRAY SUPPORT

TYPICAL DETAIL DESCRIPTION:

### CANTILEVER

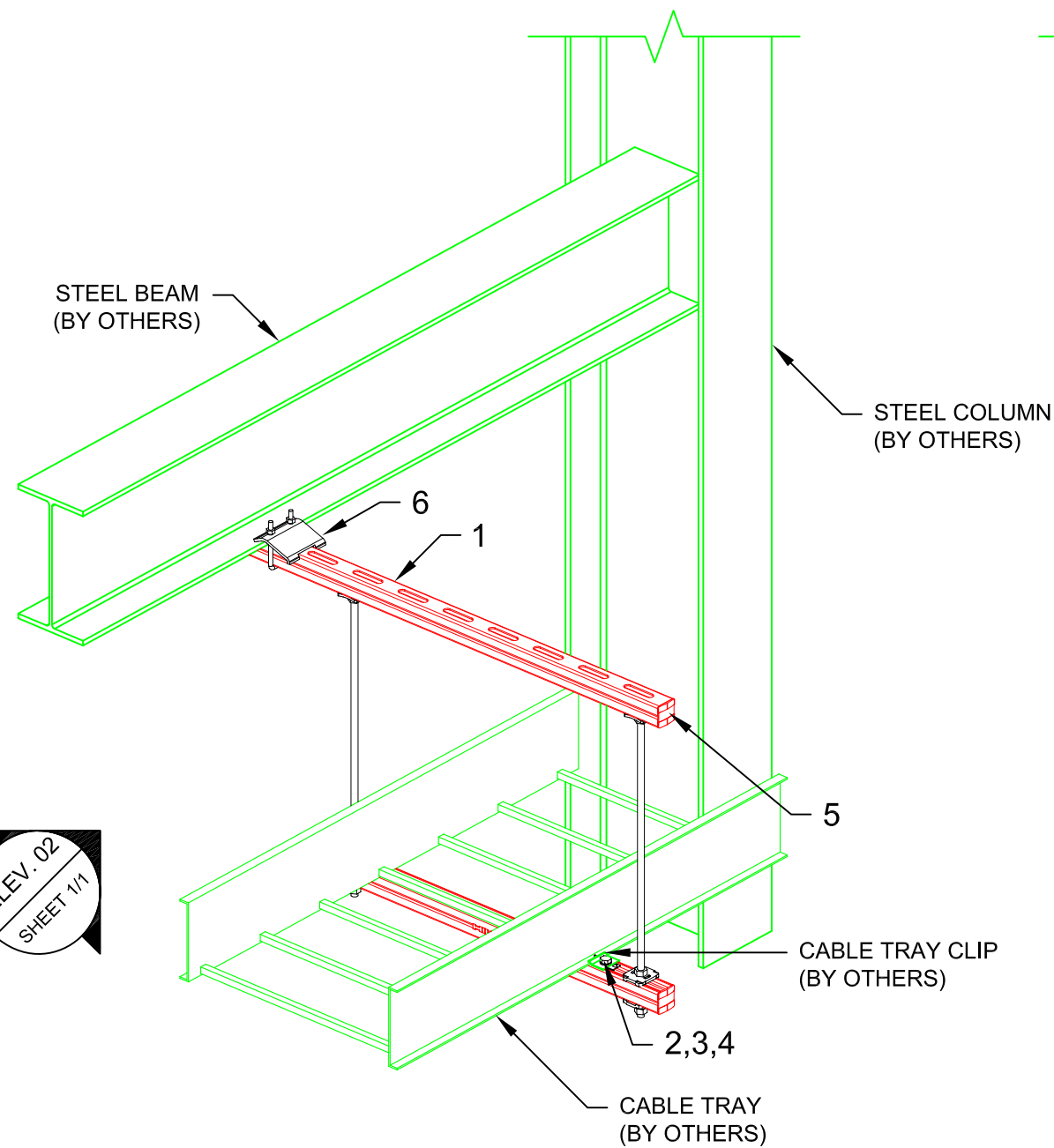
DESIGNED BY: KL	REVIEWED BY: AJV
DRAWN BY: BAP	ISSUE DATE: 04 DEC 14

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	04 DEC 14

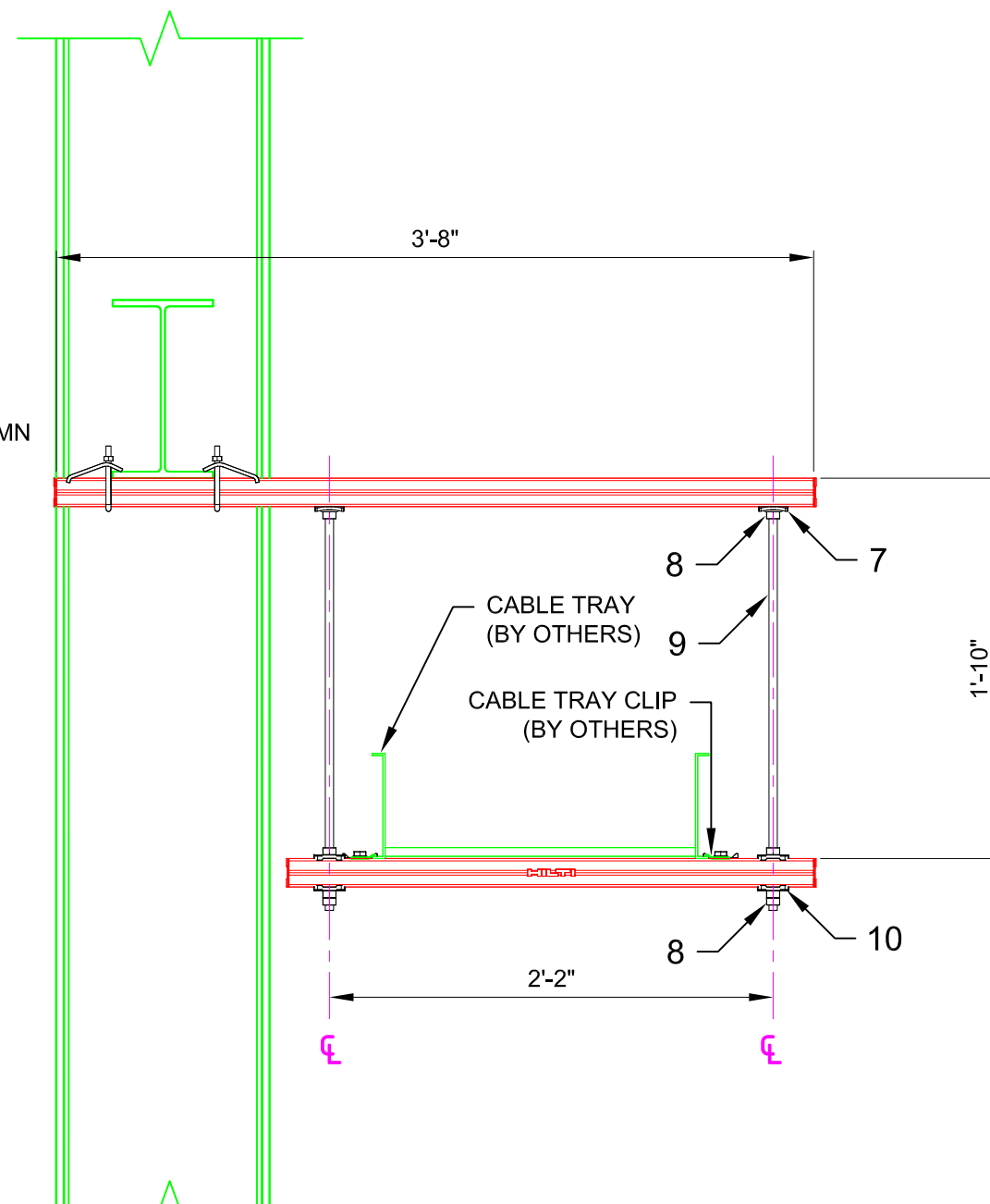
TYPICAL DETAIL NOMENCLATURE:

### CT-C51-S

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
6	AS REQ'D	EA	STRUT BEAM CLAMP MQT-21-41-F	10	AS REQ'D	304190
7	AS REQ'D	EA	SADDLE NUT MQA-F1/2"-F	25	AS REQ'D	304144
8	AS REQ'D	EA	HEX NUT-HEAVY DUTY 1/2"	100	AS REQ'D	411753
9	AS REQ'D	EA	THREADED ROD 1/2"-6' ZINC	12	AS REQ'D	257965
10	AS REQ'D	EA	BASE PLATE MQZ-L1/2"	20	AS REQ'D	370633

**NOTE(S):**  
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 c. BUILDING CODE: NOT SPECIFIED  
 d. CORROSION RESISTANCE REQ'D.: NOT SPECIFIED  
 2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
 3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**CANTILEVER - DOUBLE**

DESIGNED BY: KL  
REVIEWED BY: AJV

DRAWN BY: HAM  
ISSUE DATE: 29 DEC 14

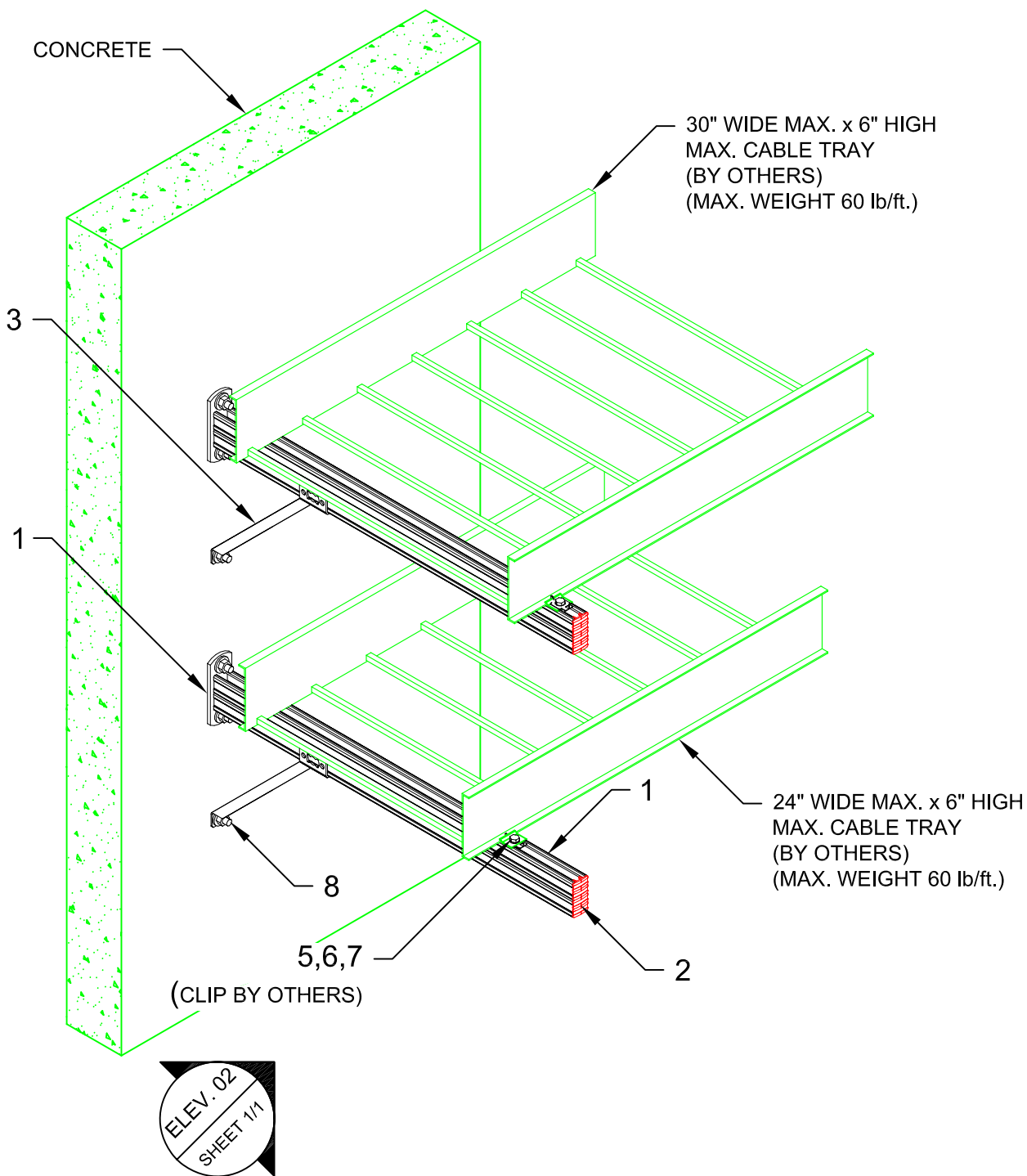
REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	29 DEC 14

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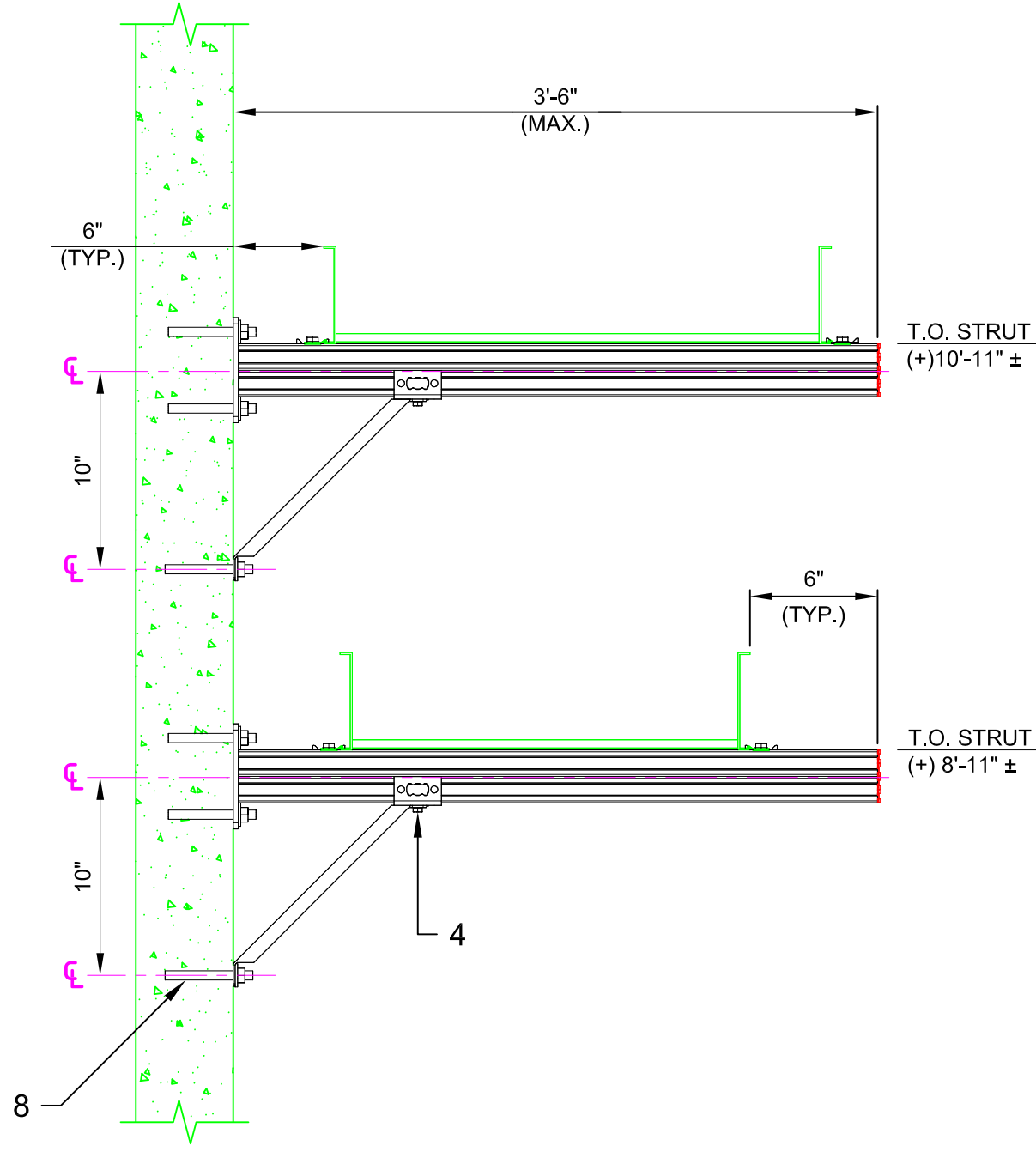
**CT-C52-C**

DRAWING NUMBER: 01  
SHEET: 1/1



ELEV. 02  
SHEET 1/1

**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	2	EA	BRACKET MQK-41D/1000-F	1	2	304127
2	8	EA	CHANNEL END CAP MEK RED	50	1	244886
3	2	EA	ANGLE BRACE MQK-SK SHORT	10	0	369622
4	2	EA	CHANNEL CONNECTOR MQN	50	0	369623
5	4	EA	WING NUT MQM-F3/8"	50	1	377882
6	4	EA	WASHER-USS 3/8"	200	1	411757
7	4	EA	HEX HEAD BOLT 3/8"-11/4" 100/BOX	100	1	411764
8	6	EA	USE KB3 OR KB-TZ AS APPROPRIATE	VARIES	VARIES	VARIES

**NOTE(S):**  
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 2. DESIGN ASSUMPTIONS:  
 a. NO LOADS CONSIDERED - CONCEPT ONLY  
 b. LATERAL LOADS NOT CONSIDERED  
 c. BUILDING CODE: NOT SPECIFIED  
 d. CORROSION RESISTANCE REQD.: NOT SPECIFIED  
 e. MAX. SUPPORT SPACING = 8'-10"  
 2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
 3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**DIRECT - SINGLE VERTICAL**

DESIGNED BY: KL  
REVIEWED BY: AJV

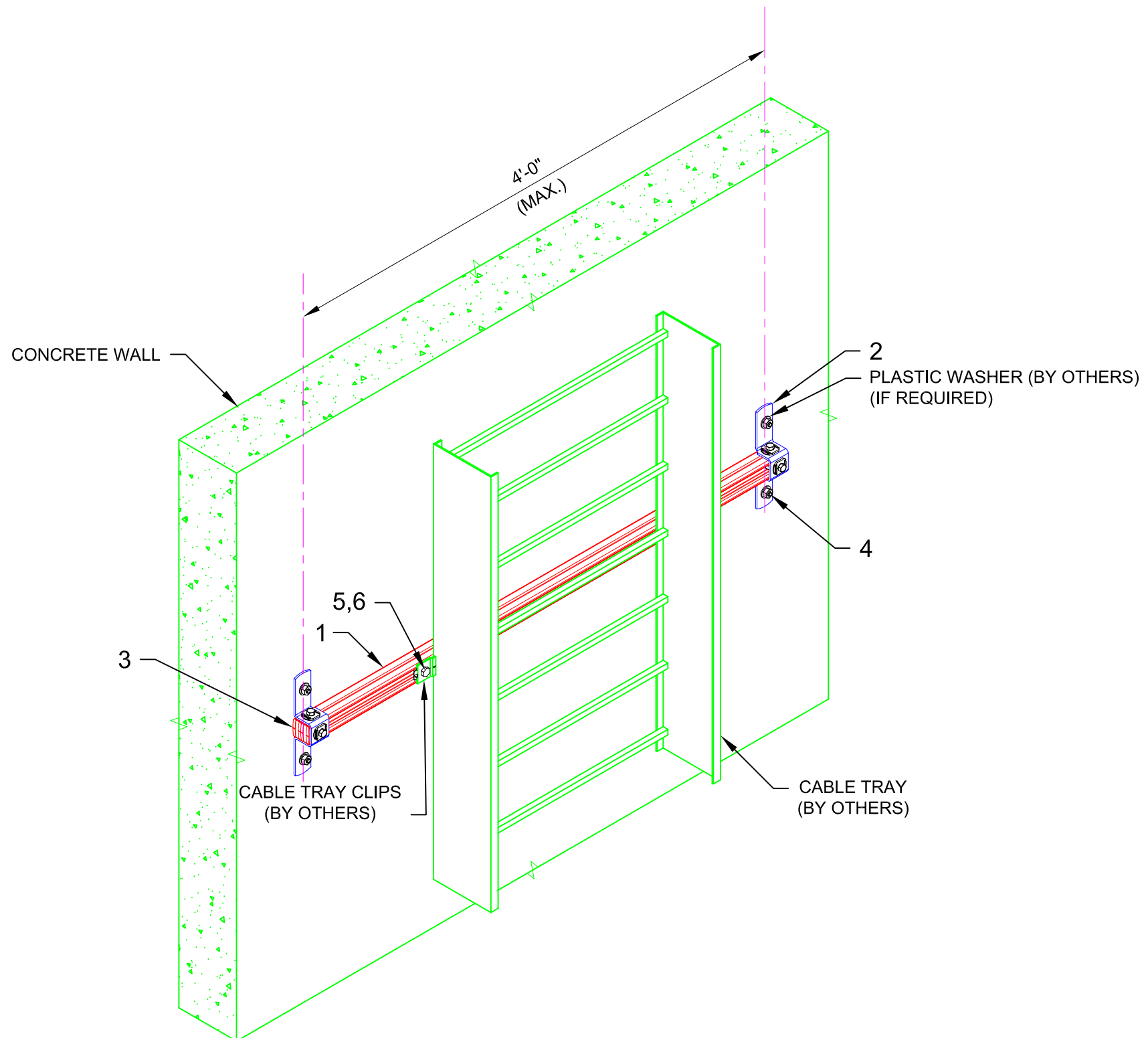
DRAWN BY: GAB  
ISSUE DATE: 05 JAN 15

REVISIONS:

NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-D50-C**

DRAWING NUMBER: 01  
SHEET: 1/1



01 ISOMETRIC  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
2	2	EA	CLAMP MQB-G41-F	10	1	304189
3	4	EA	CHANNEL END CAP MEK RED	50	1	244886
4	4	EA	USE KB3 3/8" 316SS AS APPROPRIATE	VARIES	AS REQ'D	VARIES
5	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
6	2	EA	3/8" HEX BOLT x LENGTH AS REQUIRED (HDG)	VARIES	AS REQ'D	SPECIAL

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - DESIGN ASSUMPTIONS:
    - DESIGN LOADS (STATIC, U.N.O.):  
DL: 300 lbs.
    - LATERAL LOADS NOT CONSIDERED**
    - CORROSION RESISTANCE REQD.: HDG
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

\\hlt.com\US\TEAMS\installations\Projects\TYPICAL LIBRARY\CABLE TRAY (CT)\CAD\CT-D50-C.dwg, 1/5/2015 1:10:54 PM





All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**DIRECT - SINGLE - X-BT**

DESIGNED BY: KL	REVIEWED BY: AJV
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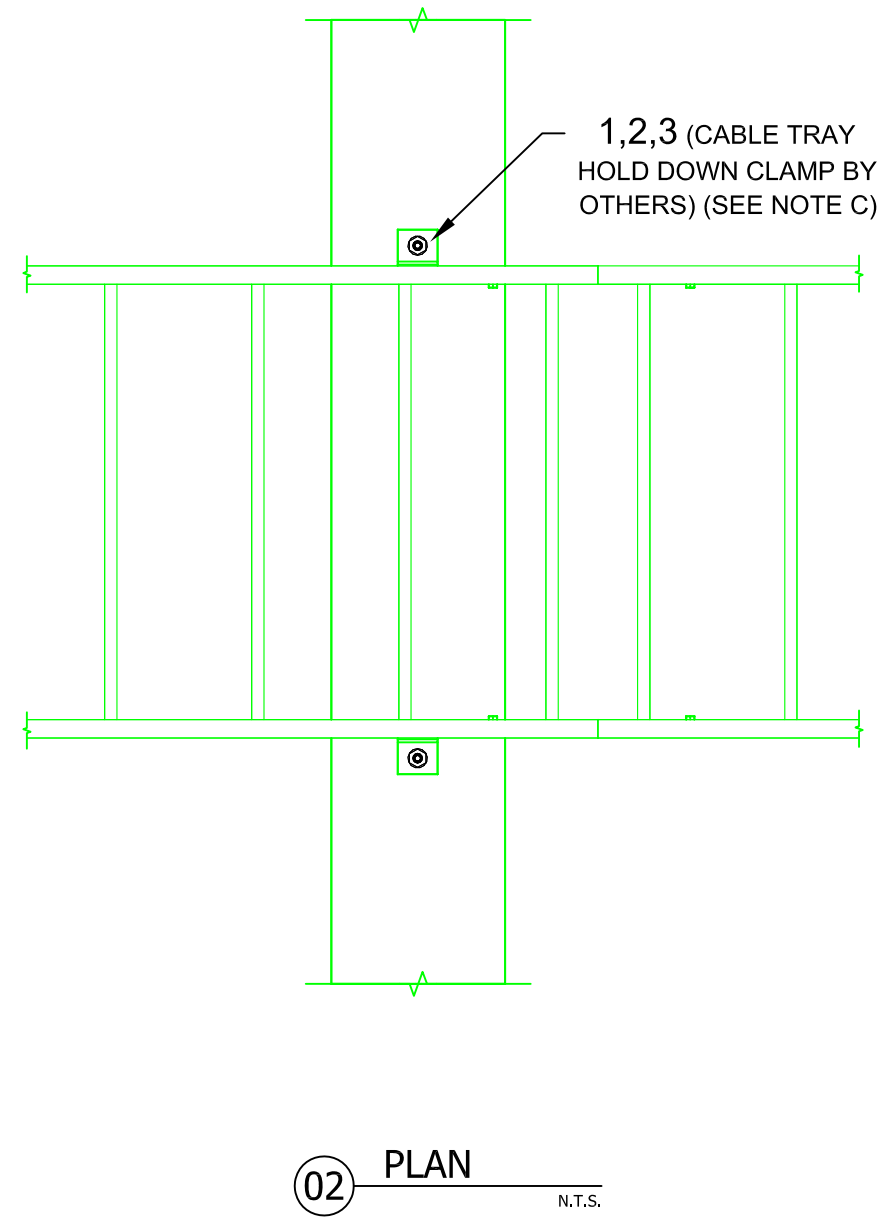
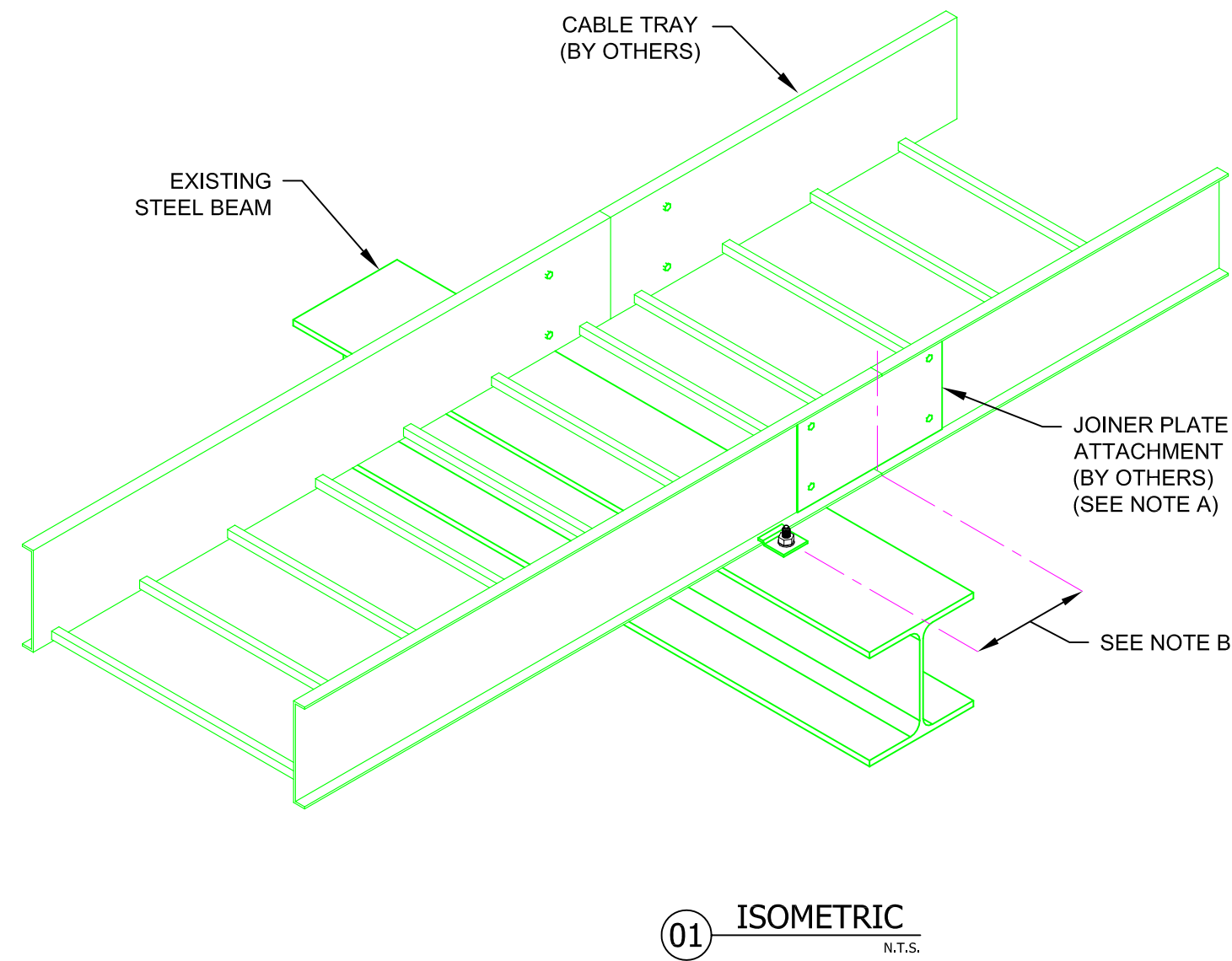
DRAWN BY: GAB	ISSUE DATE: 05 JAN 15
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REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-D51-S**

DRAWING NUMBER: 01	SHEET: 1/1
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- NOTE(S):**
- A. BOLT HEADS SHALL BE LOCATED INSIDE TRAY.
  - B. MINIMUM DISTANCE 610mm TO MAXIMUM DISTANCE 1/4 SPAN (PREFERRED) BETWEEN JOINER PLATE AND SUPPORT.
  - C. TRAY CLAMPS SHOWN ON OUTSIDE OF TRAY FOR CLARITY. PREFERRED LOCATION IS INSIDE OF TRAY.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	2	EA	X-BTW10-24-6 SN12-R	100	1	377076
2	2	EA	WASHER 3/8" SS316	200	1	411780
3	2	EA	HEX NUT STANDARD 3/8" SS316	100	1	411775

- NOTE(S):**
- 1. PRELIMINARY NOT FOR CONSTRUCTION
  - 2. DESIGN ASSUMPTIONS:
    - a. NO LOADS CONSIDERED - CONCEPT ONLY
    - b. LATERAL LOADS NOT CONSIDERED
    - c. BUILDING CODE: NOT SPECIFIED
  - 3. CORROSION RESISTANCE REQD.: HDGISS
  - 4. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - 5. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**DIRECT - SINGLE - X-BT**

DESIGNED BY: KL	REVIEWED BY: AJV
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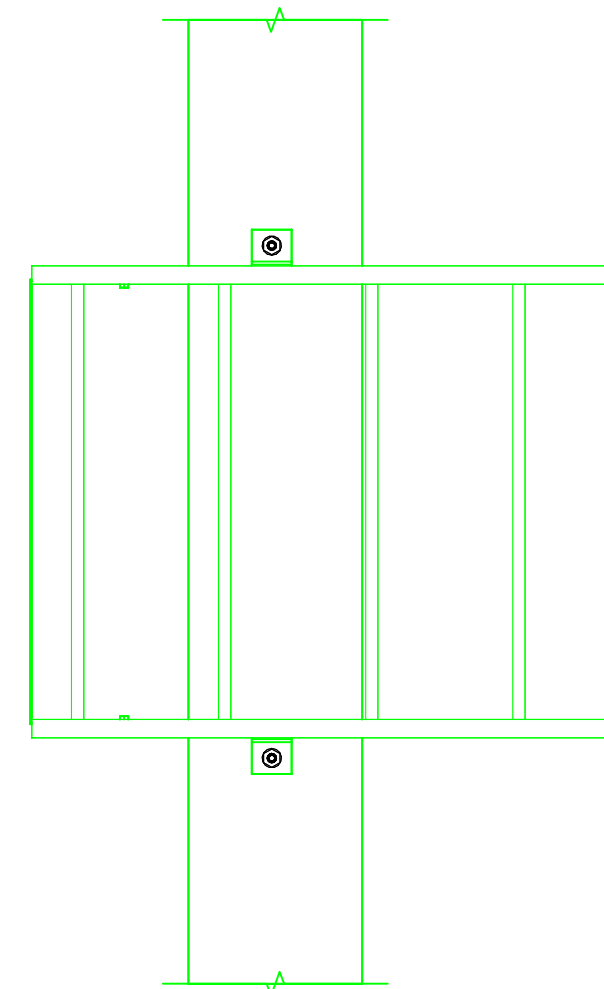
DRAWN BY: GAB	ISSUE DATE: 05 JAN 15
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REVISIONS:

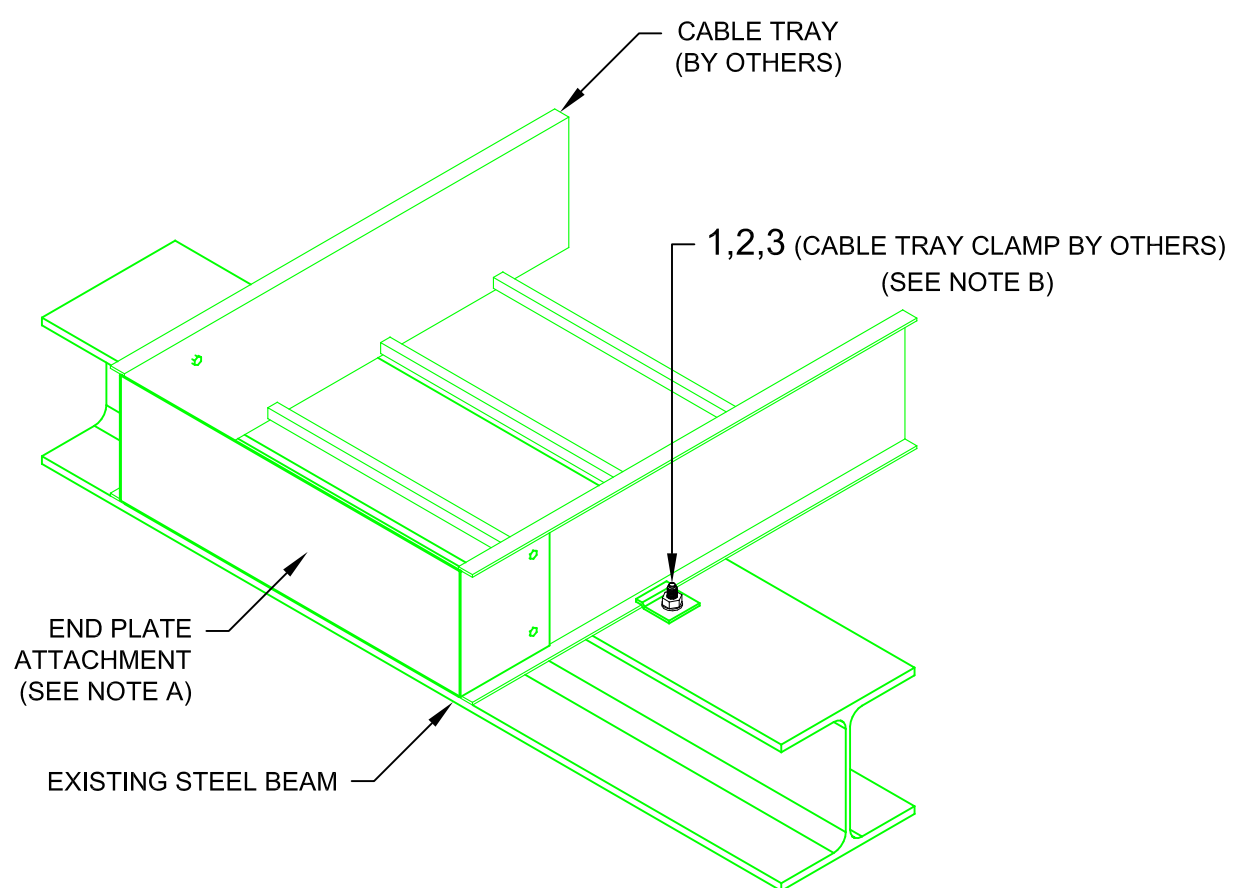
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A	ORIGINAL ISSUE	05 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-DC52-S**

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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**02 PLAN**  
N.T.S.



**01 ISOMETRIC**  
N.T.S.

**NOTE(S):**  
 A. BOLT HEADS SHALL BE LOCATED INSIDE TRAY.  
 B. TRAY CLAMPS SHOWN ON OUTSIDE OF TRAY FOR CLARITY. PREFERRED LOCATION IS INSIDE OF TRAY.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	2	EA	X-BTW10-24-6 SN12-R	100	1	377076
2	2	EA	WASHER 3/8" SS316	200	1	411780
3	2	EA	HEX NUT STANDARD 3/8" SS316	100	1	411775

**NOTE(S):**  
 1. PRELIMINARY NOT FOR CONSTRUCTION  
 2. DESIGN ASSUMPTIONS:  
 a. NO LOADS CONSIDERED - CONCEPT ONLY  
 b. LATERAL LOADS NOT CONSIDERED  
 c. BUILDING CODE: NOT SPECIFIED  
 d. CORROSION RESISTANCE REQD.: HDG/SS  
 2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
 3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

### CABLE TRAY SUPPORT

TYPICAL DETAIL DESCRIPTION:

#### DIRECT - SINGLE W/X-BT

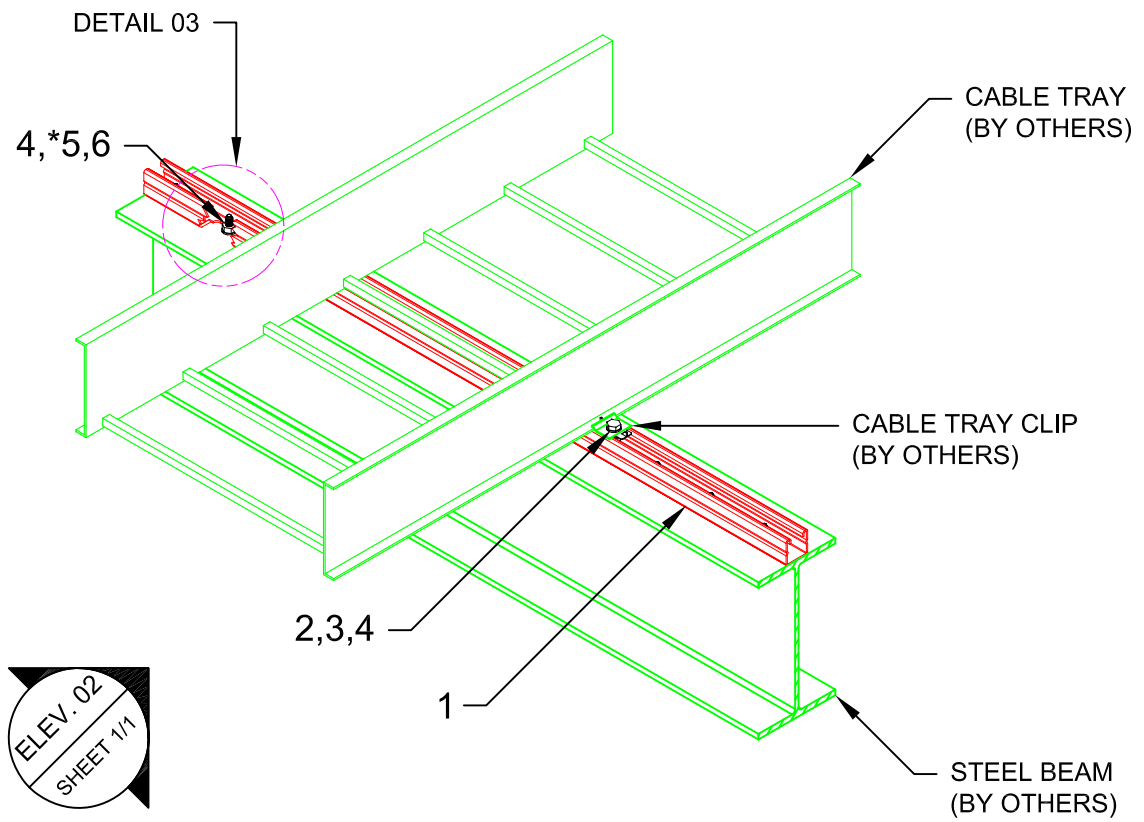
DESIGNED BY: KL	REVIEWED BY: AJV
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DRAWN BY: GAB	ISSUE DATE: 05 JAN 15
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NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	05 JAN 15

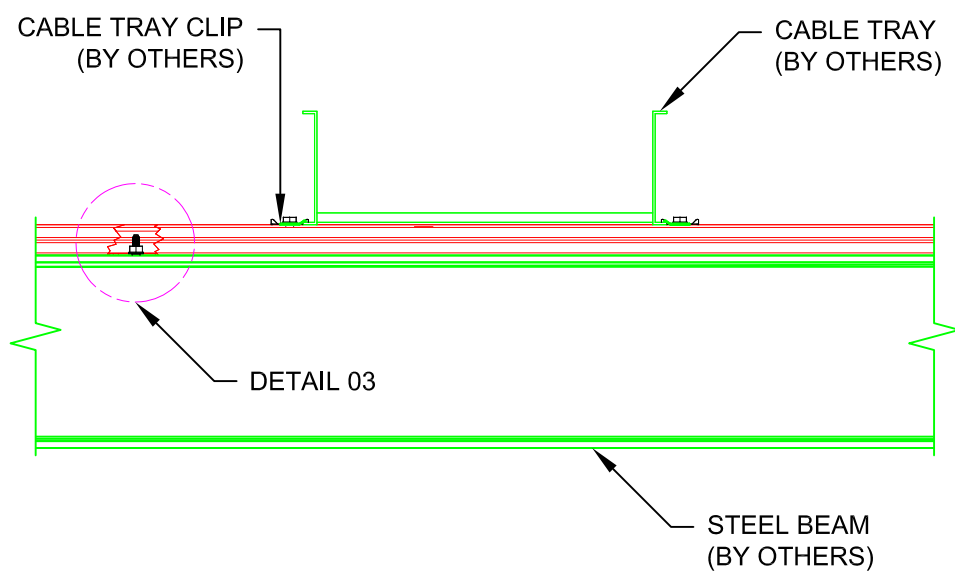
TYPICAL DETAIL NOMENCLATURE:  
**CT-D53-S**

DRAWING NUMBER: 01	SHEET: 1/1
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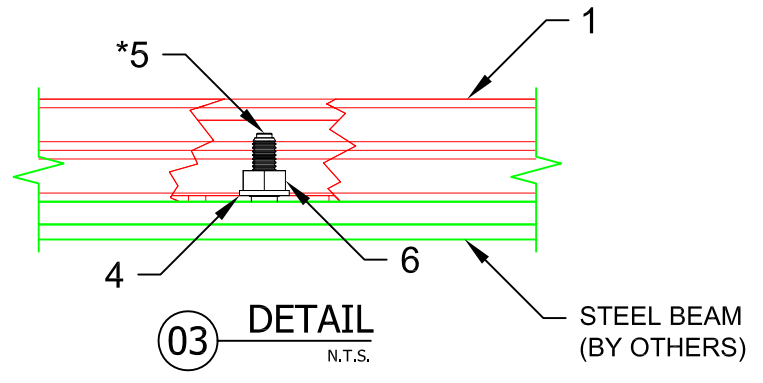


ELEV. 02  
SHEET 1/1

01 ISOMETRIC  
N.T.S.



02 ELEVATION  
N.T.S.



03 DETAIL  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/4"	250	AS REQ'D	336405
5	AS REQ'D	EA	X-BTW10-24-6 SN12-R	100	AS REQ'D	377076
6	AS REQ'D	EA	HEX NUT-HEAVY DUTY 3/8"	100	AS REQ'D	411752

NOTE(S):  
1. PRELIMINARY NOT FOR CONSTRUCTION  
2. DESIGN ASSUMPTIONS:  
a. NO LOADS CONSIDERED - CONCEPT ONLY  
b. LATERAL LOADS NOT CONSIDERED  
c. BUILDING CODE: NOT SPECIFIED  
d. CORROSION RESISTANCE REQ'D.: NOT SPECIFIED  
3. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.  
3. \*MATERIAL THICKNESS IN STEEL BASE ≥ 5/16". MINIMUM EDGE DISTANCE AND MINIMUM SPACING ARE 1/4" AND 5/8" RESPECTIVELY.



All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**GOALPOST - DIRECT W/X-BT**

DESIGNED BY:  
KL

REVIEWED BY:  
AJV

DRAWN BY:  
GAB

ISSUE DATE:  
06 JAN 15

REVISIONS:

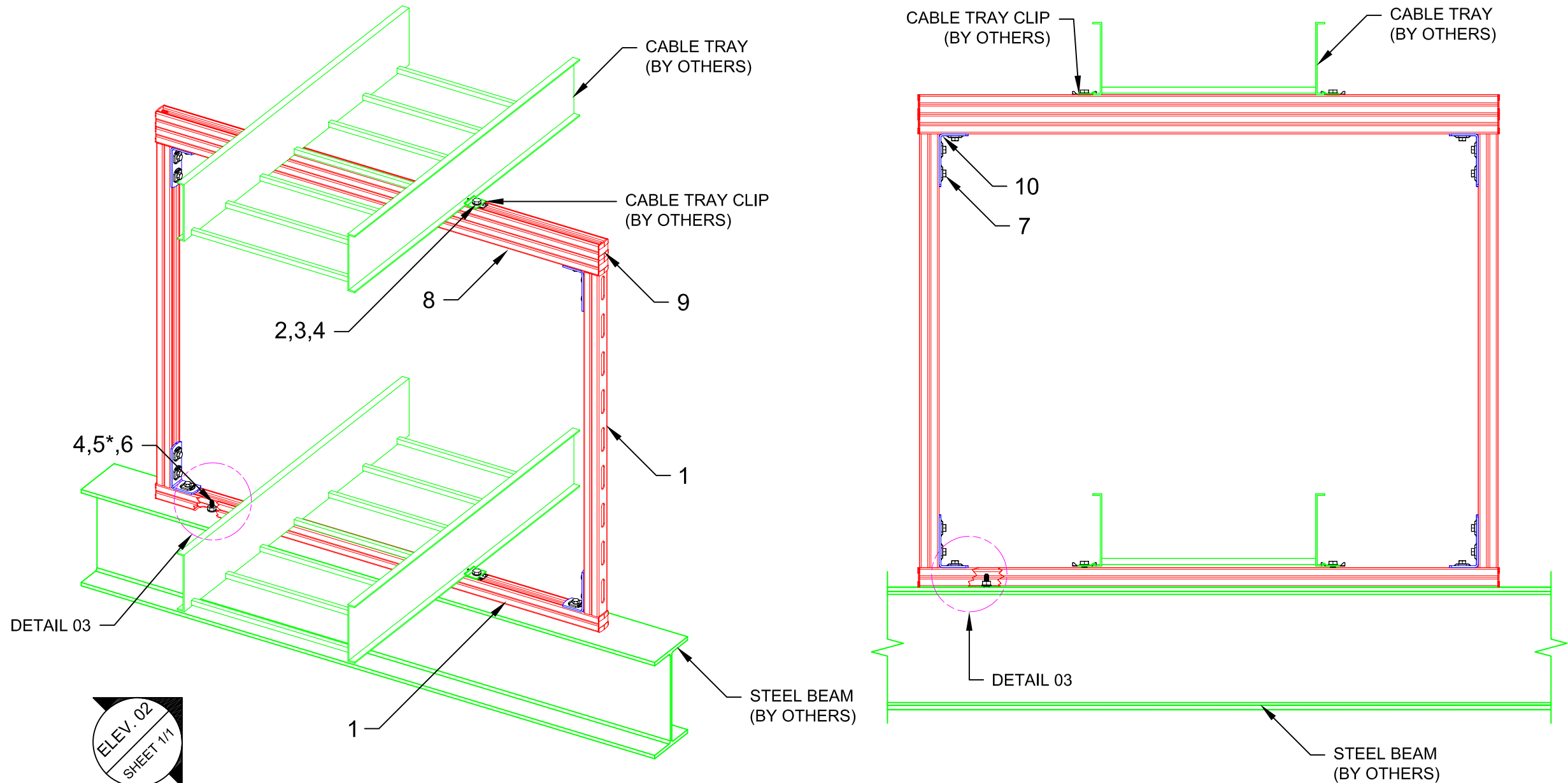
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TYPICAL DETAIL NOMENCLATURE:

**CT-D54-S**

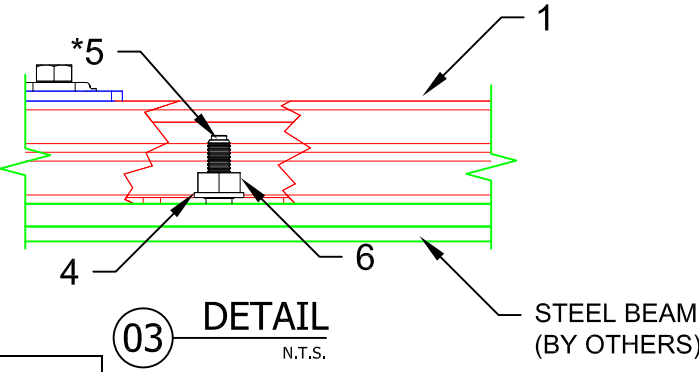
DRAWING NUMBER:  
**01**

SHEET:  
**1/1**



01 ISOMETRIC N.T.S.

02 ELEVATION N.T.S.



03 DETAIL N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	X-BTW10-24-6 SN12-R	100	AS REQ'D	377076
6	AS REQ'D	EA	HEX NUT-HEAVY DUTY 3/8"	100	AS REQ'D	411752
7	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
8	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
9	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
10	AS REQ'D	EA	3-HOLE ANGLE MQW-3	20	AS REQ'D	369656

NOTE(S):  
 1. PRELIMINARY NOT FOR CONSTRUCTION  
 2. DESIGN ASSUMPTIONS:  
 a. NO LOADS CONSIDERED - CONCEPT ONLY  
 b. LATERAL LOADS NOT CONSIDERED  
 c. BUILDING CODE: NOT SPECIFIED  
 d. CORROSION RESISTANCE REQD.: NOT SPECIFIED  
 2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
 3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.  
 3. \*MATERIAL THICKNESS IN STEEL BASE  $\geq 5/16"$ . MINIMUM EDGE DISTANCE AND MINIMUM SPACING ARE  $1/4"$  AND  $5/8"$  RESPECTIVELY.





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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**F-FRAME - 3 TIER**

DESIGNED BY: AJV  
REVIEWED BY: KL

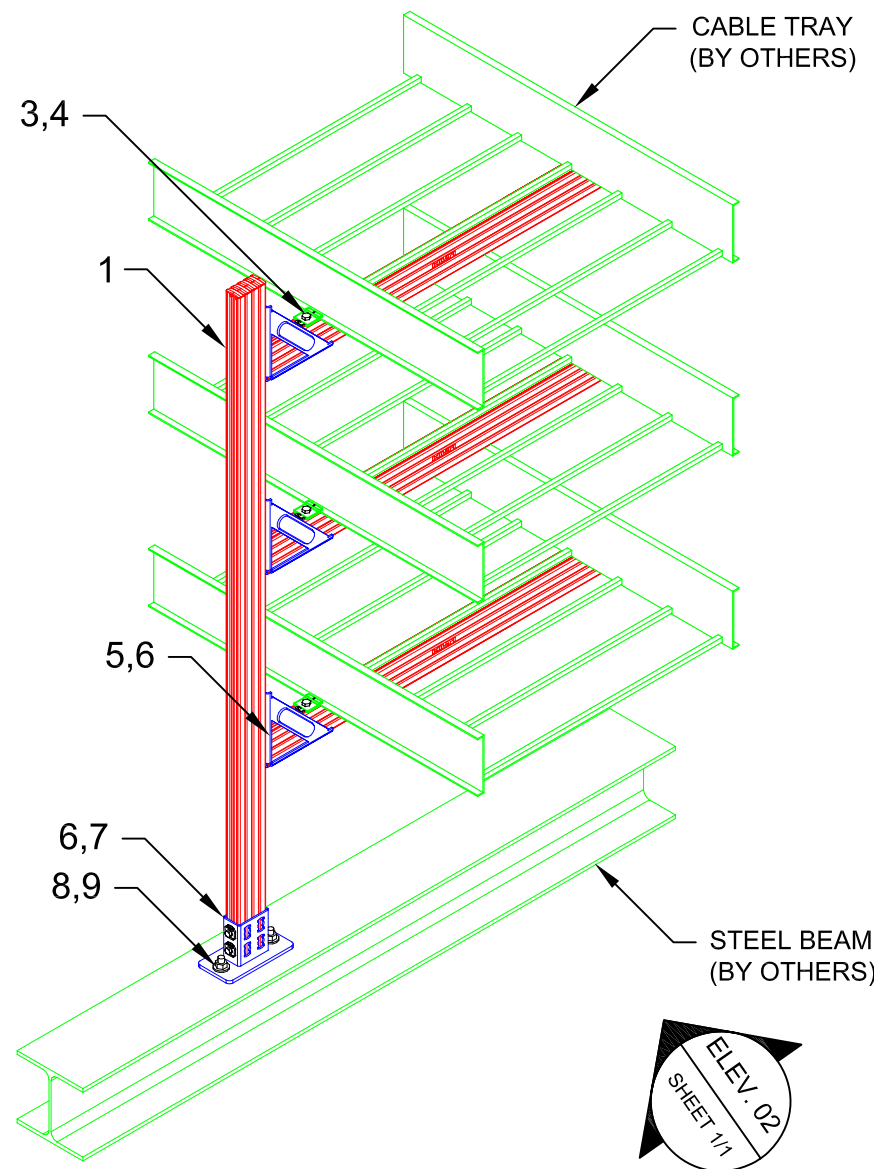
DRAWN BY: HAM  
ISSUE DATE: 30 DEC 14

REVISIONS:

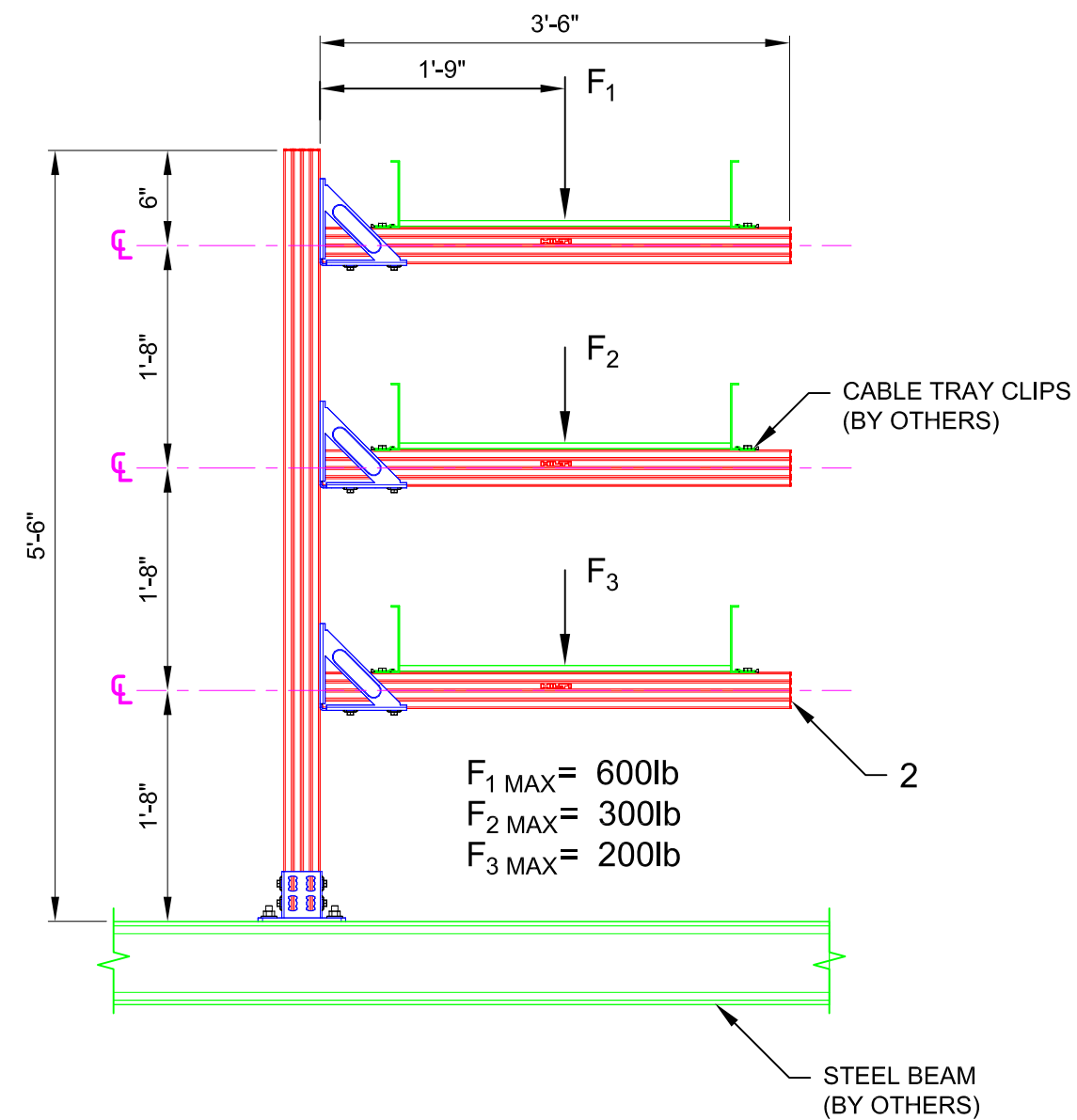
NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	30 DEC 14

TYPICAL DETAIL NOMENCLATURE:  
**CT-F50-S**

DRAWING NUMBER: 01  
SHEET: 1/1



01 ISOMETRIC  
N.T.S.



02 ELEVATION  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
2	16	EA	CHANNEL END CAP MEK RED	50	1	244886
3	6	EA	WING NUT MQM-F3/8"-F	25	1	304136
4	6	EA	3/8" x 1/2" LONG HDG HEX HEAD BOLT	VARIES	VARIES	SPECIAL
5	3	EA	ANGLE BRACKET MQW-S/2	10	1	369665
6	16	EA	CHANNEL CONNECTOR MQN	50	1	369623
7	1	EA	BASE MQP-82	8	1	369652
8	2	EA	WASHER 3/8" SS316	200	1	411780
9	2	EA	X-BTW10-24-6 SN12-R	100	1	377076

NOTE(S):  
1. PRELIMINARY NOT FOR CONSTRUCTION  
2. DESIGN ASSUMPTIONS:  
a. NO LOADS CONSIDERED - CONCEPT ONLY  
b. LATERAL LOADS NOT CONSIDERED  
c. BUILDING CODE: NOT SPECIFIED  
d. CORROSION RESISTANCE REQ'D.: NOT SPECIFIED  
3. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
4. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

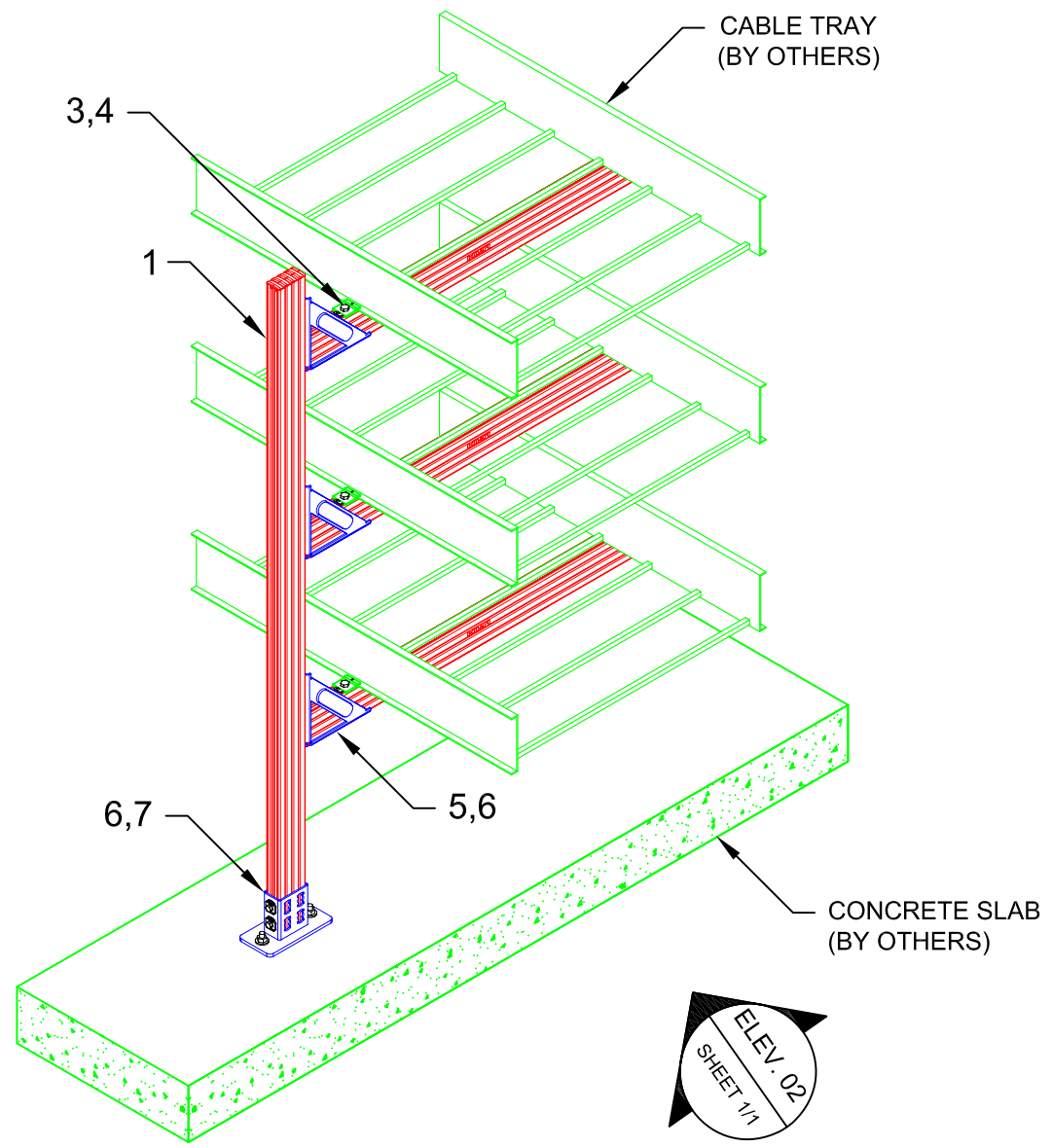
TYPICAL DETAIL DESCRIPTION:  
**F-FRAME - 3 TIER**

DESIGNED BY: AJV	REVIEWED BY: KL
DRAWN BY: HAM	ISSUE DATE: 30 DEC 14

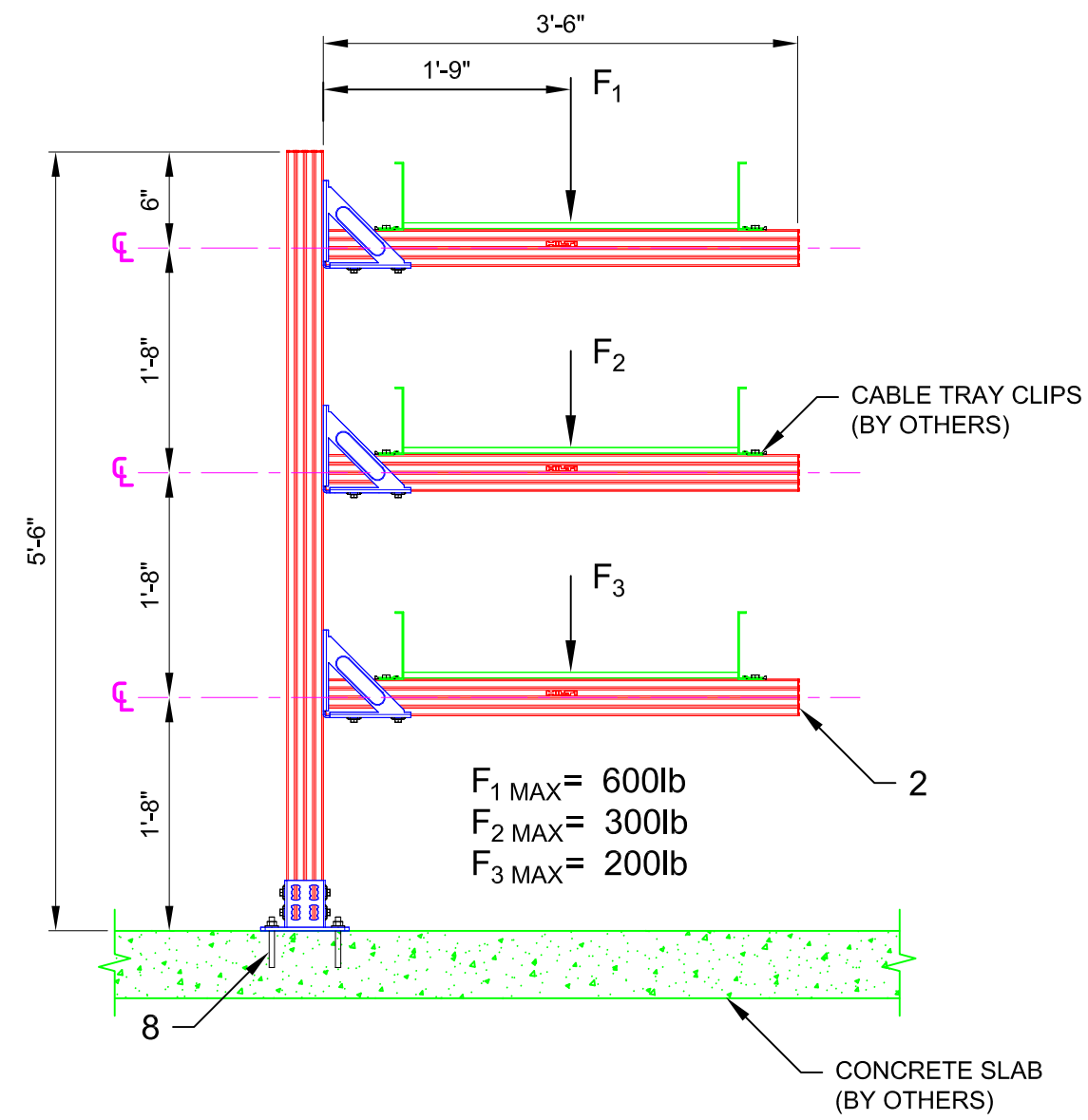
NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	30 DEC 14

TYPICAL DETAIL NOMENCLATURE:  
**CT-F51-C**

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.

$F_1 \text{ MAX} = 600\text{lb}$   
 $F_2 \text{ MAX} = 300\text{lb}$   
 $F_3 \text{ MAX} = 200\text{lb}$

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
2	16	EA	CHANNEL END CAP MEK RED	50	1	244886
3	6	EA	WING NUT MQM-F3/8"-F	25	1	304136
4	6	EA	3/8" x 1/2" LONG HDG HEX HEAD BOLT	VARIES	VARIES	SPECIAL
5	3	EA	ANGLE BRACKET MQW-S/2	10	1	369665
6	16	EA	CHANNEL CONNECTOR MQN	50	1	369623
7	1	EA	BASE MQP-82	8	1	369652
8	2	EA	USE KB3 OR KB-TZ AS APPROPRIATE	VARIES	VARIES	VARIES

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - DESIGN ASSUMPTIONS:  
NO LOADS CONSIDERED - CONCEPT ONLY
    - LATERAL LOADS NOT CONSIDERED
    - BUILDING CODE: NOT SPECIFIED
    - CORROSION RESISTANCE REQ'D.: NOT SPECIFIED
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**GOALPOST - DOUBLE**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

HAM

ISSUE DATE:

30 DEC 14

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	30 DEC 14
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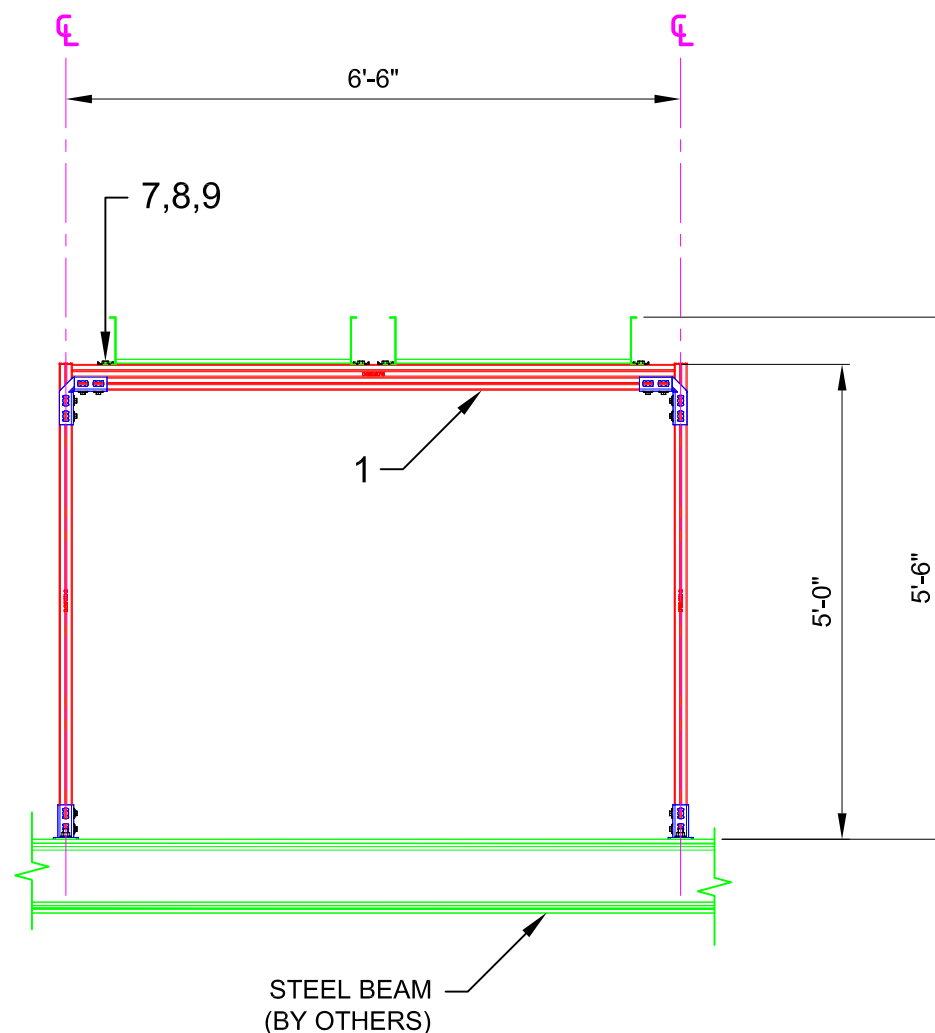
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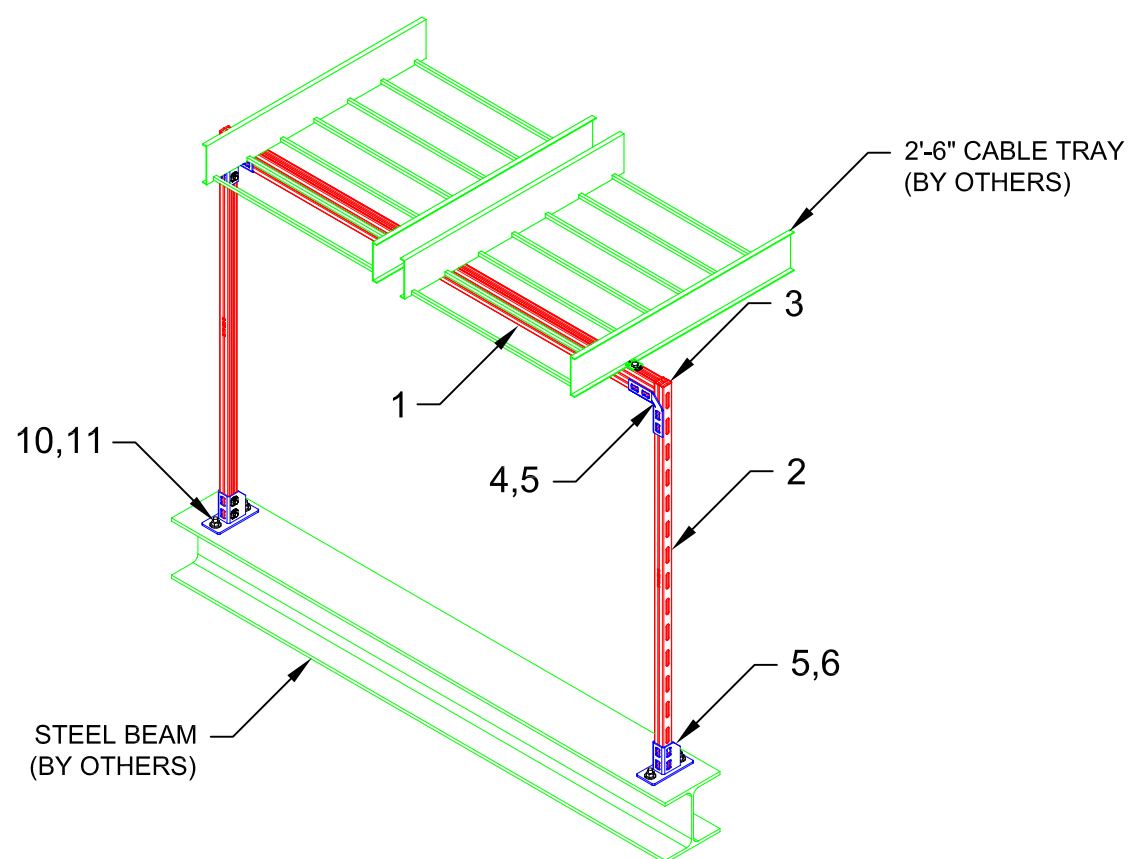
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SHEET:

1/1



**02 ELEVATION**  
N.T.S.



**01 ISOMETRIC**  
N.T.S.



No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
2	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
3	4	EA	CHANNEL END CAP MEK RED	50	1	244886
4	2	EA	8-HOLE ANGLE MQW-8/90	10	1	369659
5	12	EA	CHANNEL CONNECTOR MQN	50	1	369623
6	2	EA	RAIL SUPPORT MQP-21-72	12	1	369651
7	4	EA	WING NUT MQM-F1/2"	50	1	377883
8	4	EA	HEX HEAD BOLT 1/2" x 1"	250	1	311953
9	4	EA	LEGRAND'S 1893-0 CLAMP	-	-	BY OTHERS
10	4	EA	WASHER 3/8" SS316	200	1	411780
11	4	EA	X-BTW10-24-6 SN12-R	100	1	377076

**NOTE(S):**

- PRELIMINARY NOT FOR CONSTRUCTION
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**GOALPOST - DOUBLE**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

HAM

ISSUE DATE:

17 DEC 14

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	17 DEC 14
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TYPICAL DETAIL NOMENCLATURE:

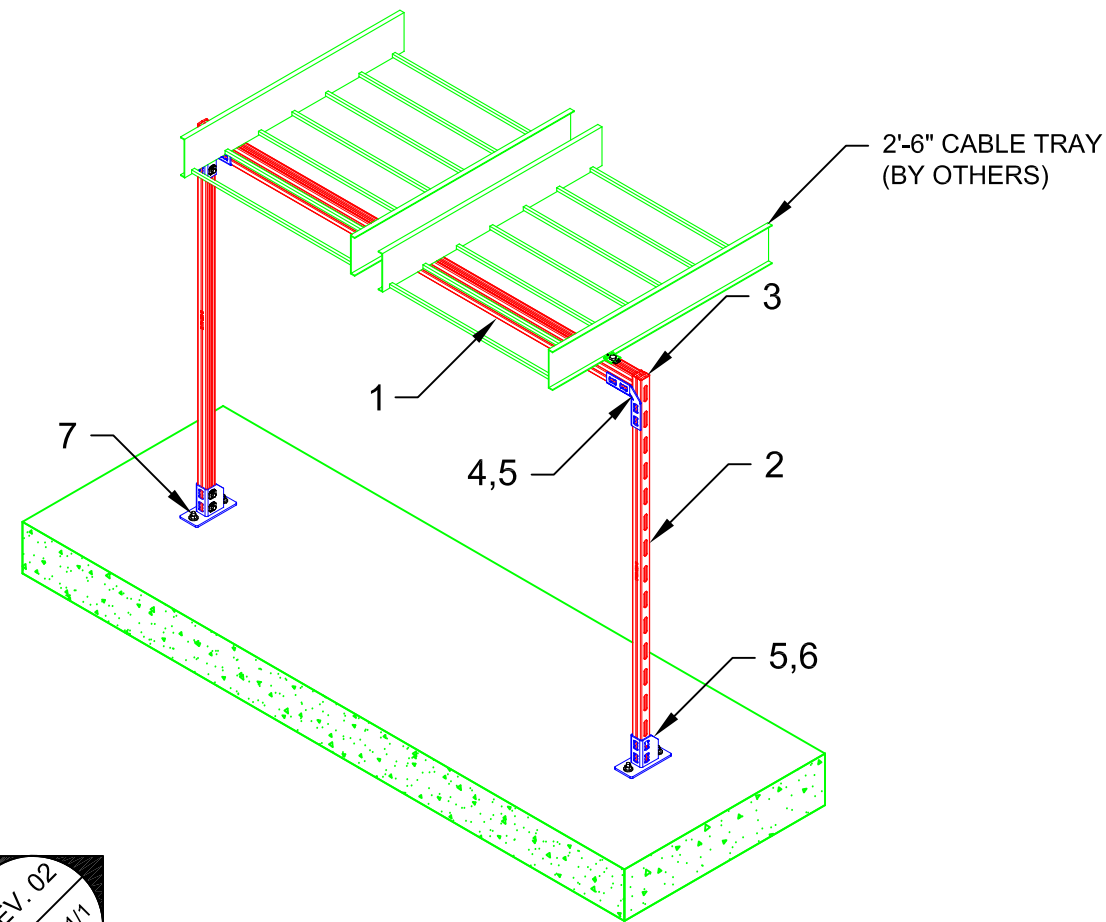
**CT-GP51-C**

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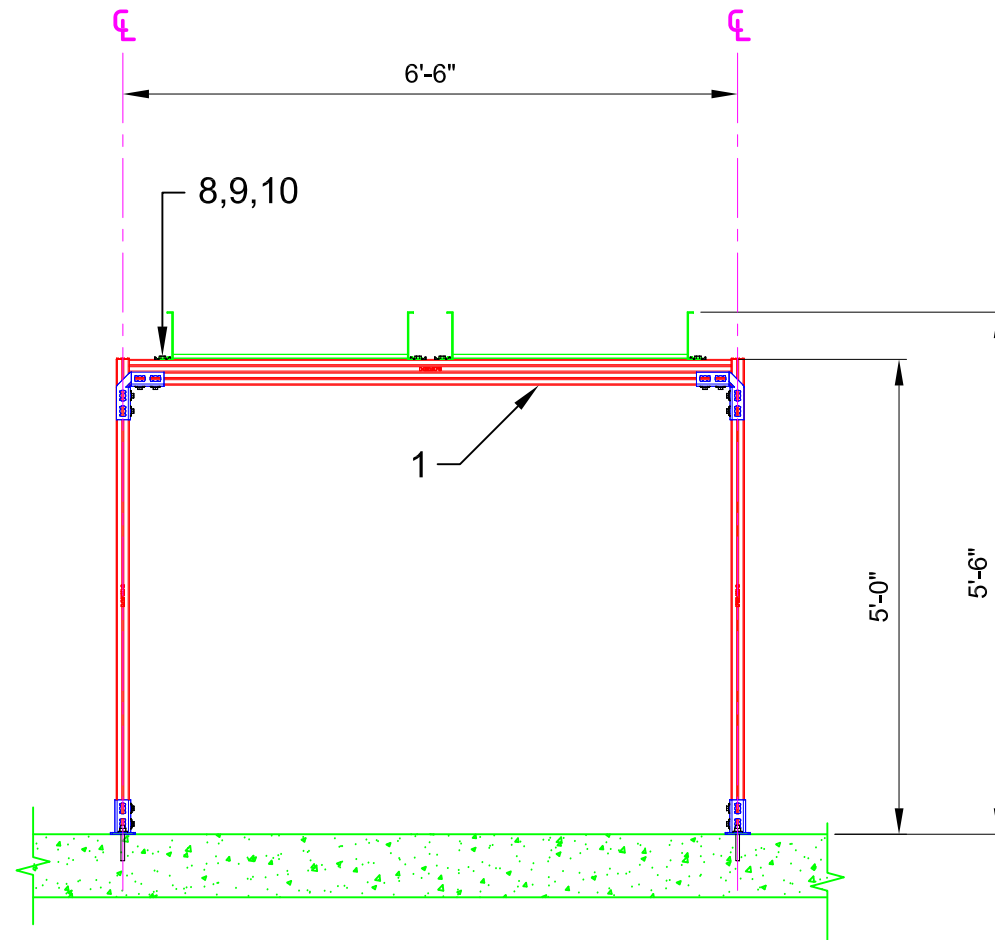
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SHEET:

1/1



**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
2	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
3	4	EA	CHANNEL END CAP MEK RED	50	1	244886
4	2	EA	8-HOLE ANGLE MQW-8/90	10	1	369659
5	12	EA	CHANNEL CONNECTOR MQN	50	1	369623
6	2	EA	RAIL SUPPORT MQP-21-72	12	1	369651
7	4	EA	USE KB3 OR KB-TZ AS APPROPRIATE	VARIES	VARIES	VARIES
8	4	EA	WING NUT MQM-F1/2"	50	1	377883
9	4	EA	HEX HEAD BOLT 1/2" x 1"	250	1	311953
10	4	EA	LEGRAND'S 1893-0 CLAMP	-	-	BY OTHERS

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - DESIGN ASSUMPTIONS:
    - NO LOADS CONSIDERED - CONCEPT ONLY
    - LATERAL LOADS NOT CONSIDERED
    - BUILDING CODE: NOT SPECIFIED
    - CORROSION RESISTANCE REQD.: NOT SPECIFIED
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.







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TYPICAL DETAIL TYPE:

### CABLE TRAY SUPPORT

TYPICAL DETAIL DESCRIPTION:

### T-POST

DESIGNED BY: AJV	REVIEWED BY: KL
DRAWN BY: HAM	ISSUE DATE: 30 DEC 14

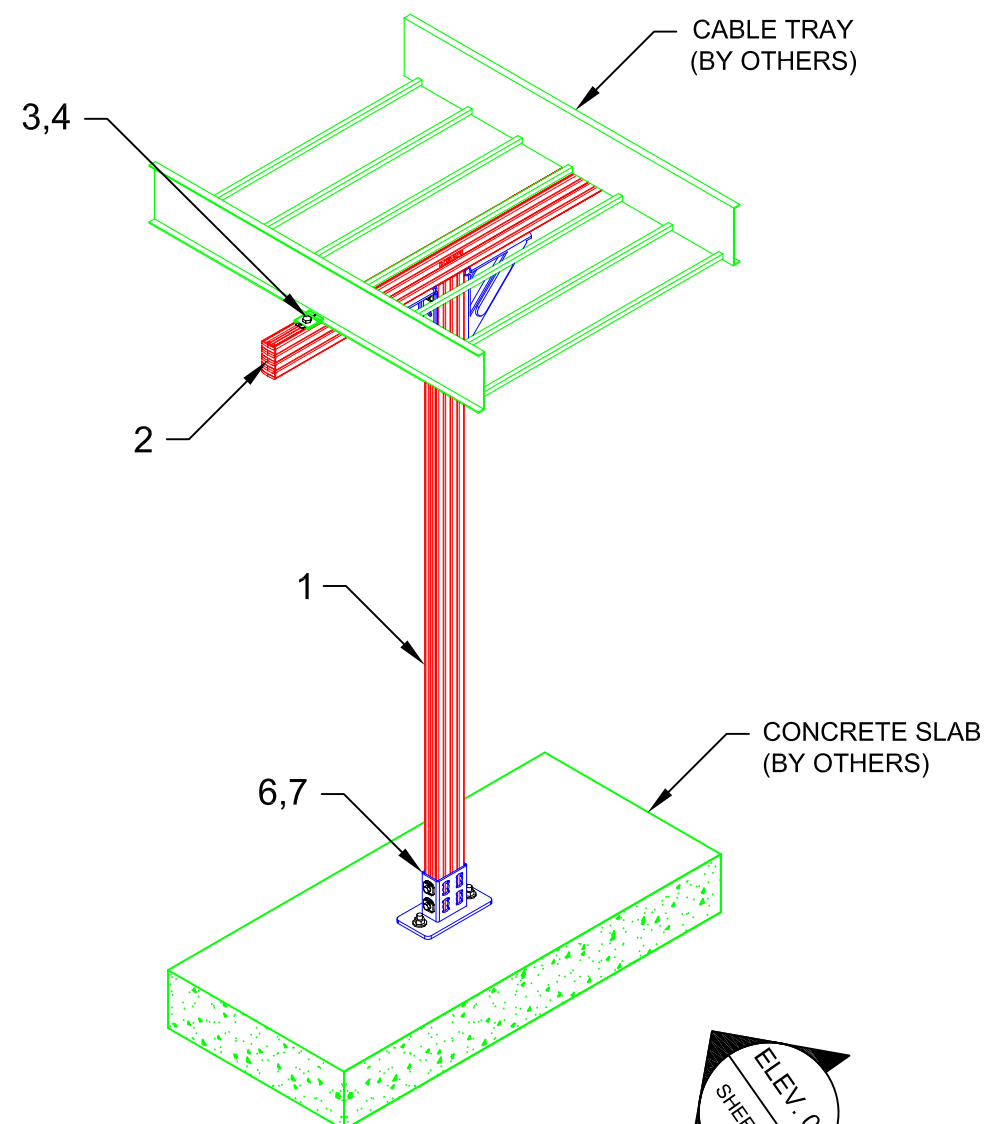
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NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	30 DEC 14

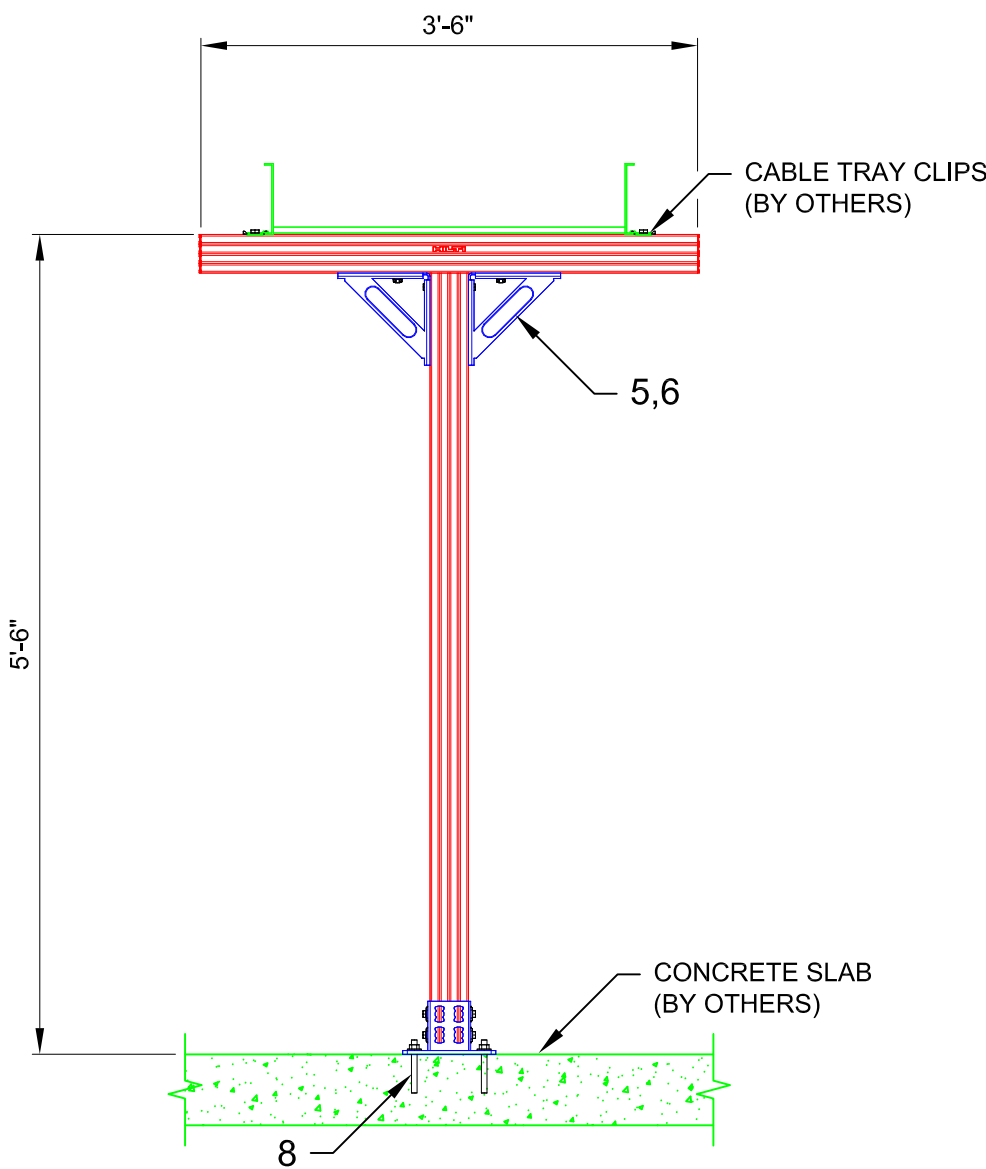
TYPICAL DETAIL NOMENCLATURE:

### CT-TP50-C

DRAWING NUMBER: 01	SHEET: 1/1
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**01** ISOMETRIC  
N.T.S.



**02** ELEVATION  
N.T.S.



No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQD	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQD	2007082
2	8	EA	CHANNEL END CAP MEK RED	50	1	244886
3	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
4	2	EA	3/8" x 1/2" LONG HDG HEX HEAD BOLT	VARIES	VARIES	SPECIAL
5	2	EA	ANGLE BRACKET MQW-S/2	10	1	369665
6	12	EA	CHANNEL CONNECTOR MQN	50	1	369623
7	1	EA	BASE MQP-82	8	1	369652
8	2	EA	USE KB3 OR KB-TZ AS APPROPRIATE	VARIES	VARIES	VARIES

**NOTE(S):**  
1. PRELIMINARY NOT FOR CONSTRUCTION  
2. DESIGN ASSUMPTIONS:  
  a. NO LOADS CONSIDERED - CONCEPT ONLY  
  b. LATERAL LOADS NOT CONSIDERED  
  c. BUILDING CODE: NOT SPECIFIED  
  d. CORROSION RESISTANCE REQD.: NOT SPECIFIED  
3. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
4. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**T-POST**

DESIGNED BY:

AJV

REVIEWED BY:

KL

DRAWN BY:

HAM

ISSUE DATE:

30 DEC 14

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	30 DEC 14
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TYPICAL DETAIL NOMENCLATURE:

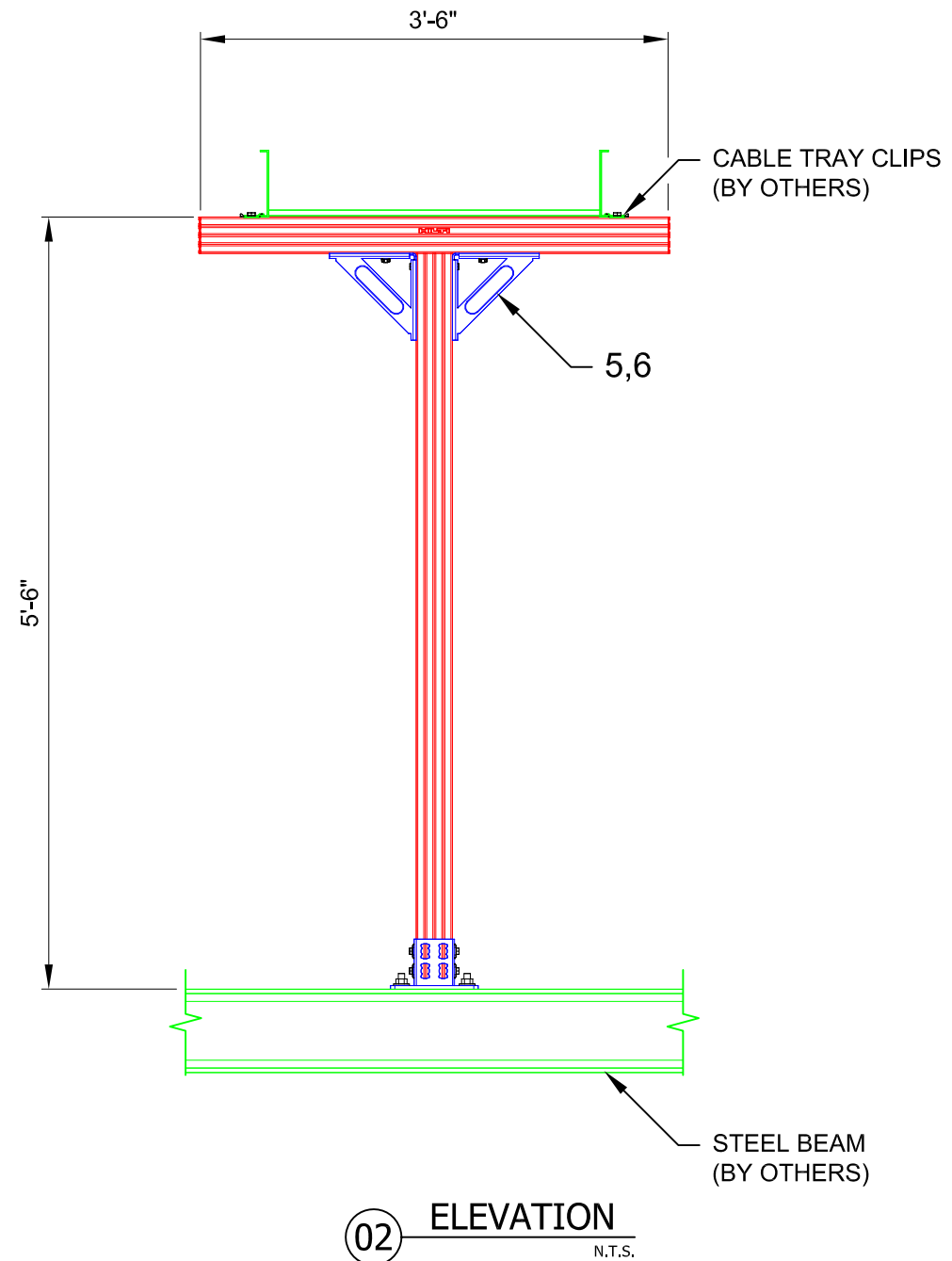
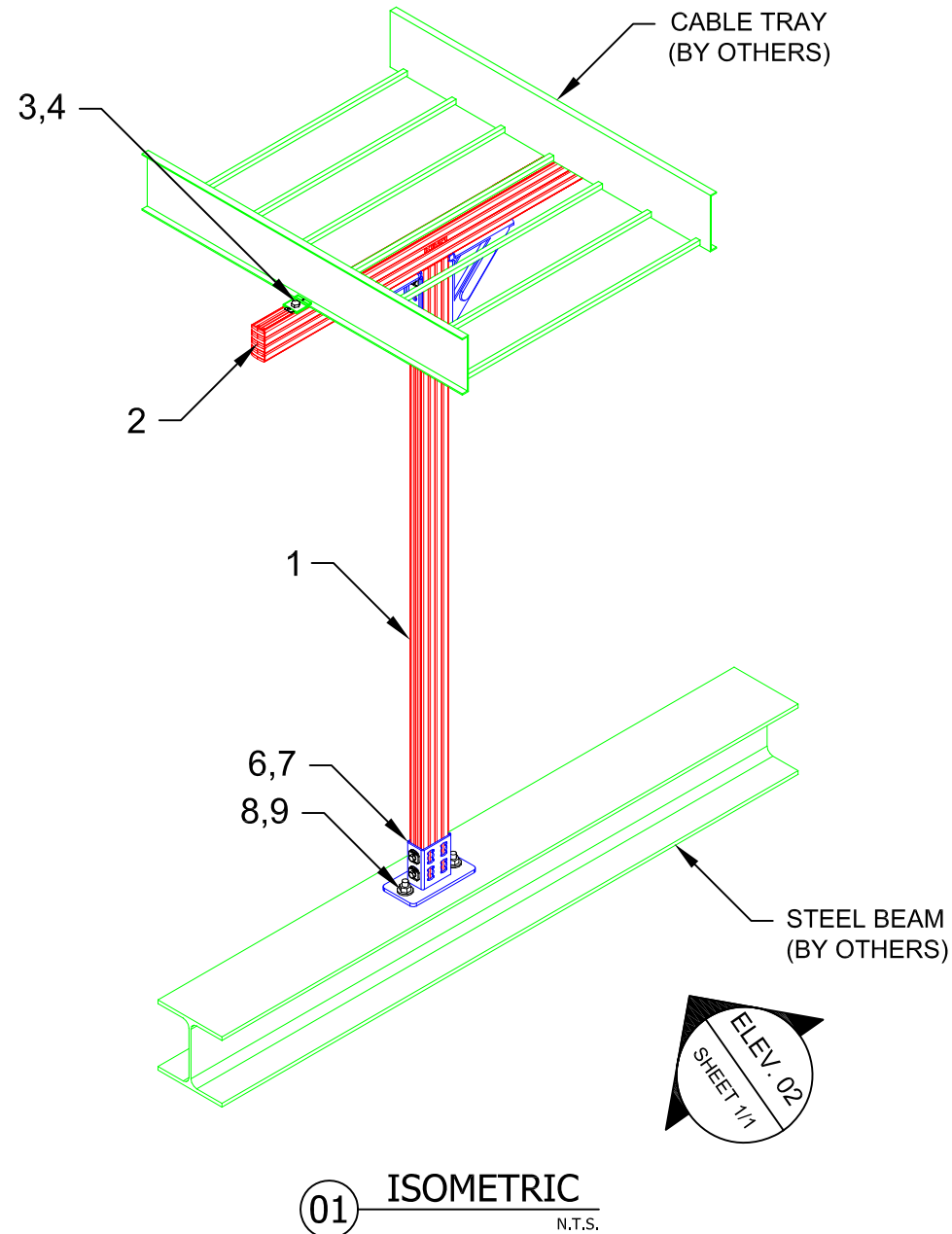
**CT-TP51-S**

DRAWING NUMBER:

01

SHEET:

1/1



No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10' B2B	1	AS REQ'D	2007082
2	8	EA	CHANNEL END CAP MEK RED	50	1	244886
3	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
4	2	EA	3/8" x 1/2" LONG HDG HEX HEAD BOLT	VARIES	VARIES	SPECIAL
5	2	EA	ANGLE BRACKET MQW-S/2	10	1	369665
6	12	EA	CHANNEL CONNECTOR MQN	50	1	369623
7	1	EA	BASE MQP-82	8	1	369652
8	2	EA	WASHER 3/8" SS316	200	1	411780
9	2	EA	X-BTW10-24-6 SN12-R	100	1	377076

**NOTE(S):**

- PRELIMINARY NOT FOR CONSTRUCTION
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
  - BUILDING CODE: NOT SPECIFIED
  - CORROSION RESISTANCE REQ'D.: NOT SPECIFIED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
- E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**TRAPEZE - 2 TIER**

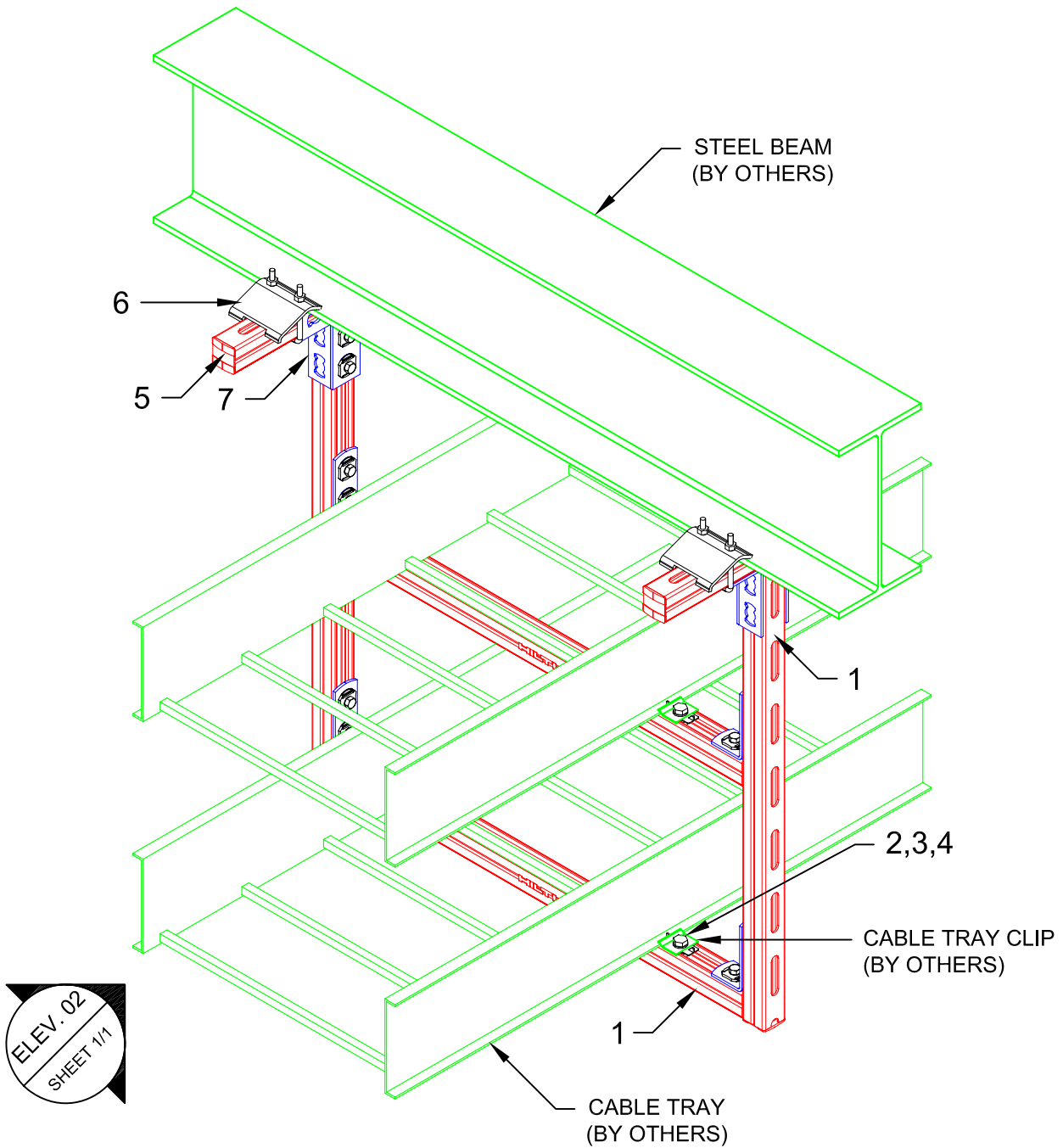
DESIGNED BY: KL	REVIEWED BY: AJV
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DRAWN BY: BAP	ISSUE DATE: 03 DEC 14
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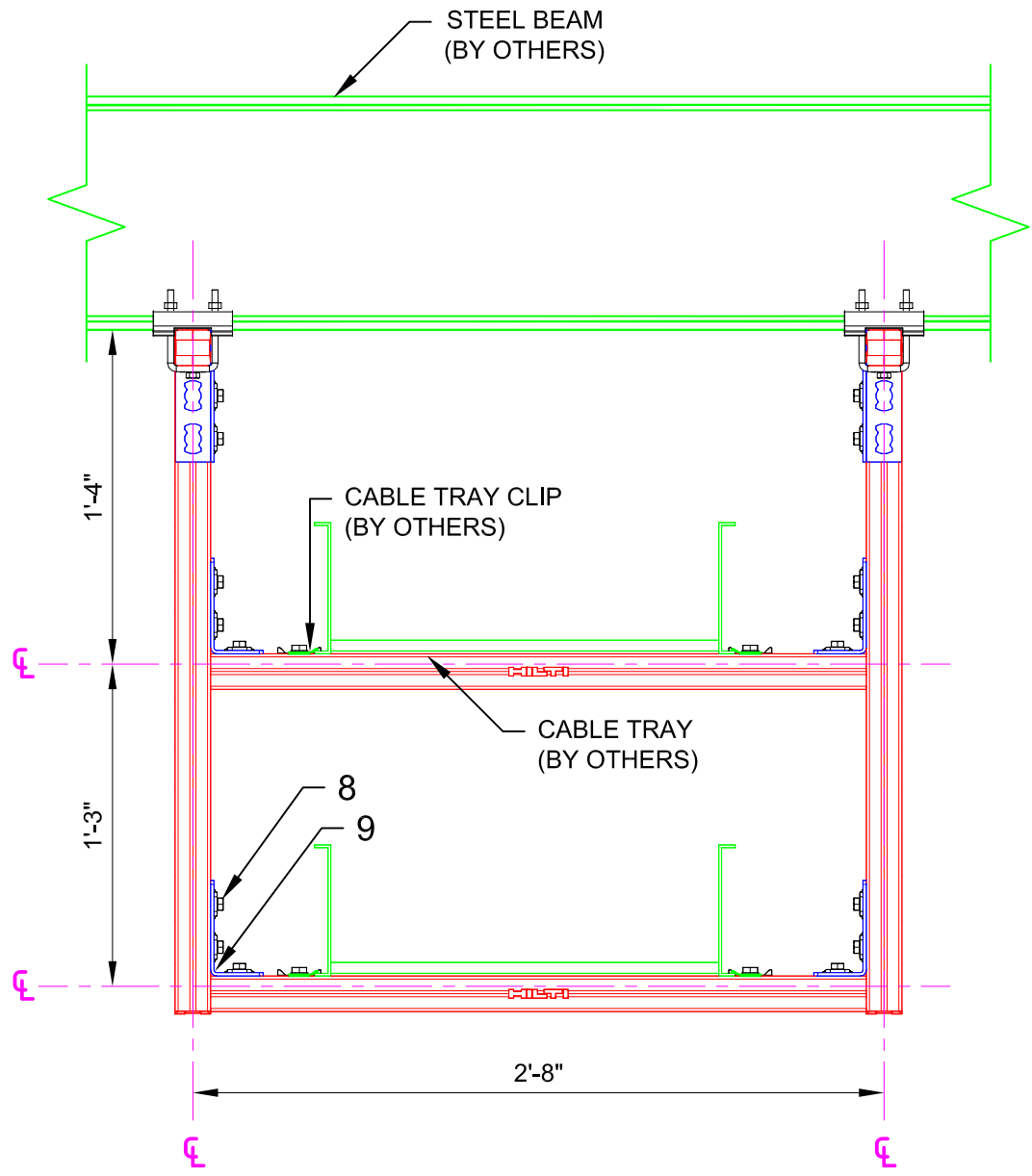
REVISIONS:		
NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	03 DEC 14

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR50-S**

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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**01** ISOMETRIC  
N.T.S.



**02** ELEVATION  
N.T.S.

ELEV. 02  
SHEET 1/1

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
6	AS REQ'D	EA	STRUT BEAM CLAMP MQT-21-41-F	10	AS REQ'D	304190
7	AS REQ'D	EA	CHANNEL TIE MQV-3/2 D	10	AS REQ'D	369640
8	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
9	AS REQ'D	EA	3-HOLE ANGLE MQW-3	20	AS REQ'D	369656

**NOTE(S):**

- PRELIMINARY NOT FOR CONSTRUCTION
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
  - BUILDING CODE: NOT SPECIFIED
  - CORROSION RESISTANCE REQD.: NOT SPECIFIED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
- E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.



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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - 3 TIER**

DESIGNED BY:  
KL

REVIEWED BY:  
AJV

DRAWN BY:  
BAP

ISSUE DATE:  
03 DEC 14

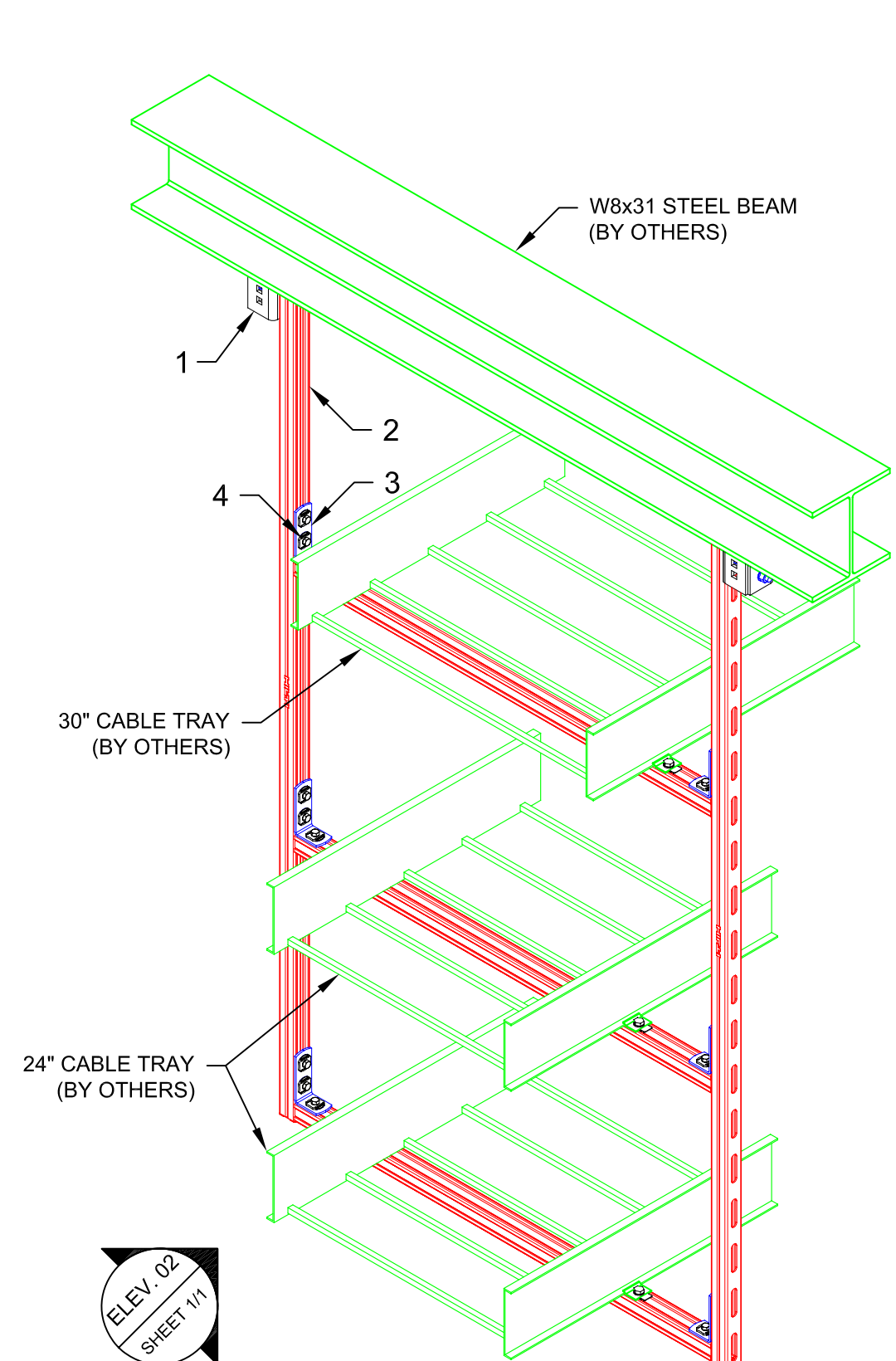
REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	03 DEC 14

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR51-S**

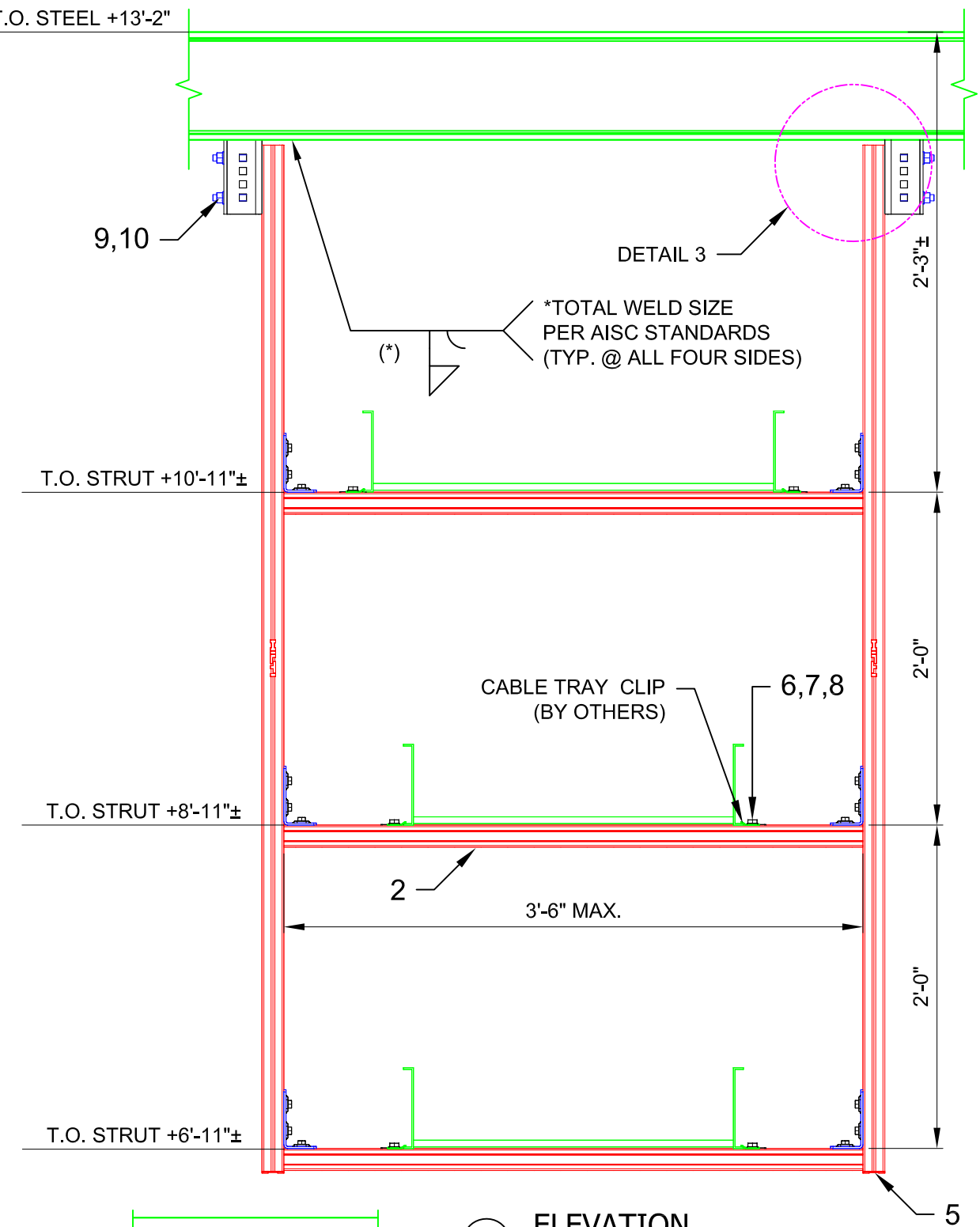
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SHEET:  
1/1

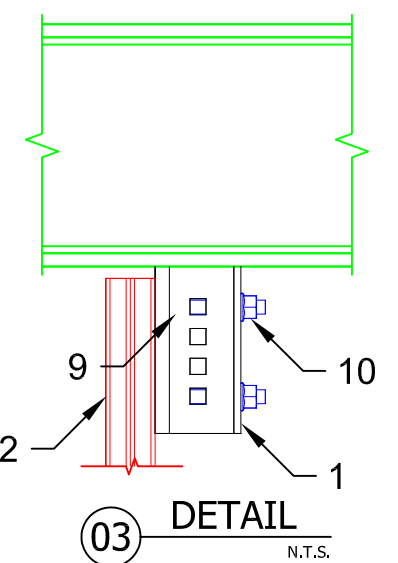


ELEV. 02  
SHEET 1/1

01 ISOMETRIC  
N.T.S.



02 ELEVATION  
N.T.S.



03 DETAIL  
N.T.S.

NOTE(S):

1. PRELIMINARY NOT FOR CONSTRUCTION
2. DESIGN ASSUMPTIONS:
  - a. DESIGN LOADS (STATIC, U.N.O.):  
DL:60 lb/ft PER CABLE TRAY
  - b. LATERAL LOADS NOT CONSIDERED
  - c. CORROSION RESISTANCE REQD.:HDG
  - d. MAX. SUPPORT SPACING = 8'-10"
3. REFER TO COMPONENT MANUFACTURER'S IFUS FOR REQUIRED INSTALLATION INFO.
4. VERIFY FIELD CONDITIONS PRIOR TO ORDERING & INSTALLATION.
5. ADEQUACY OF CABLE TRAY MAX. SPAN NOT VERIFIED BY HILTI.
6. UNIT WEIGHT OF FRAMING AS FOLLOWS:
  - a. STRUT HS-158-12/PG: 1.881 lb/ft

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	2	EA	CONNECTOR MIC-SC90	2	1	304824
2	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
3	6	EA	3-HOLE ANGLE MQW-3-F	20	1	304172
4	18	EA	CHANNEL CONNECTOR MQN-HDG PLUS	50	1	387779
5	2	EA	CHANNEL END CAP MEK RED	50	1	244886
6	6	EA	HEX HEAD BOLT 3/8" x 1-1/4" HDG	VARIES	VARIES	SPECIAL
7	6	EA	WASHER 3/8" HDG	VARIES	VARIES	SPECIAL
8	6	EA	WING NUT MQM-F3/8"-F	25	1	304136
9	4	EA	ONEHAND SCREW MIA-OH90	10	1	304889
10	4	EA	MI HEX NUT M12-F-SL-WS 3/4"	100	1	382897

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All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - SINGLE**

DESIGNED BY: KL	REVIEWED BY: AJV
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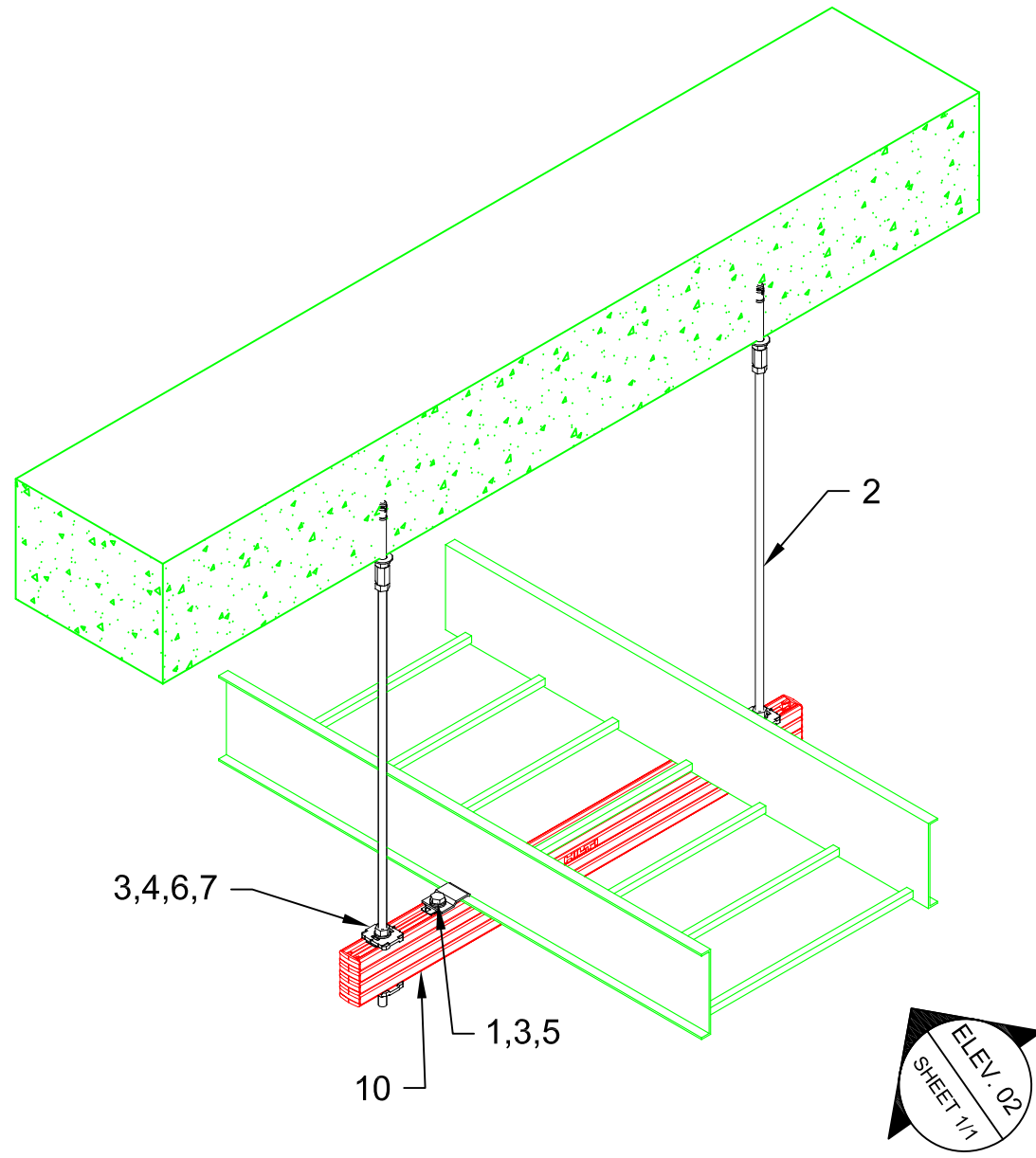
DRAWN BY: BAP	ISSUE DATE: 03 DEC 14
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REVISIONS:

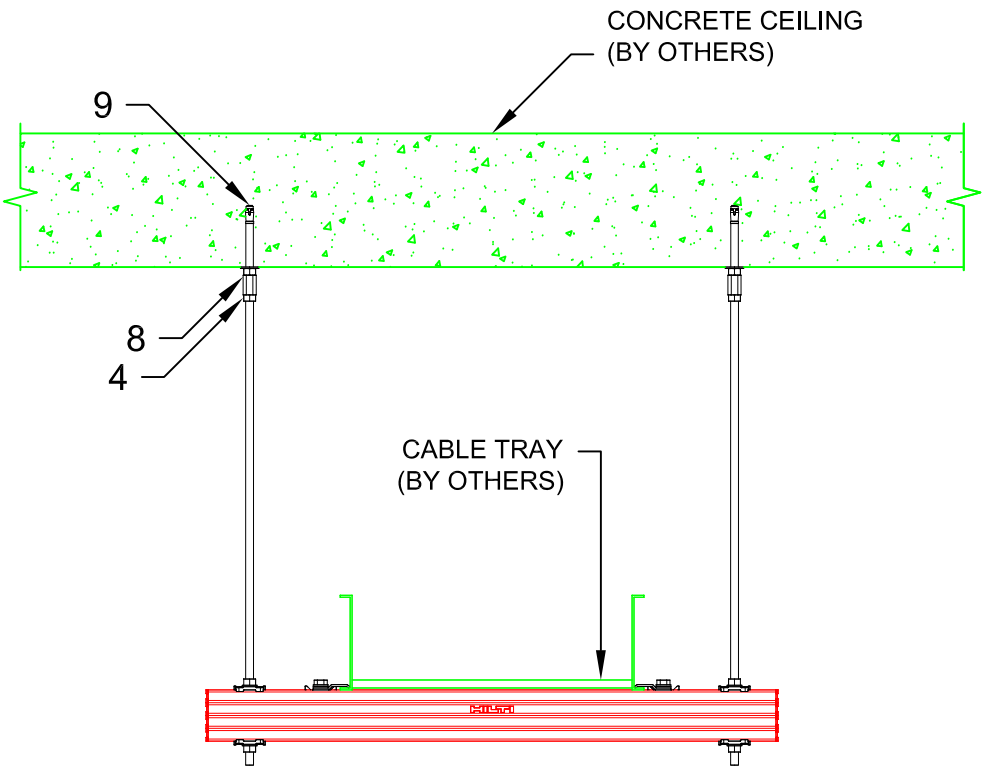
NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	03 DEC 14

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR52-C**

DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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01 ISOMETRIC  
N.T.S.



02 ELEVATION  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	1	EA	CABLE TRAY HOLD DOWN/EXPANSION CLAMP	VARIES	VARIES	BY OTHERS
2	6FT	EA	THREADED ROD 1/2" SS316	VARIES	AS REQ'D	SPECIAL
3	4	EA	WING NUT MQM-F1/2"-R (SS316)	25	1	304020
4	6	EA	HEX NUT STANDARD 1/2" SS316	100	1	411776
5	2	EA	HEX HEAD BOLT 1/2" X 1" SS316	50	1	411790
6	4	EA	1/2" LOCKWASHER SS316	VARIES	VARIES	SPECIAL
7	2	EA	BASE PLATE MQZ-F1/2"-R (SS316)	20	1	304077
8	2	EA	1/2" ROD COUPLER SS316	VARIES	VARIES	SPECIAL
9	2	EA	STD STUD ANCHOR KB3 SS316 1/2X5 1/2	25	1	282571
10	4FT	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQ'D	2007087

NOTE(S):  
 1. PRELIMINARY NOT FOR CONSTRUCTION  
 2. DESIGN ASSUMPTIONS:  
 a. NO LOADS CONSIDERED - CONCEPT ONLY  
 b. CORROSION RESISTANCE REQ'D.: HDG / SS316  
 c. MAX. SUPPORT SPACING:  
 HORIZONTAL SUPPORT POINTS FOR CABLE TRAYS SHALL NOT EXCEED 20'-0".  
 HORIZONTAL SUPPORT POINTS FOR 4" CHANNEL SHALL NOT EXCEED 12'-0".  
 d. NOT RATED FOR SEISMIC REGIONS.  
 3. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.

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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**TRAPEZE - 2 TIER**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

GAB

ISSUE DATE:

02 JAN 15

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:

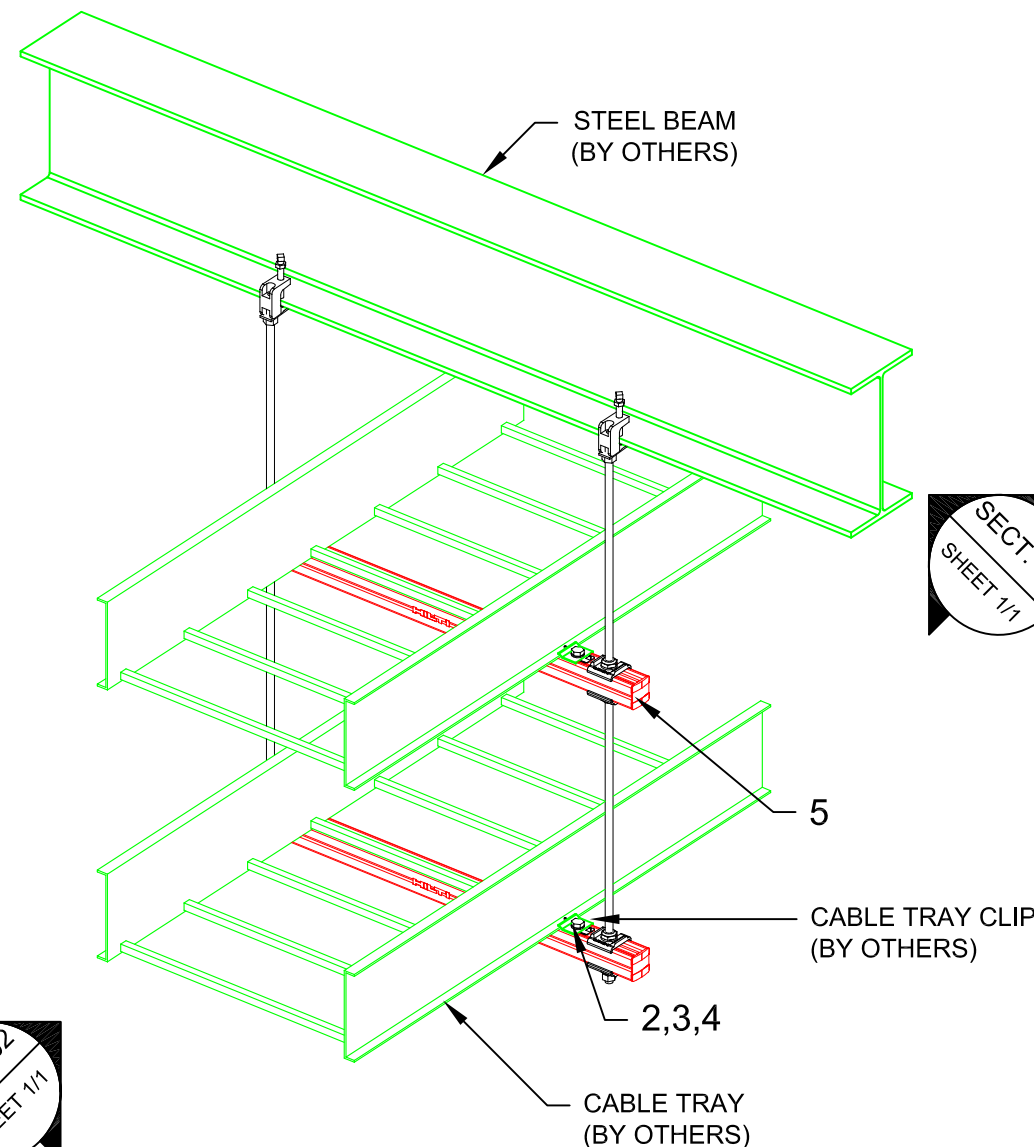
**CT-TR53-S**

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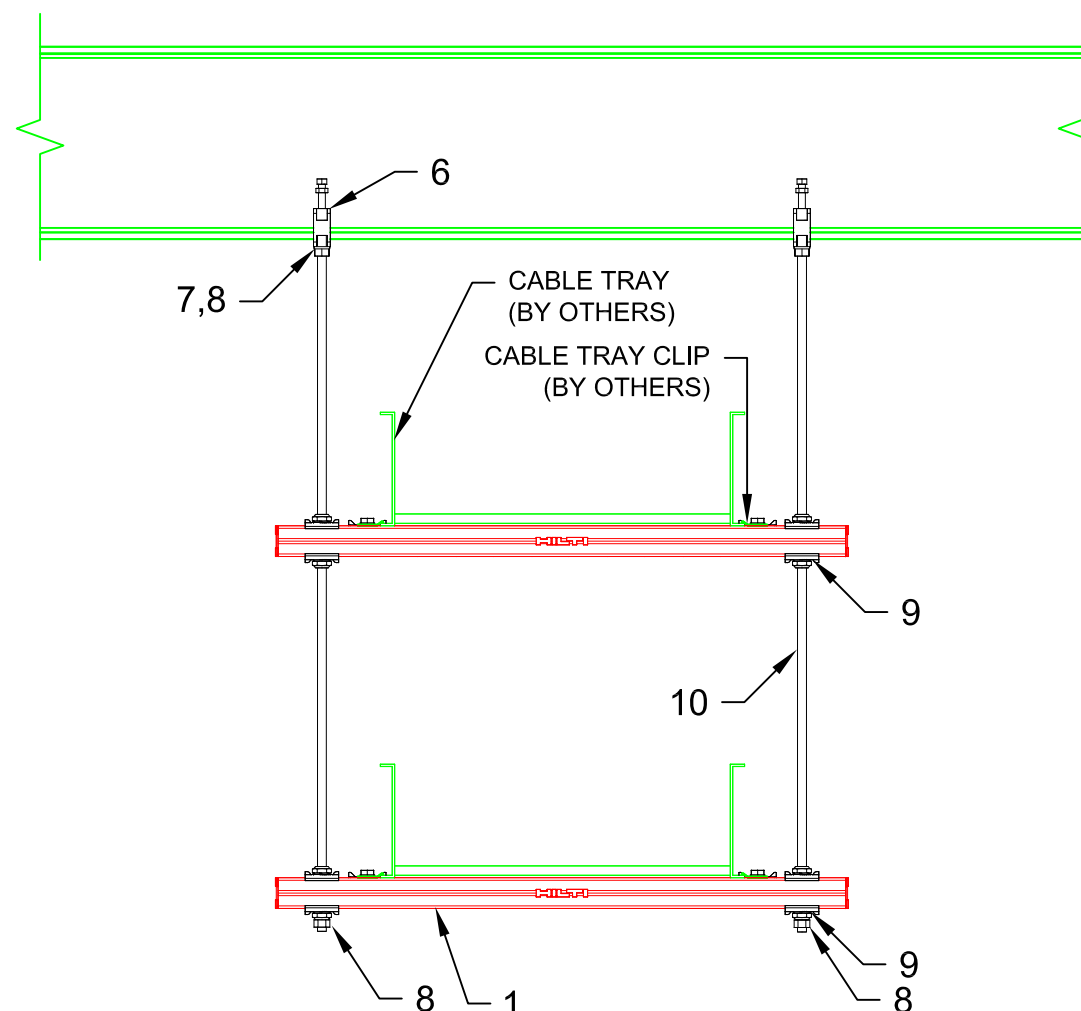
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SHEET:

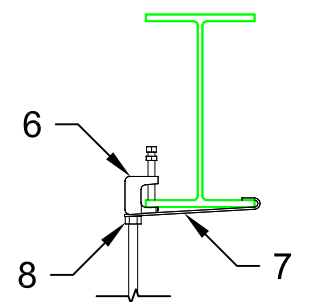
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**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.



**03 SECTION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
6	AS REQ'D	EA	BC 1/2" 50/BOX	50	AS REQ'D	257367
7	AS REQ'D	EA	RETAINER STRAP BC-RS 3/8" X 12"	1	AS REQ'D	424238
8	AS REQ'D	EA	HEX NUT-HEAVY DUTY 1/2"	100	AS REQ'D	411753
9	AS REQ'D	EA	1/2" SPLIT NUT AND SLOT SQUARE WASHER	40	AS REQ'D	2008781
10	AS REQ'D	EA	THREADED ROD 1/2"-6' ZINC	12	AS REQ'D	257965

**NOTE(S):**

- PRELIMINARY NOT FOR CONSTRUCTION
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
  - BUILDING CODE: NOT SPECIFIED
  - CORROSION RESISTANCE REQD.: NOT SPECIFIED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
- E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

ELEV. 02  
SHEET 1/1

SECT. 03  
SHEET 1/1

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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - SINGLE - X-BT**

DESIGNED BY: KL  
REVIEWED BY: AJV

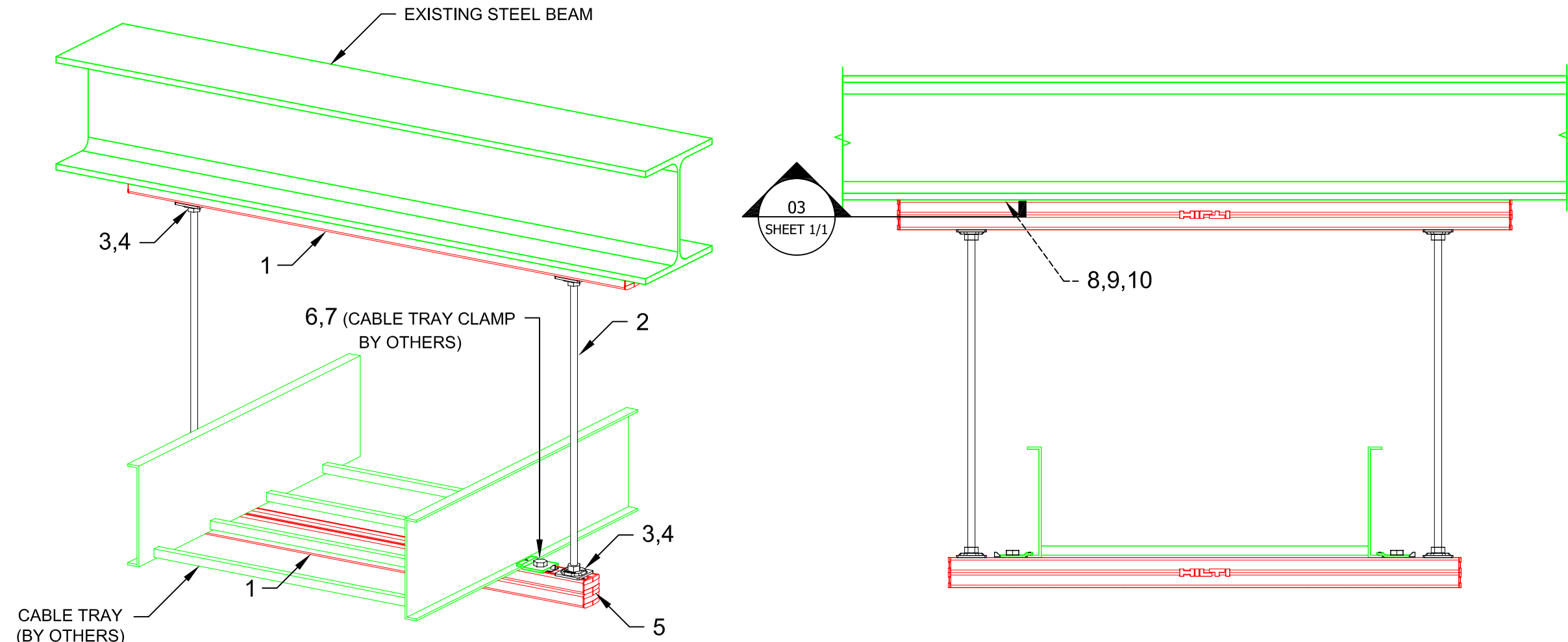
DRAWN BY: GAB  
ISSUE DATE: 02 JAN 15

REVISIONS:

NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR-54-S**

DRAWING NUMBER: 01  
SHEET: 1/1



01 ISOMETRIC  
N.T.S.  
ELEV. 02  
SHEET 1/1

02 ELEVATION  
N.T.S.  
03 SECTION  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
2	AS REQ'D	EA	3/8" THREADED ROD HDG	VARIES	AS REQ'D	SPECIAL
3	4	EA	SADDLE NUT MQA-F3/8"-F	25	1	304143
4	4	EA	HEX NUT HDG 3/8"	VARIES	VARIES	SPECIAL
5	8	EA	CHANNEL END CAP MEK RED	50	1	244886
6	2	EA	HEX HEAD BOLT HDG 3/8"x1"	VARIES	VARIES	SPECIAL
7	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
8	4	EA	X-BTW10-24-6 SN12-R	100	1	377076
9	4	EA	WASHER 3/8" SS316	200	1	411780
10	4	EA	HEX NUT STANDARD 3/8" SS316	100	1	411775

NOTE(S):  
1. PRELIMINARY NOT FOR CONSTRUCTION  
2. DESIGN ASSUMPTIONS:  
a. NO LOADS CONSIDERED - CONCEPT ONLY  
b. LATERAL LOADS NOT CONSIDERED  
c. BUILDING CODE: NOT SPECIFIED  
d. CORROSION RESISTANCE REQ'D.: NOT SPECIFIED  
2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:

### CABLE TRAY SUPPORT

TYPICAL DETAIL DESCRIPTION:

### TRAPEZE - SINGLE - VERTICAL

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

GAB

ISSUE DATE:

02 JAN 15

REVISIONS:

NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:

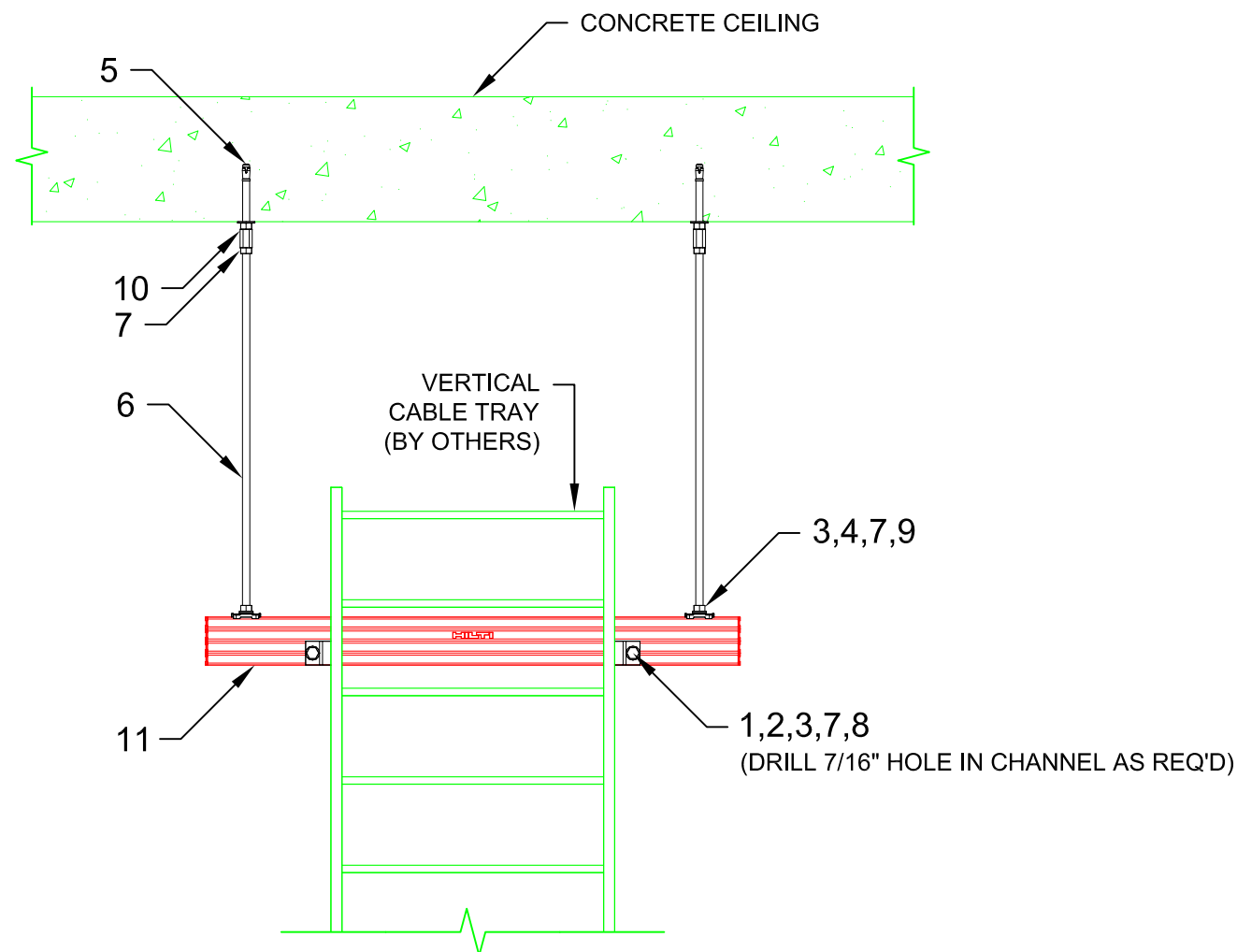
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DRAWING NUMBER:

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**01** ELEVATION  
N.T.S.  
VERTICAL CHANNEL OR TRAY SUPPORTED FROM CEILING (T9)

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	1	EA	CABLE TRAY HOLD DOWN/EXPANSION CLAMP	VARIES	VARIES	BY OTHERS
2	2	EA	HEX HEAD BOLT 1/2" X 1" SS316	50	1	411790
3	4	EA	1/2" LOCKWASHER SS316	VARIES	VARIES	SPECIAL
4	2	EA	WING NUT MQM-F1/2"-R (SS316)	25	1	304020
5	2	EA	STD STUD ANCHOR KB3 SS316 1/2X5 1/2	25	1	282571
6	10FT	EA	THREADED ROD 1/2" SS316	VARIES	AS REQD	SPECIAL
7	6	EA	HEX NUT STANDARD 1/2" SS316	100	1	411776
8	2	EA	WASHER 1/2" SS316	100	1	411781
9	2	EA	BASE PLATE MQZ-F1/2"-R (SS316)	20	1	304077
10	2	EA	1/2" ROD COUPLER SS316	VARIES	VARIES	SPECIAL
11	5FT	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQD	2007087

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - VERTICAL RACEWAY SUPPORTS FROM STRUCTURAL STEEL OR PLATFORMS SHALL BE WELDED OR BOLTED TO STEEL.
  - DESIGN ASSUMPTIONS:
    - NO LOADS CONSIDERED - CONCEPT ONLY
    - CORROSION RESISTANCE REQD.: HDG / SS316
    - MAX. SUPPORT SPACING:
      - HORIZONTAL SUPPORT POINTS FOR CABLE TRAYS SHALL NOT EXCEED 20'-0".
      - HORIZONTAL SUPPORT POINTS FOR 4" CHANNEL SHALL NOT EXCEED 12'-0".
    - NOT RATED FOR SEISMIC REGIONS.
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.





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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**TRAPEZE - SINGLE**

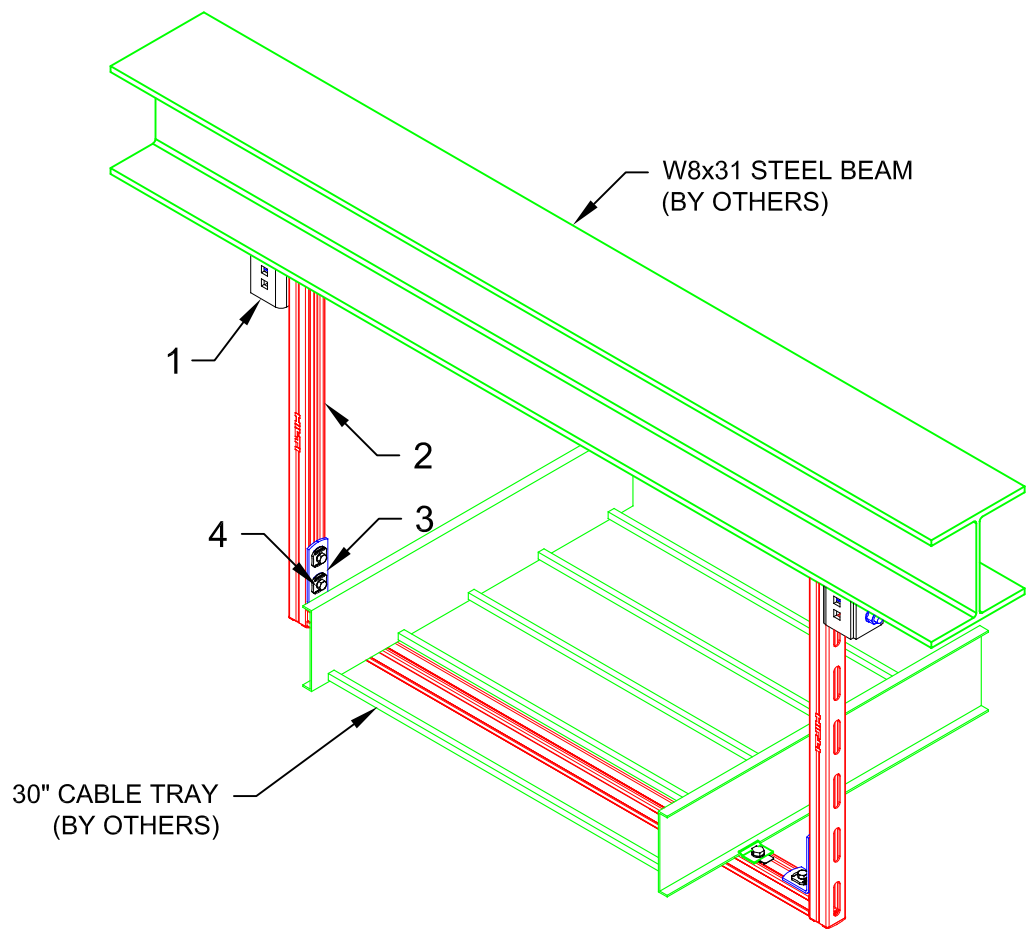
DESIGNED BY: KL	REVIEWED BY: AJV
DRAWN BY: GAB	ISSUE DATE: 02 JAN 15

REVISIONS:

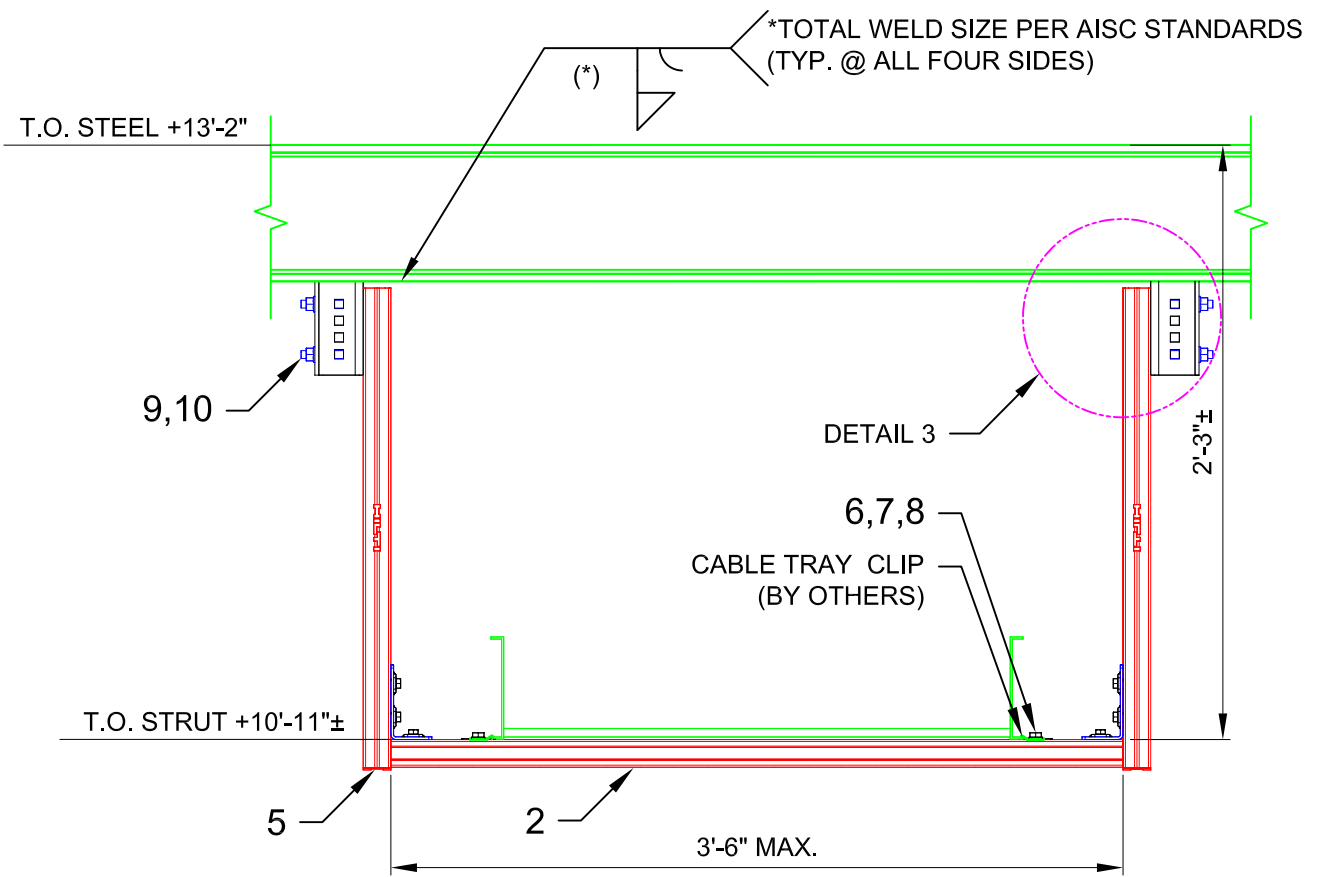
NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR56-S**

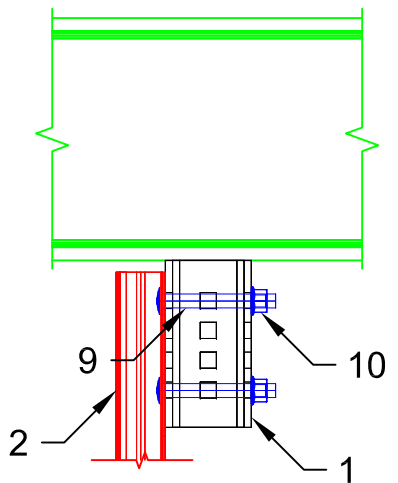
DRAWING NUMBER: <b>01</b>	SHEET: <b>1/1</b>
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01 ISOMETRIC  
N.T.S.



02 ELEVATION  
N.T.S.



03 DETAIL  
N.T.S.

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - DESIGN ASSUMPTIONS:
    - DESIGN LOADS (STATIC, U.N.O.):  
DL:60 lb/ft PER CABLE TRAY
    - LATERAL LOADS NOT CONSIDERED
    - CORROSION RESISTANCE REQD.:HDG
    - MAX. SUPPORT SPACING = 8'-10"
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - VERIFY FIELD CONDITIONS PRIOR TO ORDERING & INSTALLATION.
  - ADEQUACY OF CABLE TRAY MAX. SPAN NOT VERIFIED BY HILTI.
  - UNIT WEIGHT OF FRAMING AS FOLLOWS:
    - STRUT HS-158-12/PG: 1.881 lb/ft

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	2	EA	CONNECTOR MIC-SC90	2	1	304824
2	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
3	2	EA	3-HOLE ANGLE MQW-3-F	20	1	304172
4	6	EA	CHANNEL CONNECTOR MQN-HDG PLUS	50	1	387779
5	2	EA	CHANNEL END CAP MEK RED	50	1	244886
6	2	EA	HEX HEAD BOLT 3/8" x 1-1/4" HDG	VARIES	VARIES	SPECIAL
7	2	EA	WASHER 3/8" HDG	VARIES	VARIES	SPECIAL
8	2	EA	WING NUT MQM-F3/8"-F	25	1	304136
9	4	EA	ONEHAND SCREW MIA-OH90	10	1	304889
10	4	EA	MI HEX NUT M12-F-SL-WS 3/4"	100	1	382897



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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - SINGLE**

DESIGNED BY: KL  
REVIEWED BY: AJV

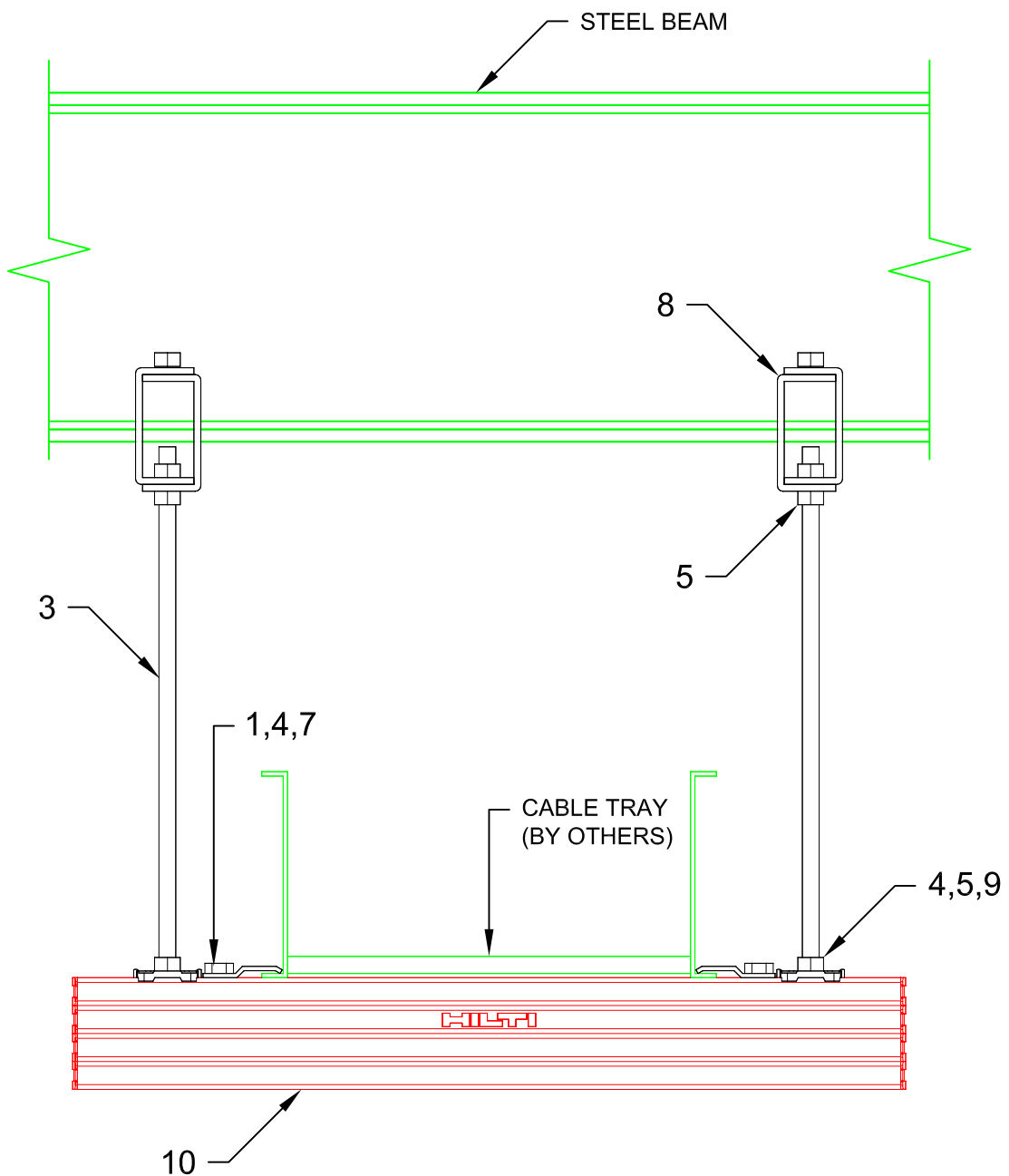
DRAWN BY: GAB  
ISSUE DATE: 02 JAN 15

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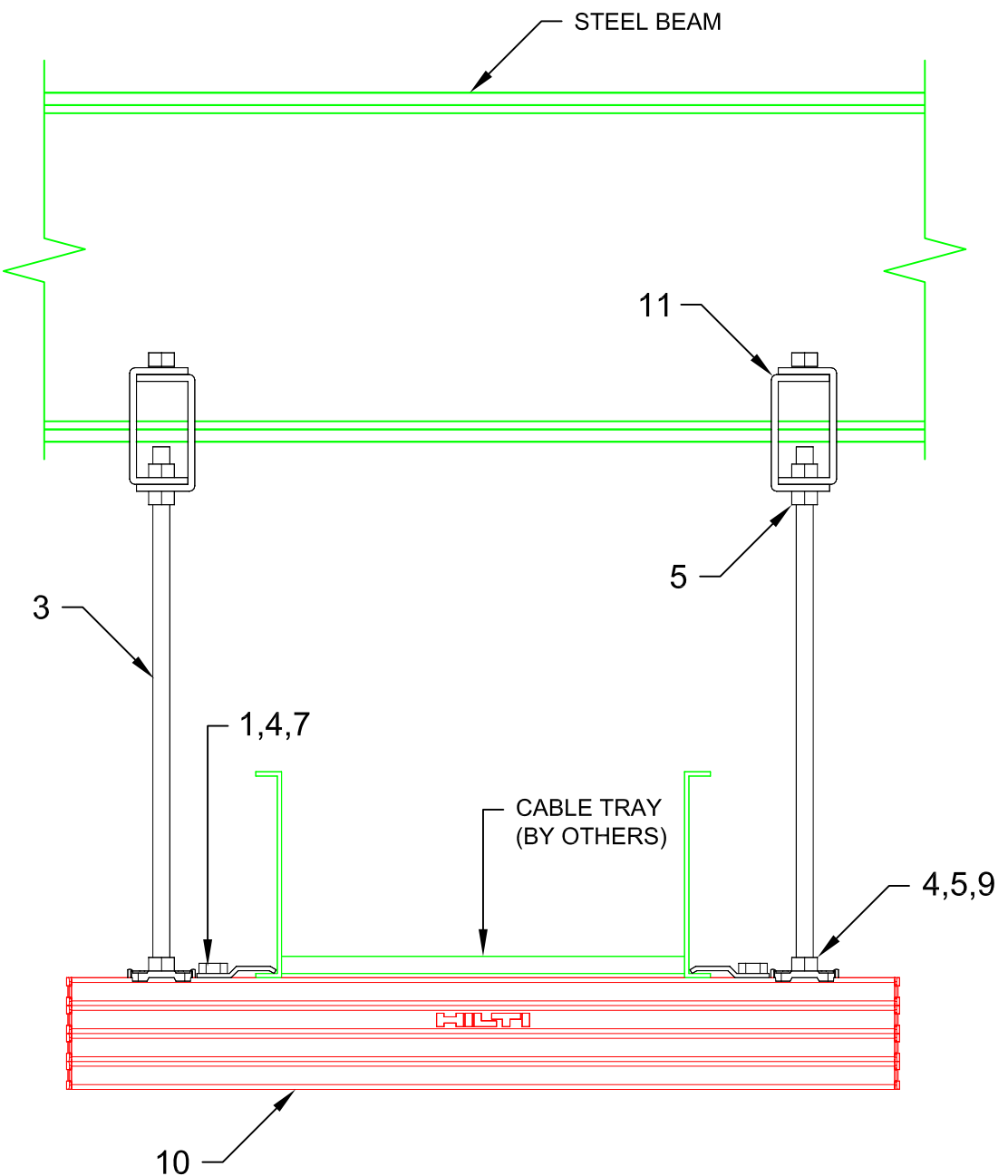
TYPICAL DETAIL NOMENCLATURE:  
**CT-TR57-S**

DRAWING NUMBER: 01  
SHEET: 1/1



**01 ELEVATION**  
N.T.S.

TRAPEZE STYLE CABLE TRAY  
SUPPORTED FROM STEEL BEAM FLANGE  
WIDTH 3/4" OR SMALLER (T4B & T4BHD)



**02 ELEVATION**  
N.T.S.

TRAPEZE STYLE CABLE TRAY  
SUPPORTED FROM STEEL BEAM FLANGE  
WIDTH 7/8" UP TO 1-5/8" (T4C & T4CHD)

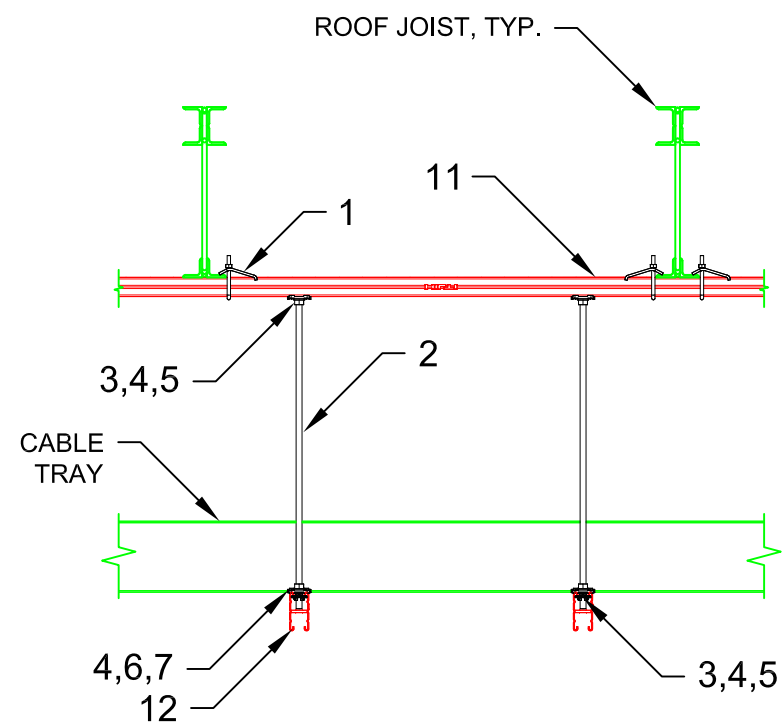
**NOTE(S):**

- PRELIMINARY NOT FOR CONSTRUCTION
- "H.D." SUFFIX ON A DETAIL CALLOUT DENOTES THE USE OF HOLD DOWN CLAMPS IN LIEU OF EXPANSION GUIDES. EXAMPLE: DETAIL "T4HD" IS THE SAME AS DETAIL "T4" EXCEPT THE CLAMP IS INSTALLED FOR HOLD DOWN INSTEAD OF EXPANSION.
- BEAM CLAMPS FOR 1/2" DIAMETER THREADED ROD SHALL BE AS FOLLOWS:
  - FOR UP TO 3/4" THICK FLANGE, USE HILTI JS-BC16 OR LOAD CAPACITY EQUIVALENT.
  - FOR FLANGES 7/8" THICK OR LARGER, USE HILTI JS-BC17 OR LOAD CAPACITY EQUIVALENT.
  - MAX. LOAD FOR BEAM CLAMPS = 1100 lbs.
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - CORROSION RESISTANCE REQD.: HDG / SS316
  - MAX. SUPPORT SPACING:  
HORIZONTAL SUPPORT POINTS FOR CABLE TRAYS SHALL NOT EXCEED 20'-0".  
HORIZONTAL SUPPORT POINTS FOR 4" CHANNEL SHALL NOT EXCEED 12'-0".
  - NOT RATED FOR SEISMIC REGIONS.
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.

No.	Unit Qty				Unit	Description	Box Qty	# Boxes Needed	Item No.
	T4B	T4BHD	T4C	T4CHD					
1	1	1	1	1	EA	CABLE TRAY HOLD DOWN/EXPANSION CLAMP	VARIES	VARIES	BY OTHERS
2	-	-	-	-	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
3	10FT	10FT	10FT	10FT	EA	THREADED ROD 1/2" SS316	VARIES	AS REQ'D	SPECIAL
4	4	4	4	4	EA	WING NUT MQM-F1/2"-R (SS316)	25	1	304020
5	6	6	6	6	EA	HEX NUT STANDARD 1/2" SS316	100	1	411776
6	-	-	-	-	EA	1/2" LOCKWASHER SS316	VARIES	VARIES	SPECIAL
7	2	2	2	2	EA	HEX HEAD BOLT 1/2" X 1" SS316	50	1	411790
8	2	2	-	-	EA	1/2" ALL THREADED ROD BEAM CLAMP (BC16)	VARIES	VARIES	BY OTHERS
9	2	2	2	2	EA	BASE PLATE MQZ-F1/2"-R (SS316)	20	1	304077
10	4FT	4FT	4FT	4FT	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQ'D	2007087
11	-	-	2	2	EA	1/2" ALL THREADED ROD BEAM CLAMP (BC17)	VARIES	VARIES	SPECIAL



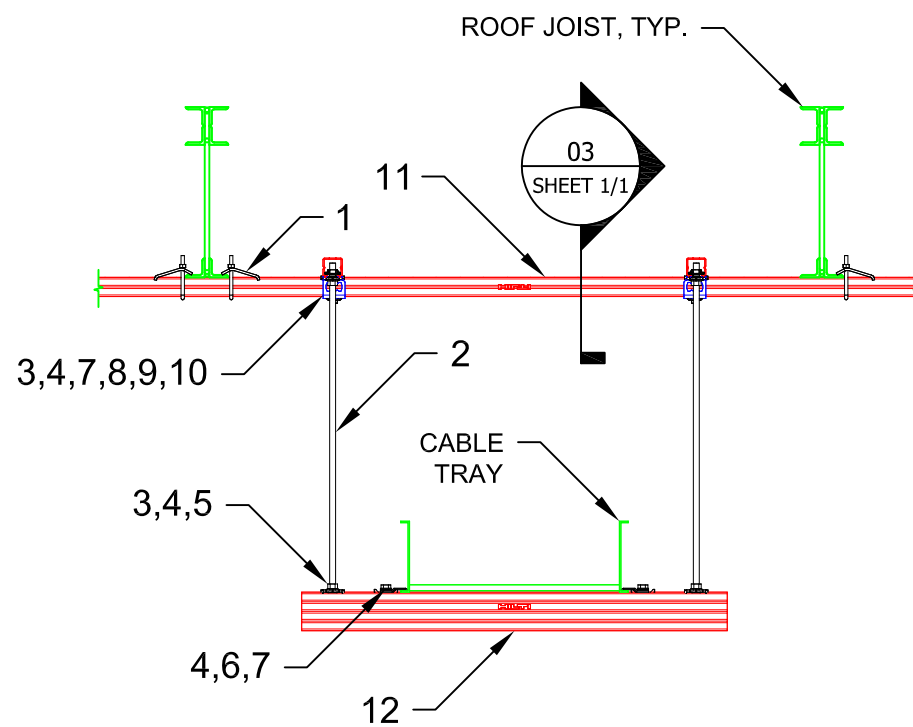
All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.



**01 ELEVATION**  
N.T.S.

HORIZONTAL TRAY SUPPORTED FROM ROOF JOISTS (PERPENDICULAR) (T11A)

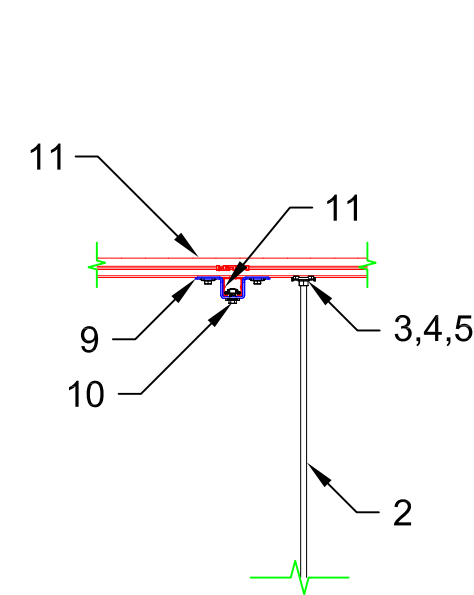
HORIZONTAL TRAY SUPPORTED FROM ROOF JOISTS (PERPENDICULAR) H.D. CLAMPS (T11AHD)



**02 ELEVATION**  
N.T.S.

HORIZONTAL TRAY SUPPORTED FROM ROOF JOISTS (PARALLEL) (T11B)

HORIZONTAL TRAY SUPPORTED FROM ROOF JOISTS (PARALLEL) H.D. CLAMPS (T11BHD)



**03 SECTION**  
N.T.S.

TYPICAL DETAIL TYPE:

CABLE TRAY SUPPORT

TYPICAL DETAIL DESCRIPTION:

TRAPEZE - SINGLE

DESIGNED BY:  
KL

REVIEWED BY:  
AJV

DRAWN BY:  
GAB

ISSUE DATE:  
02 JAN 15

REVISIONS:

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TYPICAL DETAIL NOMENCLATURE:

CT-TR58-S

DRAWING NUMBER:  
01

SHEET:  
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No.	Unit Qty				Unit	Description	Box Qty	# Boxes Needed	Item No.
	T11A	T11AHD	T11B	T11BHD					
1	2	2	2	2	EA	CABLE TRAY HANGER ROD CLAMP HDG	VARIES	VARIES	BY OTHERS
2	10FT	10FT	10FT	10FT	EA	THREADED ROD 1/2" SS316	VARIES	AS REQ'D	SPECIAL
3	6	6	4	4	EA	HEX NUT STANDARD 1/2" SS316	100	1	411776
4	10	13	10	13	EA	WING NUT MQM-F1/2"-R (SS316)	25	1	304020
5	6	6	6	6	EA	BASE PLATE MQZ-F1/2"-R (SS316)	20	1	304077
6	2	2	1	1	EA	CABLE TRAY HANGER ROD BEAM CALMP	VARIES	VARIES	BY OTHERS
7	4	4	6	6	EA	HEX HEAD BOLT 1/2" X 1" SS316	50	1	411790
8	-	-	4	4	EA	1/2" LOCKWASHER SS316	VARIES	VARIES	SPECIAL
9	-	-	2	2	EA	CLAMP MQB-41-R (SS316)	10	1	304061
10	-	-	6	6	EA	CHANNEL CONNECTOR MQN-R (SS316)	25	1	304012
11	AS REQ'D	AS REQ'D	AS REQ'D	AS REQ'D	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
12	AS REQ'D	AS REQ'D	AS REQ'D	AS REQ'D	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQ'D	2007087

NOTE(S):

- PRELIMINARY NOT FOR CONSTRUCTION
- ALL TRAY SUPPORTS SHALL BE SUSPENDED FROM CHANNELS.
- "H.D." SUFFIX ON A DETAIL CALLOUT DENOTES THE USE OF HOLD DOWN CLAMPS IN LIEU OF EXPANSION GUIDES. EXAMPLE: DETAIL "T11AHD" IS THE SAME AS DETAIL "T11A" EXCEPT THE CLAMP IS INSTALLED FOR HOLD DOWN INSTEAD OF EXPANSION.
- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - CORROSION RESISTANCE REQ'D.: HDG / SS316
  - MAX. SUPPORT SPACING:  
HORIZONTAL SUPPORT POINTS FOR CABLE TRAYS SHALL NOT EXCEED 20'-0".  
HORIZONTAL SUPPORT POINTS FOR 4" CHANNEL SHALL NOT EXCEED 12'-0".
  - NOT RATED FOR SEISMIC REGIONS.
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**TRAPEZE - 3 TIER**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

GAB

ISSUE DATE:

02 JAN 15

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:

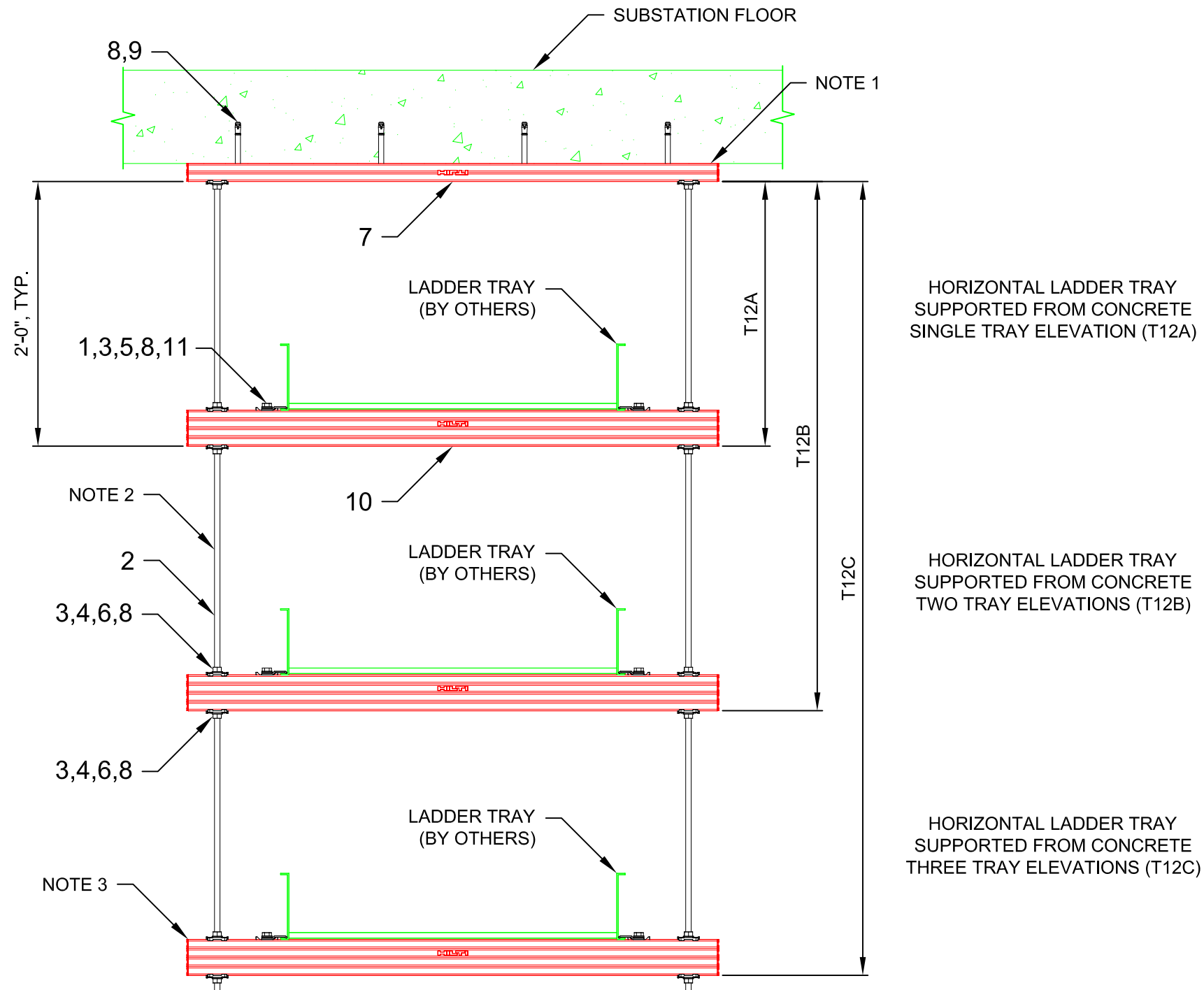
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DRAWING NUMBER:

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HORIZONTAL LADDER TRAY SUPPORTED FROM CONCRETE SINGLE TRAY ELEVATION (T12A)

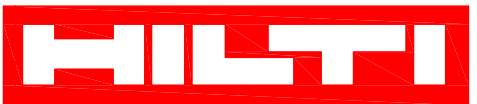
HORIZONTAL LADDER TRAY SUPPORTED FROM CONCRETE TWO TRAY ELEVATIONS (T12B)

HORIZONTAL LADDER TRAY SUPPORTED FROM CONCRETE THREE TRAY ELEVATIONS (T12C)

**01 ELEVATION**  
N.T.S.

No.	Unit Qty			Unit	Description	Box Qty	# Boxes Needed	Item No.
	T12A	T12B	T12C					
1	1PR	2PR	3PR	EA	CABLE TRAY HOLD DOWN/EXPANSION CLAMP	VARIES	VARIES	BY OTHERS
2	6FT	12FT	24FT	EA	THREADED ROD 1/2" SS316	VARIES	AS REQ'D	SPECIAL
3	6	8	10	EA	WING NUT MQM-F1/2"-R (SS316)	25	1	304020
4	4	8	12	EA	HEX NUT STANDARD 1/2" SS316	100	1	411776
5	2	4	6	EA	HEX HEAD BOLT 1/2" X 1" SS316	50	1	411790
6	4	8	12	EA	BASE PLATE MQZ-F1/2"-R (SS316)	20	1	304077
7	4FT	4FT	4FT	EA	STRUT HS-158-12/HDG 10'	1	AS REQ'D	407570
8	10	16	22	EA	1/2" LOCKWASHER SS316	VARIES	VARIES	SPECIAL
9	4	4	4	EA	STD STUD ANCHOR KB3 SS316 1/2X5 1/2	25	1	282571
10	4FT	8FT	12FT	EA	STRUT HS-158-12/HDG 10' B2B	1	AS REQ'D	2007087
11	2	4	6	EA	WASHER 1/2" SS316	100	1	411781

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - MAXIMUM SUPPORT SPACING:  
TWO TRAY ELEVATIONS = 13'-0"  
THREE TRAY ELEVATIONS = 10'-0"
  - ALL THREADED ROD TO BE ONE CONTINUOUS PIECE. CUT TO FIT.
  - SEE PLAN DRAWING FOR TRAY ELEVATIONS.
  - DESIGN ASSUMPTIONS:  
a. NO LOADS CONSIDERED - CONCEPT ONLY  
b. CORROSION RESISTANCE REQD.: HDG / SS316  
c. NOT RATED FOR SEISMIC REGIONS.
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.



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TYPICAL DETAIL TYPE:

**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:

**TRAPEZE - ANGLED**

DESIGNED BY:

KL

REVIEWED BY:

AJV

DRAWN BY:

GAB

ISSUE DATE:

02 JAN 15

REVISIONS:

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TYPICAL DETAIL NOMENCLATURE:

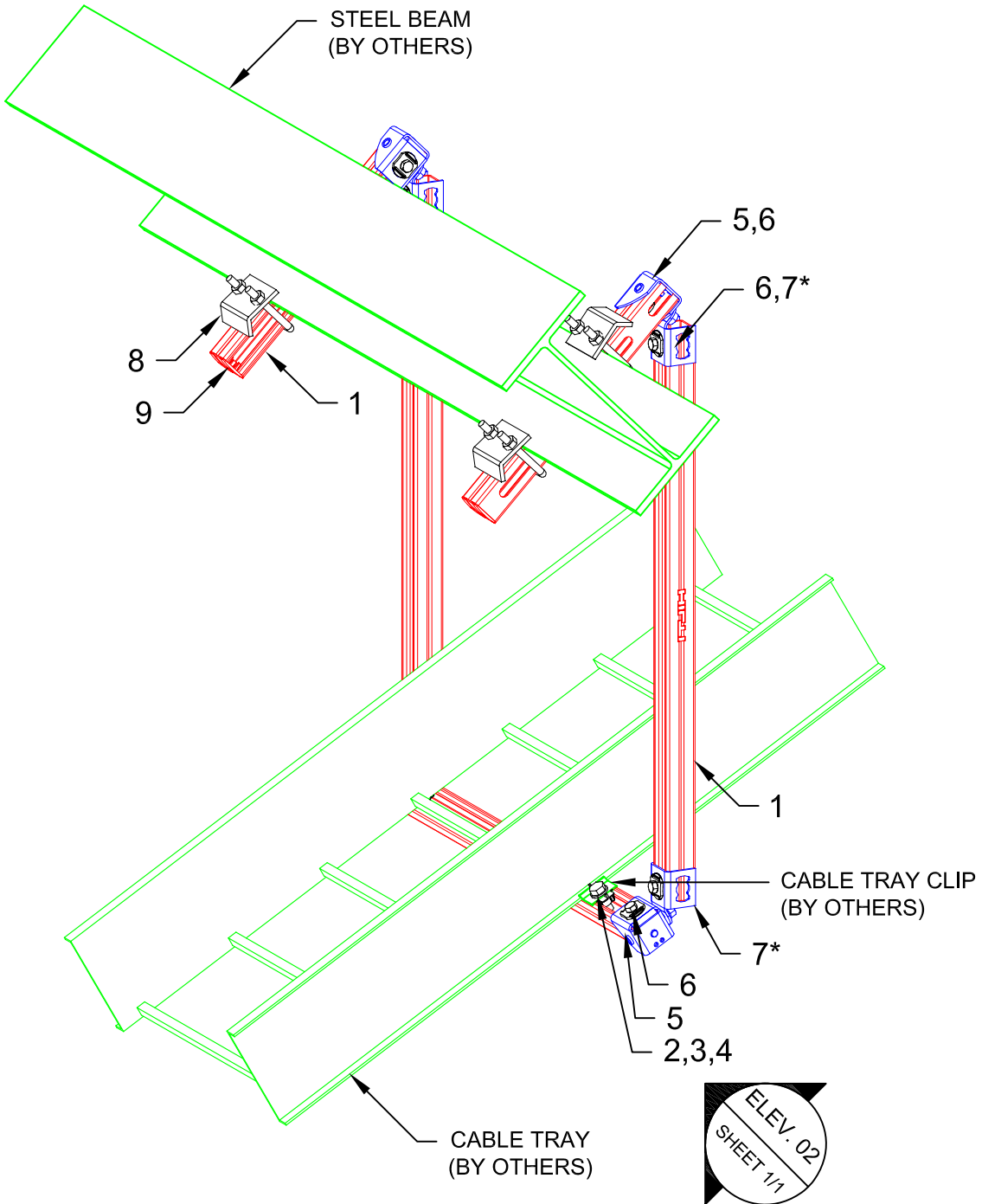
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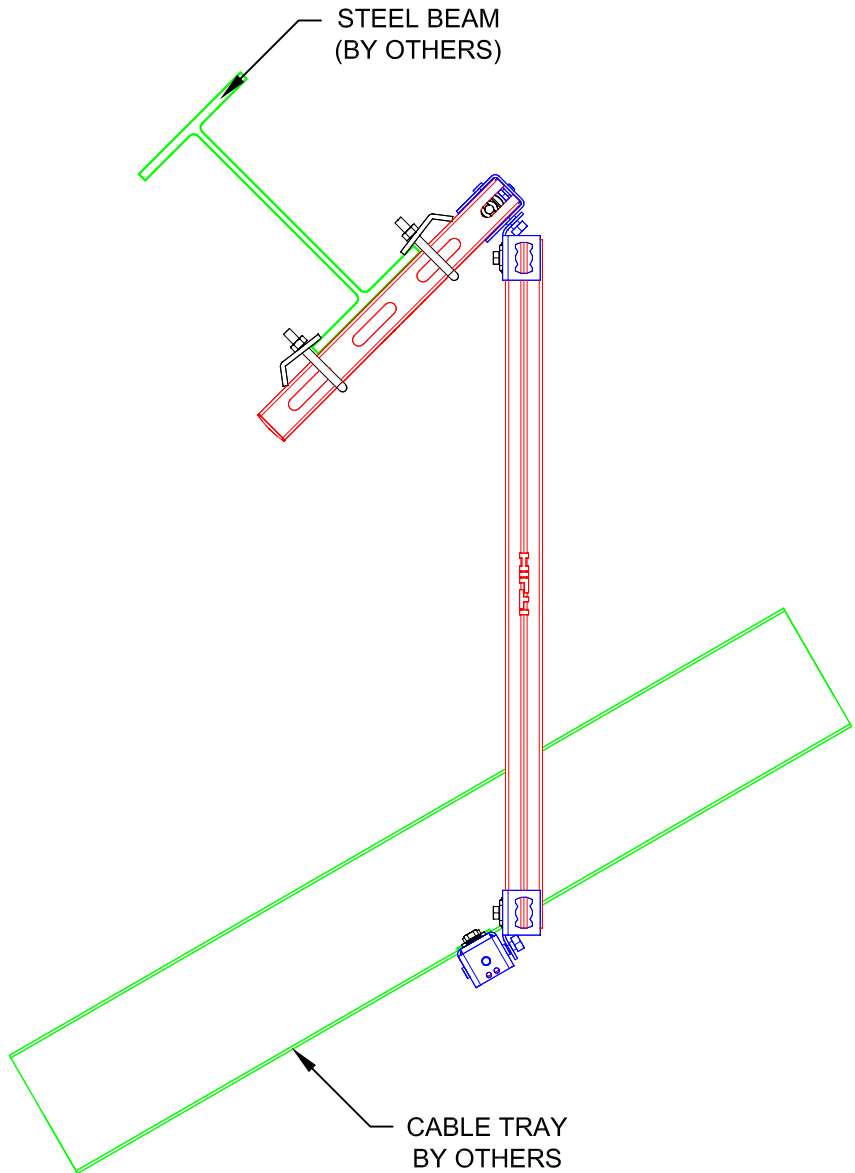
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**01 ISOMETRIC**  
N.T.S.



**02 ELEVATION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	ANGLE MQ3D-W90	20	AS REQ'D	369695
6	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
7	AS REQ'D	EA	ANGLE MQ3D-W45	16	AS REQ'D	369696
8	AS REQ'D	EA	STRUT BEAM CLAMP SBC (25/BOX)	25	AS REQ'D	258316
9	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886

- NOTE(S):**
- PRELIMINARY NOT FOR CONSTRUCTION
  - \*FIELD BEND ONCE AS REQUIRED
  - \*\*MATERIAL THICKNESS IN STEEL BASE  $\geq 5/16"$ . MINIMUM EDGE DISTANCE AND MINIMUM SPACING ARE  $1/4"$  AND  $5/8"$  RESPECTIVELY.
  - DESIGN ASSUMPTIONS:
    - NO LOADS CONSIDERED - CONCEPT ONLY
    - LATERAL LOADS NOT CONSIDERED
    - BUILDING CODE: NOT SPECIFIED
    - CORROSION RESISTANCE REQ'D.: NOT SPECIFIED
  - REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
  - E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - ANGLED - W/X-BT**

DESIGNED BY: KL  
REVIEWED BY: AJV

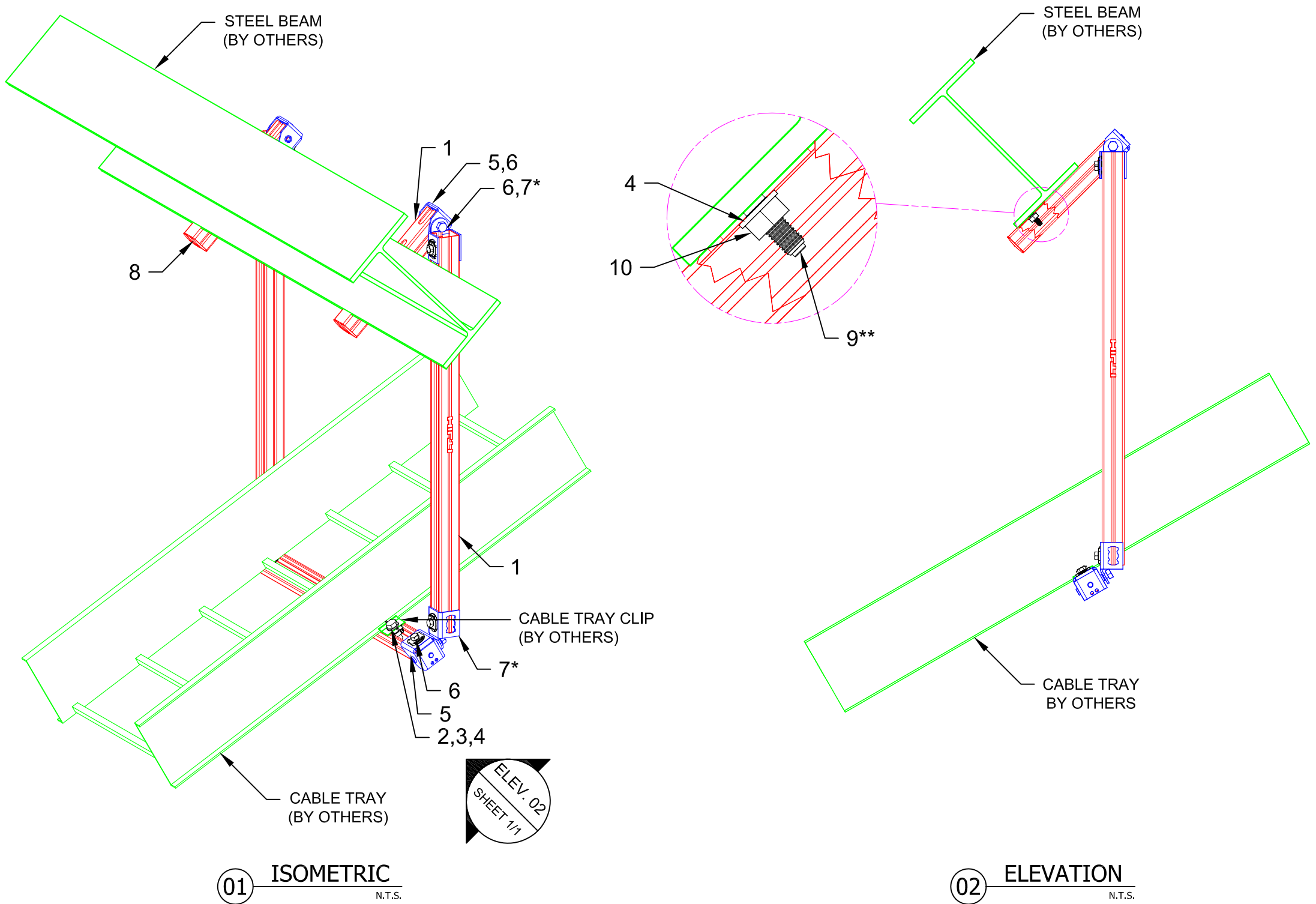
DRAWN BY: GAB  
ISSUE DATE: 02 JAN 15

REVISIONS:

NO.	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR61-S**

DRAWING NUMBER: 01  
SHEET: 1/1



**01 ISOMETRIC**  
N.T.S.

**02 ELEVATION**  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F3/8"	50	AS REQ'D	377882
3	AS REQ'D	EA	HEX HEAD BOLT 3/8" x 1-1/4"	100	AS REQ'D	411764
4	AS REQ'D	EA	WASHER 3/8"	200	AS REQ'D	411757
5	AS REQ'D	EA	ANGLE MQ3D-W90	20	AS REQ'D	369695
6	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
7	AS REQ'D	EA	ANGLE MQ3D-W45	16	AS REQ'D	369696
8	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
9	AS REQ'D	EA	X-BTW 10-24-6 SN12-R	100	AS REQ'D	377076
10	AS REQ'D	EA	HEX NUT STANDARD 3/8" SS316	100	AS REQ'D	411775

NOTE(S):  
 1. PRELIMINARY NOT FOR CONSTRUCTION  
 2. \*FIELD BEND ONCE AS REQUIRED  
 3. \*\*MATERIAL THICKNESS IN STEEL BASE ≥ 5/16". MINIMUM EDGE DISTANCE AND MINIMUM SPACING ARE 1/4" AND 5/8" RESPECTIVELY.  
 4. DESIGN ASSUMPTIONS:  
 a. NO LOADS CONSIDERED - CONCEPT ONLY  
 b. LATERAL LOADS NOT CONSIDERED  
 c. BUILDING CODE: NOT SPECIFIED  
 d. CORROSION RESISTANCE REQD.: NOT SPECIFIED  
 2. REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.  
 3. E.O.R. MUST BE NOTIFIED OF ANY DEVIATIONS FROM EXISTING/ NEW SUBSTRATE CONDITIONS SHOWN HEREIN TO VALIDATE ACCEPTANCE OF THIS HILTI DESIGN PRIOR TO INSTALLATION.

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All loading and design criteria supplied by customer is assumed accurate. Only the stated Design Assumptions were considered, and must be verified by the responsible Engineer of Record (EOR). The basis of Hilti component and connection design is the published data in the current Hilti Technical Guide, including material and cross-section properties, allowable load values, factors of safety, methods of calculation, and limiting factors. The EOR must verify suitability for any specific application, and the capacity of the supportive structure to receive the shown configuration and associated reaction loads. Modification to components and/or design may alter performance and must be evaluated by the EOR.

TYPICAL DETAIL TYPE:  
**CABLE TRAY SUPPORT**

TYPICAL DETAIL DESCRIPTION:  
**TRAPEZE - 2 TIER ANGLED BEAM**

DESIGNED BY: KL  
REVIEWED BY: AJV

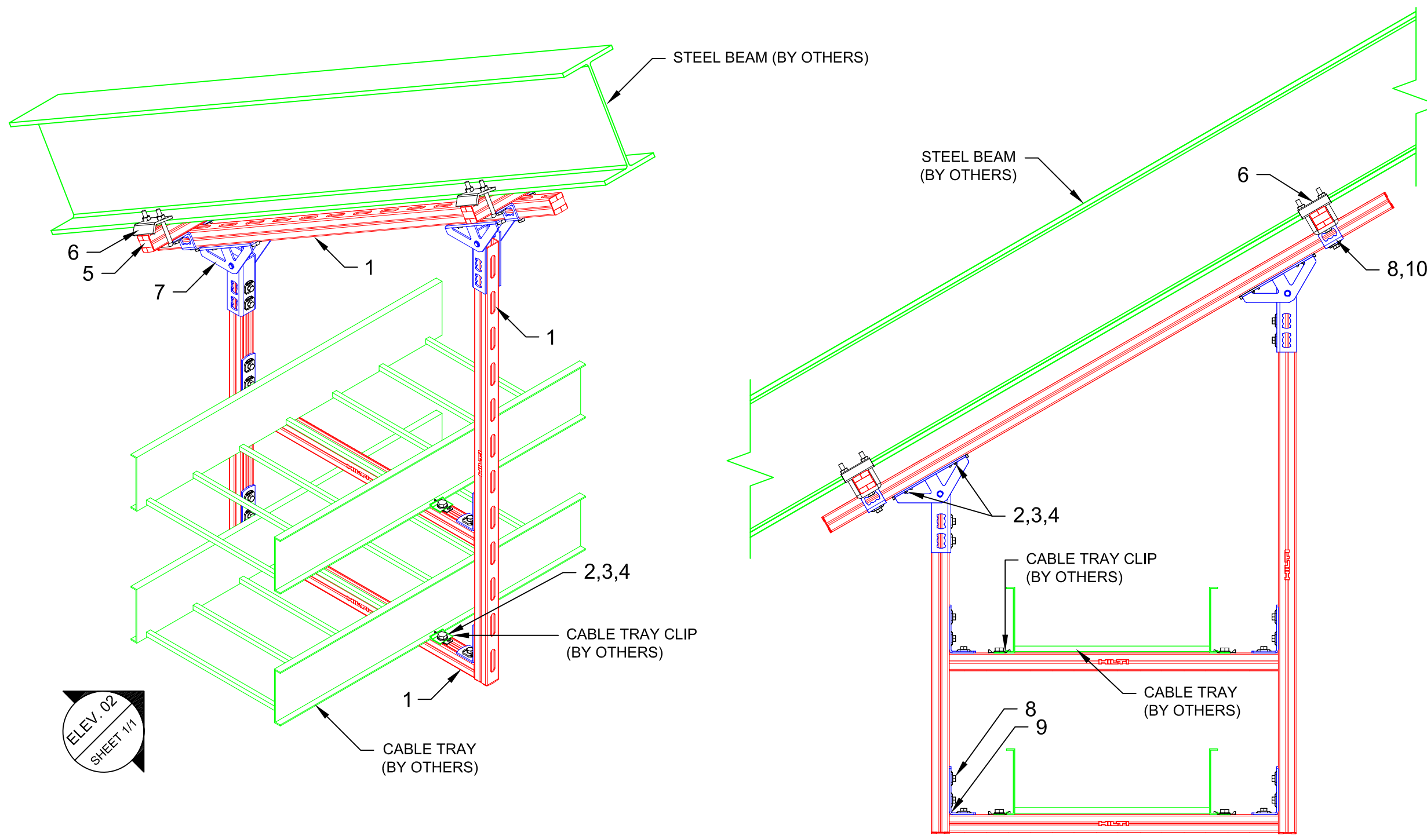
DRAWN BY: GAB  
ISSUE DATE: 02 JAN 15

REVISIONS:

NO:	DESCRIPTION:	DATE:
A	ORIGINAL ISSUE	02 JAN 15

TYPICAL DETAIL NOMENCLATURE:  
**CT-TR62-S**

DRAWING NUMBER: 01  
SHEET: 1/1



01 ISOMETRIC  
N.T.S.

02 ELEVATION  
N.T.S.

No.	Unit Qty	Unit	Description	Box Qty	# Boxes Needed	Item No.
1	AS REQ'D	EA	STRUT HS-158-12/PG 10'	1	AS REQ'D	407555
2	AS REQ'D	EA	WING NUT MQM-F1/2"	50	AS REQ'D	377883
3	AS REQ'D	EA	HEX HEAD BOLT 1/2" x 1-1/4"	50	AS REQ'D	411767
4	AS REQ'D	EA	WASHER 1/2"	100	AS REQ'D	411758
5	AS REQ'D	EA	CHANNEL END CAP MEK RED	50	AS REQ'D	244886
6	AS REQ'D	EA	STRUT BEAM CLAMP SBC (25/BOX)	25	AS REQ'D	258316
7	AS REQ'D	EA	RAIL SUPPORT MQP-G	10	AS REQ'D	369654
8	AS REQ'D	EA	CHANNEL CONNECTOR MQN	50	AS REQ'D	369623
9	AS REQ'D	EA	3-HOLE ANGLE MQW-3	20	AS REQ'D	369656
10	AS REQ'D	EA	CLAMP MQB-41	10	AS REQ'D	369668

NOTE(S):

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- DESIGN ASSUMPTIONS:
  - NO LOADS CONSIDERED - CONCEPT ONLY
  - LATERAL LOADS NOT CONSIDERED
  - BUILDING CODE: NOT SPECIFIED
  - CORROSION RESISTANCE REQ'D.: NOT SPECIFIED
- REFER TO COMPONENT MANUFACTURER'S IFUs FOR REQUIRED INSTALLATION INFO.
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ELEV. 02  
SHEET 1/1