REFLECTIVE CRACKING PHASE VI

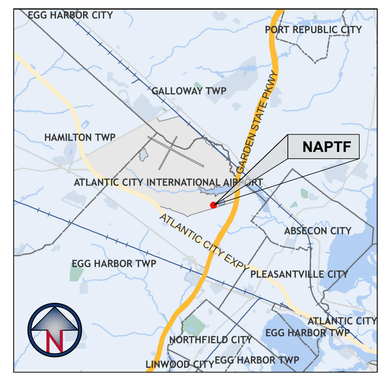
AS-BUILT DRAWINGS

NATIONAL AIRPORT PAVEMENT TESTING FACILITY
WILLIAM J. HUGHES TECHNICAL CENTER
ATLANTIC CITY AIRPORT, NEW JERSEY

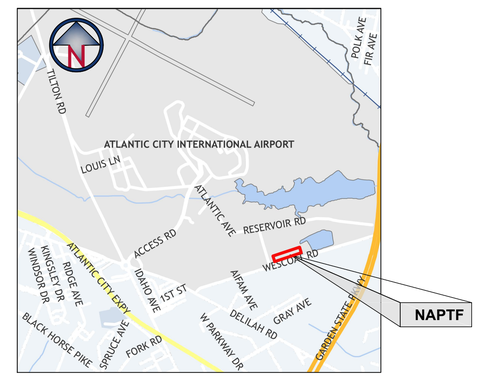
06/10/2019

NEW JERSEY STATE MAP N.T.S.

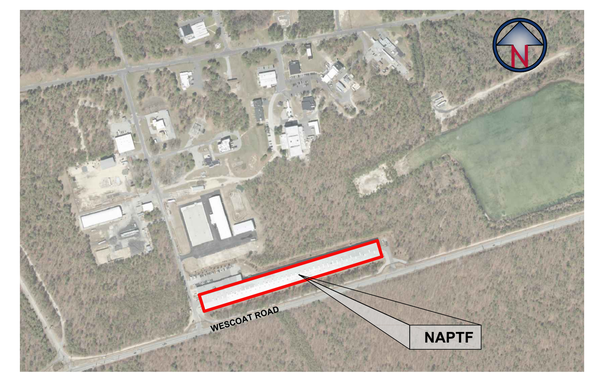
VICINITY MAP N.T.S.



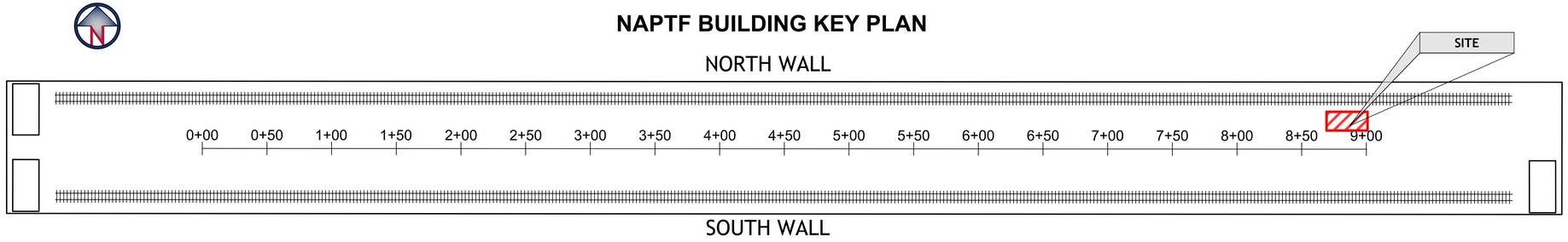
PROJECT LOCATION MAP N.T.S.



AERIAL VIEW OF THE NAPTF BUILDING N.T.S.



NAPTF BUILDING KEY PLAN



INDEX OF DRAWINGS

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2 OF 8	SITE ACCESS, HAULING AND STAGING AREA PLAN	06/10/2019
3 OF 8	NAPFT BUILDING ACCESS AND CONTROL NETWORK PLAN	06/10/2019
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6 OF 8	CONSTRUCTION PLAN	06/10/2019
7 OF 8	INSTRUMENTATION PLAN	06/10/2019
8 OF 8	INSTRUMENTATION PLAN SIDE VIEWS	06/10/2019

PREPARED BY:

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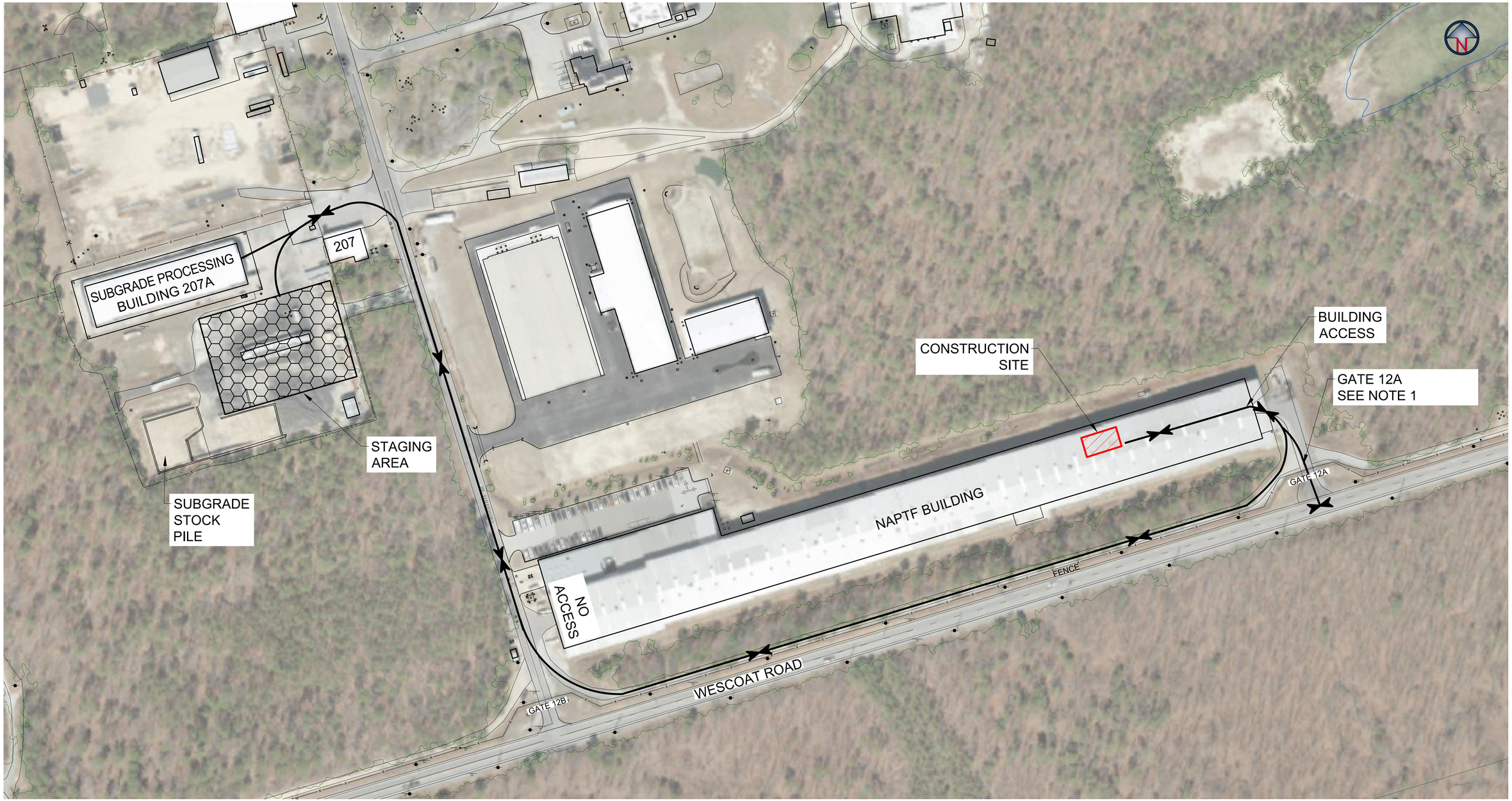

80' 0 80' 160' 240'

GRAPHIC SCALE

1" = 80'

NOTES:

1. CONTRACTORS ACCESS THROUGH THE GATE AVAILABLE BY ADVANCED REQUEST.
2. LOCATION OF THE STAGING AREA SHOWN IS APPROXIMATE. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.
3. SEE SHEET NUMBER 3 FOR INSIDE THE BUILDING STAGING AREA LOCATION AND RESTRICTIONS.

LEGEND:

- X — FENCE
- HAUL ROUTE
- CONSTRUCTION SITE
- STAGING AREA

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FOR

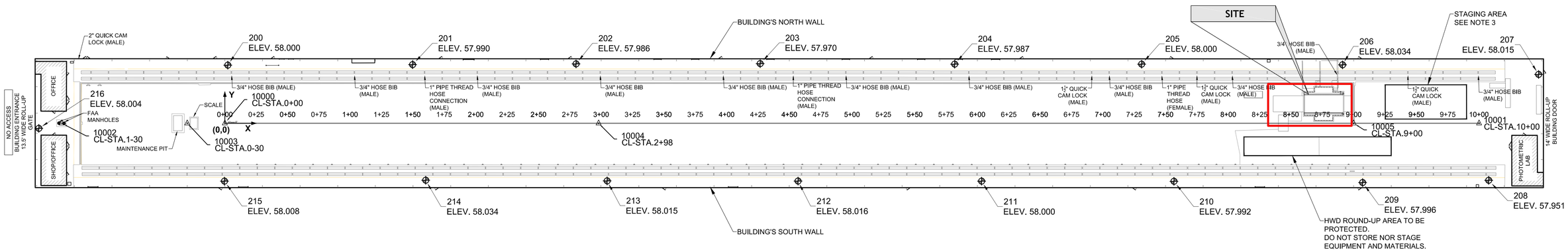
NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT
NEW JERSEY 08234

	NAME	DATE
DRAWN	J.S. / M.M.	06/10/2019
CHECKED	H.YIN	
FAA APPROVAL DATE:		
PROJECT NO:		

REFLECTIVE CRACKING PHASE VI
AS-BUILT DRAWINGS
SITE ACCESS, HAULING AND STAGING AREA PLAN

SIZE: ANSI D | SCALE: AS NOTED | SHEET 2 OF 8

CAD FILE: REFL-CRACK-PHA6-GNRL-ABLT.DWG



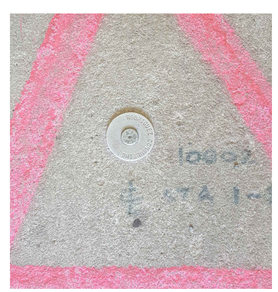
NAPTF BUILDING PLAN VIEW

SCALE: 1"=40'

CENTER LINE MARKER POINTS

NUMBER	X COORDINATE [FEET]	Y COORDINATE [FEET]	LOCATION DESCRIPTION	MARKER DESCRIPTION
10000	0.000	0.0000	ON CENTER LINE STA. 0+00	MAG AND WASHER
10001	1,000.000	0.000	ON CENTER LINE STA. 10+00	MAG AND WASHER
10002	-130.000	0.000	ON CENTER LINE STA. -1-30	MAG AND WASHER
10003	-30.000	0.000	ON CENTER LINE STA. 0-30	MAG AND WASHER
10004	298.000	0.000	ON CENTER LINE STA. 2+98	MAG AND WASHER
10005	900.000	0.000	ON CENTER LINE STA. 9+00	MAG AND WASHER

CENTER LINE MARKER DETAIL



CONTROL POINTS

NUMBER	X COORDINATE [FEET]	Y COORDINATE [FEET]	Z ELEVATION [FEET]	DESCRIPTION
200	2.352	46.209	58.000	MAG AND WASHER
201	149.673	46.634	57.990	MAG AND WASHER
202	280.029	47.236	57.986	MAG AND WASHER
203	426.822	47.441	57.970	MAG AND WASHER
204	581.880	47.034	57.987	MAG AND WASHER
205	730.901	47.054	58.000	MAG AND WASHER
206	891.088	46.481	58.034	MAG AND WASHER
207	1047.423	38.858	58.015	MAG AND WASHER
208	1007.640	-45.426	57.951	MAG AND WASHER
209	907.144	-47.198	57.996	MAG AND WASHER
210	756.728	-46.194	57.992	MAG AND WASHER
211	603.298	-46.091	58.000	MAG AND WASHER
212	456.998	-45.992	58.016	MAG AND WASHER
213	304.791	-45.889	58.015	MAG AND WASHER
214	160.140	-45.350	58.034	MAG AND WASHER
215	-0.315	-46.085	58.008	MAG AND WASHER
216	-148.287	-4.082	58.004	MAG AND WASHER

CONTROL POINT MARKER DETAIL

EACH CONTROL POINT LOCATION IS MARKED WITH A MAGNETIC NAIL WITH WASHER. THE CONTROL POINT NUMBER IS ENGRAVED ON EACH WASHER.

NOTES:

1. THE PROJECT AREA IS LOCATED INSIDE OF THE NATIONAL AIRPORT PAVEMENT TESTING FACILITY, BUILDING NUMBER 296, WILLIAM J. HUGHES TECHNICAL CENTER, LOCATED AT THE ATLANTIC CITY INTERNATIONAL AIRPORT, EGG HARBOR TOWNSHIP, NEW JERSEY 08405.
2. THE HORIZONTAL CONTROL NETWORK IS REFERENCED TO A LOCAL COORDINATE SYSTEM ALIGNED WITH THE NAPTF TESTING AREA CENTER LINE. THE VERTICAL CONTROL NETWORK IS ALSO REFERENCED TO A LOCAL ASSUMED DATUM.
3. LOCATION OF THE STAGING AREA SHOWN IS APPROXIMATE. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

LEGEND

- CENTER LINE MARKER - MAG NAIL
- CONTROL POINT - MAG NAIL
- MANHOLE

40' 0 40' 80' 120'

GRAPHIC SCALE

1" = 40'

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ATLANTIC CITY AIRPORT
NEW JERSEY 08234

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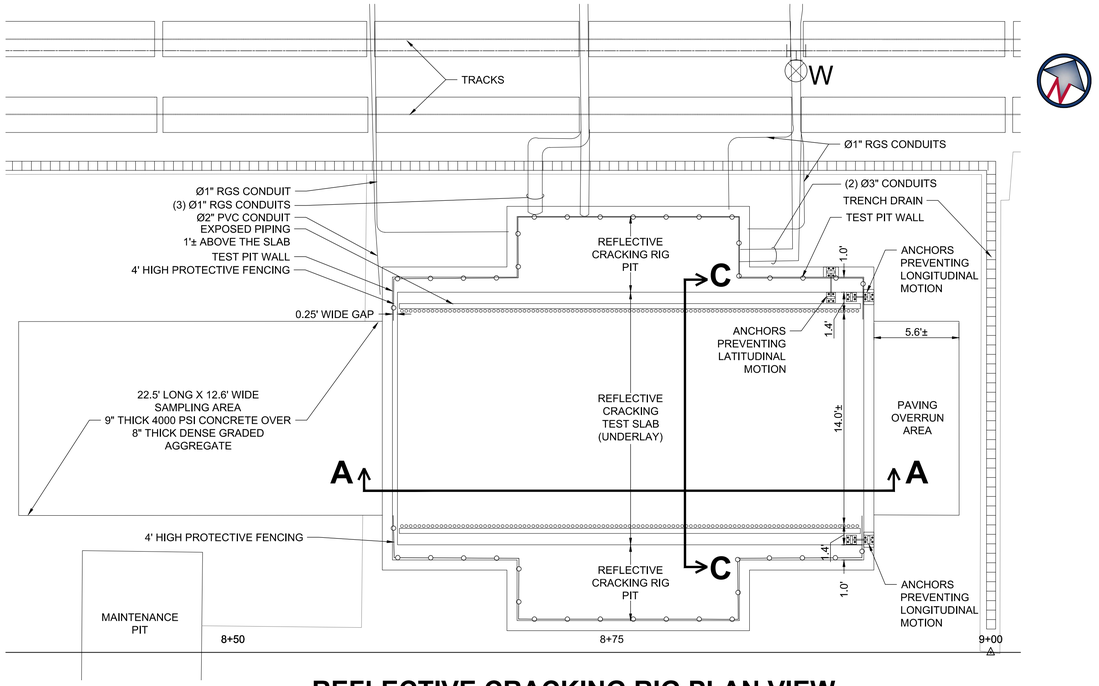
REFLECTIVE CRACKING PHASE VI

AS-BUILT DRAWINGS NAPTF BUILDING ACCESS AND CONTROL NETWORK PLAN

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 3 OF 8

CAD FILE: REFL-CRACK-PHA6-GNRL-ABLT.DWG

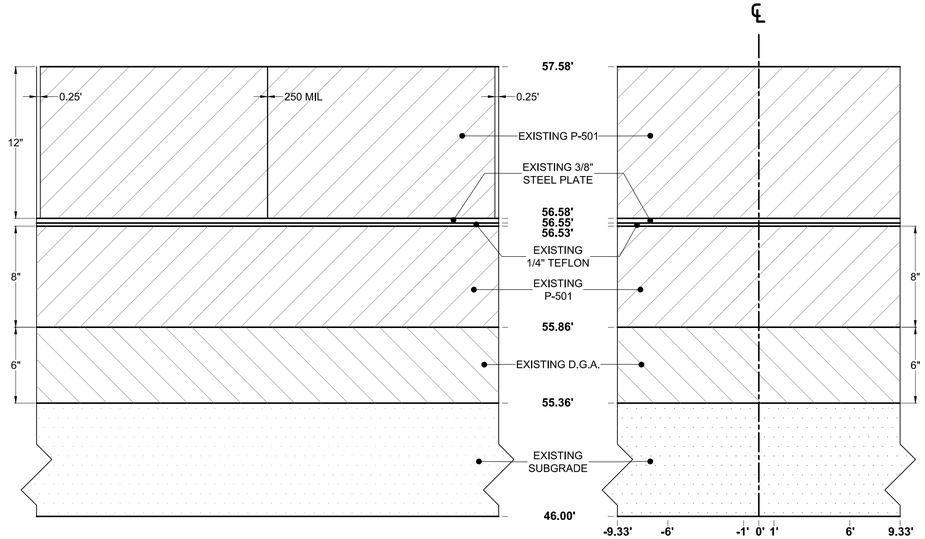


REFLECTIVE CRACKING RIG PLAN VIEW

SCALE: 1"=5'

REFLECTIVE CRACKING TEST AREA LOOKING EAST VIEW

N.T.S.



SECTION A-A

SECTION C-C

EXISTING TEST AREA UNDERLAY DETAIL

HORIZONTAL SCALE: 1"=5'
VERTICAL SCALE: 1"=0.5'

LEGEND:

- P-501 CONCRETE PAVEMENT (PORTLAND CEMENT CONCRETE)
- DENSE GRADED AGGREGATE
- SUBGRADE

5' 0 5' 10' 15'

GRAPHIC SCALE

1" = 5'

REFLECTIVE CRACKING TEST AREA LOOKING WEST VIEW

N.T.S.

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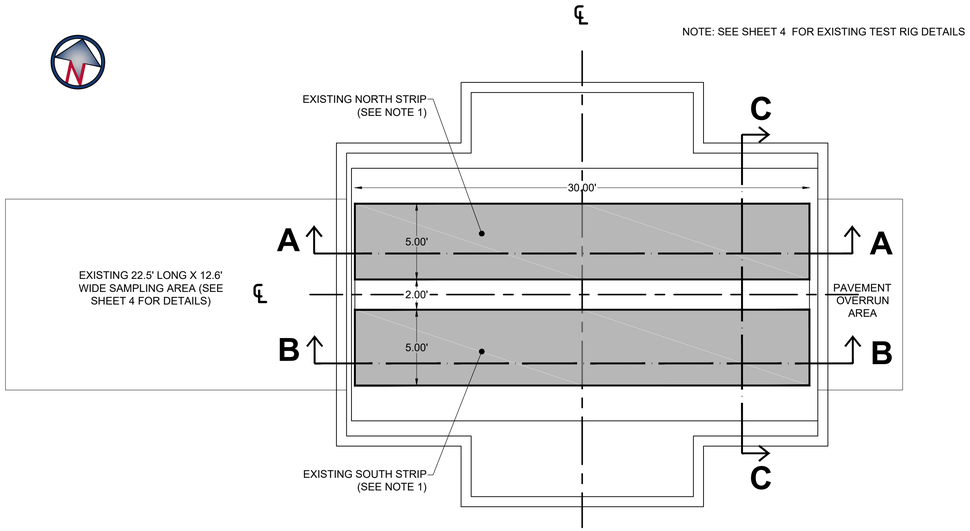
NAPTF REFLECTIVE CRACKING
PHASE VI AS-BUILT DRAWINGS
TESTING AREA EXISTING CONDITIONS PLAN

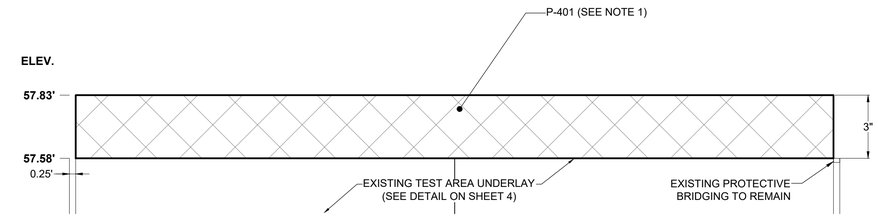
SIZE: ANSI D | SCALE: AS NOTED | SHEET 4 OF 8

CAD FILE: REFL-CRACK-PHA6-GNRL-ABLT.DWG



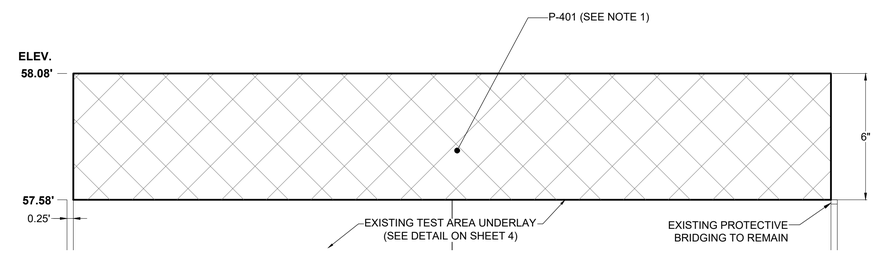
PLAN VIEW

SCALE: 1"=5'



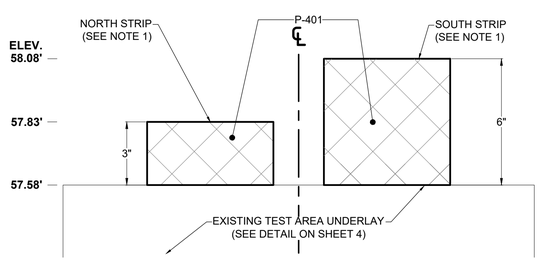
SECTION A-A (NORTH STRIP)

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'



SECTION B-B (SOUTH STRIP)

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'



SECTION C-C

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'

NOTES:

1. P-401 TO BE MILLED DOWN TO THE CONCRETE SURFACE.

LEGEND:

PROPOSED P-401 PLANT MIX BITUMINOUS PAVEMENT

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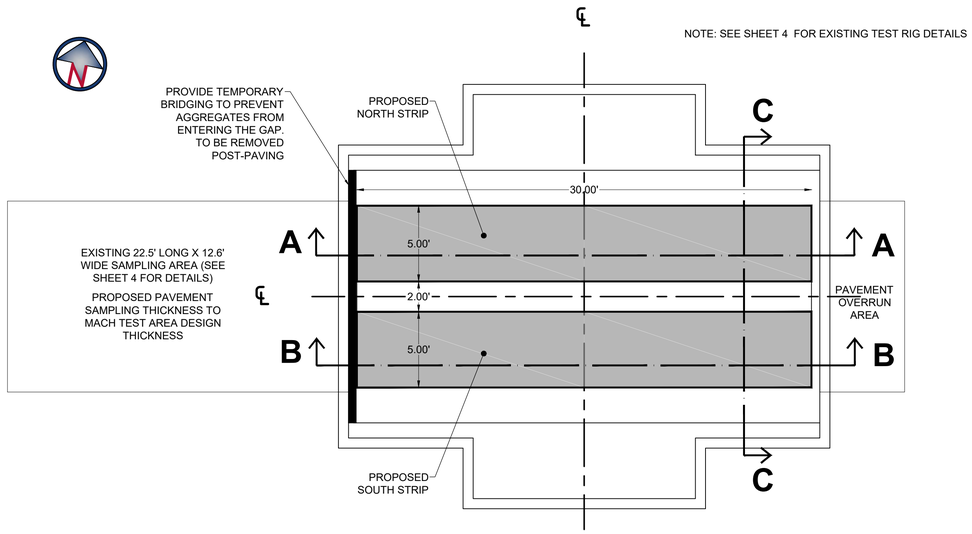
NAPTF REFLECTIVE CRACKING
PHASE VI AS-BUILT DRAWINGS
DEMOLITION PLAN

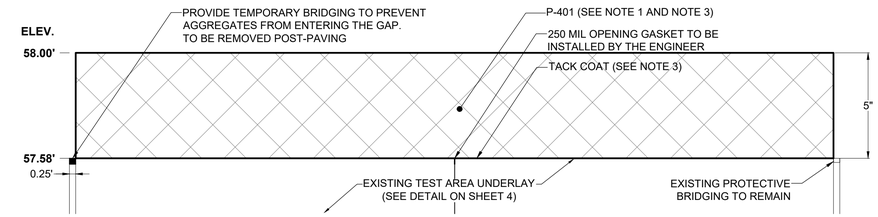
SIZE: ANSI D | SCALE: AS NOTED | SHEET 5 OF 8

CAD FILE: REFL-CRACK-PHA6-DEMO-ABLT.DWG



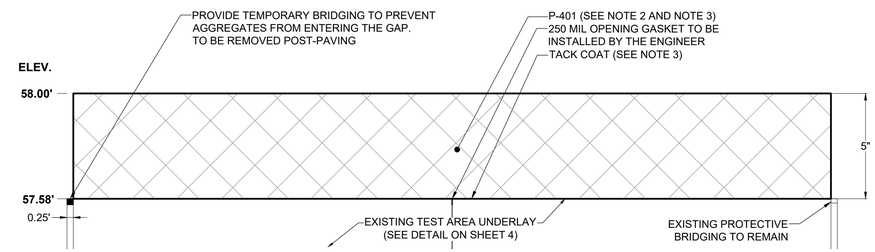
PLAN VIEW

SCALE: 1"=5'



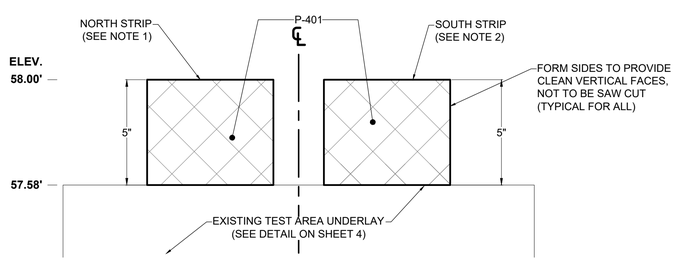
SECTION A-A (NORTH STRIP)

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'



SECTION B-B (SOUTH STRIP)

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'



SECTION C-C

HORIZONTAL SCALE: 1"=3'
VERTICAL SCALE: 1"=0.3'

NOTES:

1. THE NORTH SIDE TEST STRIP WAS PLACED IN TWO (2) $2\frac{1}{2}$" COMPACTED LIFTS.
2. THE SOUTH SIDE TEST STRIP WAS PLACED IN TWO (2) $2\frac{1}{2}$" COMPACTED LIFTS.
3. STRAIGHT ASPHALT BINDER (I.E., PG 64-22) SHALL BE APPLIED BETWEEN LIFTS AND ON TOP OF THE CONCRETE AS A TACK COAT, AT AN APPLICATION RATE OF 0.04 – 0.06 GAL/YD2.

LEGEND:

PROPOSED P-401 PLANT MIX BITUMINOUS PAVEMENT

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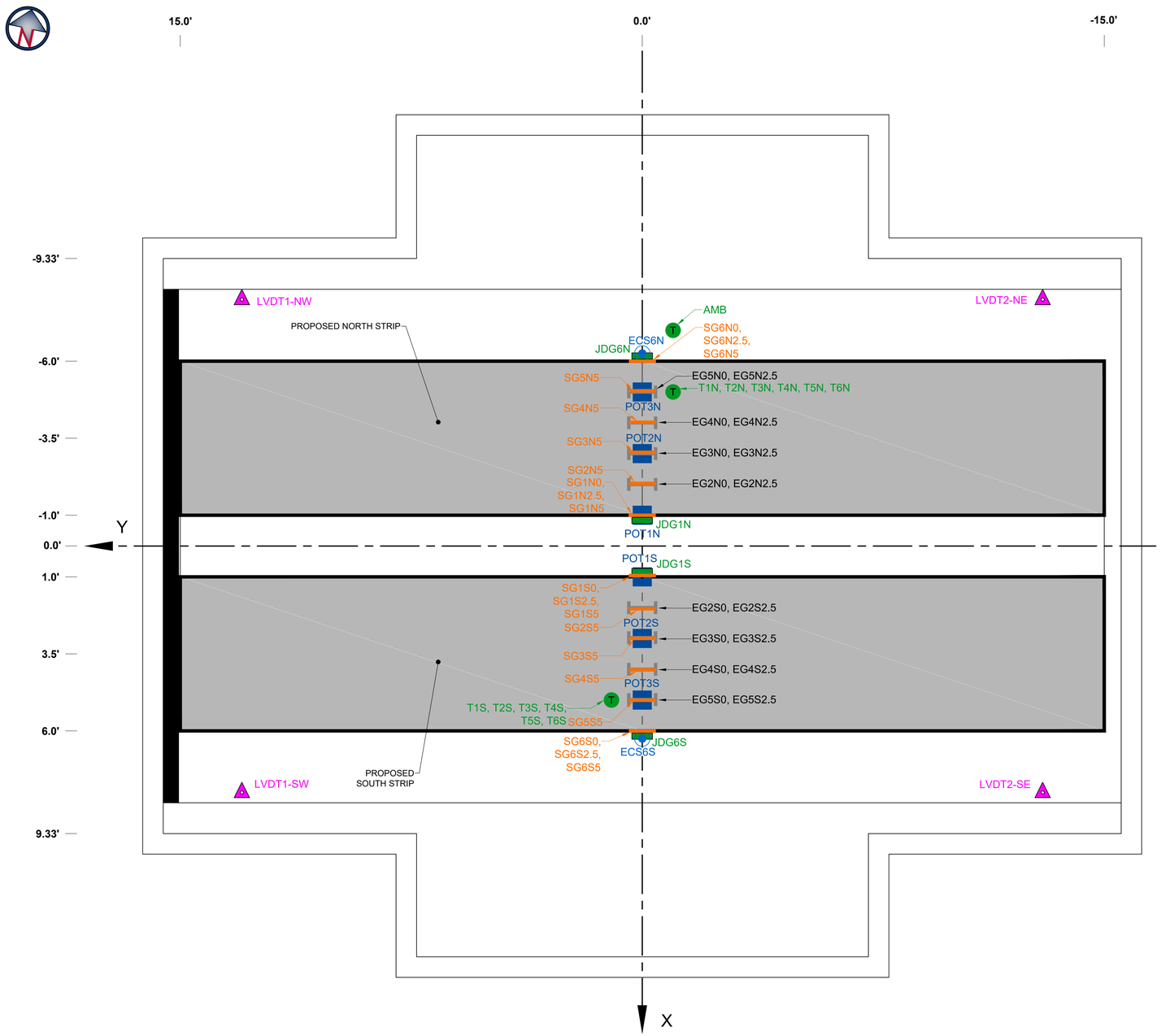
NAPTF REFLECTIVE CRACKING

PHASE VI AS-BUILT DRAWINGS CONSTRUCTION PLAN

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 6 OF 8

CAD FILE: REFL-CRACK-PHA6-CONS-ABLT.DWG



PLAN VIEW

SCALE: 1"=2'

PHASE VI INSTRUMENTATION

SENSOR	SENSOR LOCATION								INSTALLATION PHASE		
	X [IN]	Y [IN]	Z [IN]	NORTH	SOUTH	SURFACE	EMBEDDED	LOCATION DESCRIPTION	PRE-CON.	DURING	POST-CON.
SG1-S-0	12.00	0	0.25		x	x		Bottom vertical inner edge			x
SG1-S-2.5	12.00	0	2.50		x	x		Midsection vertical inner edge			x
SG1-S-5	12.00	0	5.00		x	x		Top inner vertical edge.			x
SG2-S-5	24.00	0	5.00		x	x		On surface, 1 foot from inner edge			x
SG3-S-5	36.00	0	5.00		x	x		On surface, 2 feet from inner edge.			x
SG4-S-5	48.00	0	5.00		x	x		On surface, 2 feet from outer edge.			x
SG5-S-5	60.00	0	5.00		x	x		On surface, 1 foot from outer edge.			x
SG6-S-5	72.00	0	5.00		x	x		Top outer vertical edge.			x
SG6-S-2.5	72.00	0	2.50		x	x		Midsection outer vertical edge			x
SG6-S-0.0	72.00	0	0.25		x	x		Bottom outer vertical edge			x
SG1-N-0	-12.00	0	0.25	x		x		Bottom vertical inner edge			x
SG1-N-2.5	-12.00	0	2.50	x		x		Midsection vertical inner edge			x
SG1-N-5	-12.00	0	5.00	x		x		Top inner vertical edge.			x
SG2-N-5	-24.00	0	5.00	x		x		On surface, 1 foot from inner edge			x
SG3-N-5	-36.00	0	5.00	x		x		On surface, 2 feet from inner edge.			x
SG4-N-5	-48.00	0	5.00	x		x		On surface, 2 feet from outer edge.			x
SG5-N-5	-60.00	0	5.00	x		x		On surface, 1 foot from outer edge.			x
SG6-N-5	-72.00	0	5.00	x		x		Top outer vertical edge.			x
SG6-N-2.5	-72.00	0	2.50	x		x		Midsection outer vertical edge			x
SG6-N-0	-72.00	0	0.25	x		x		Bottom outer vertical edge			x
EG2-S-0	24.00	0	0		x		x	Bottom	x		
EG2-S-2.5	24.00	0	2.5		x		x	Between 1st & 2nd layer.		x	
EG3-S-0	36.00	0	0		x		x	Bottom	x		
EG3-S-2.5	36.00	0	2.5		x		x	Between 1st & 2nd layer.		x	
EG4-S-0	48.00	0	0		x		x	Bottom	x		
EG4-S-2.5	48.00	0	2.5		x		x	Between 1st & 2nd layer.		x	
EG5-S-0	60.00	0	0		x		x	Bottom	x		
EG5-S-2.5	60.00	0	2.5		x		x	Between 1st & 2nd layer.		x	
EG2-N-0	-24.00	0	0	x			x	Bottom	x		
EG2-N-2.5	-24.00	0	2.5	x			x	Between 1st & 2nd layer.		x	
EG3-N-0	-36.00	0	0	x			x	Bottom	x		
EG3-N-2.5	-36.00	0	2.5	x			x	Between 1st & 2nd layer.		x	
EG4-N-0	-48.00	0	0	x			x	Bottom	x		
EG4-N-2.5	-48.00	0	2.5	x			x	Between 1st & 2nd layer.		x	
EG5-N-0	-60.00	0	0	x			x	Bottom	x		
EG5-N-2.5	-60.00	0	2.5	x			x	Between 1st & 2nd layer.		x	
T6-S	60	12	5.00		x	x	x	Surface, West side			x
T5-S	60	12	4.00		x		x	Midsection, West side			x
T4-S	60	12	3.00		x		x	Midsection, West side			x
T3-S	60	12	2.00		x		x	Midsection, West side			x
T2-S	60	12	1.00		x		x	Midsection, West side			x
T1-S	60	12	0.00		x		x	Bottom, West side	x		
T6-N	-60	-12	5.00	x		x		Surface, East side			x
T5-N	-60	-12	4.00	x			x	Midsection, East side			x
T4-N	-60	-12	3.00	x			x	Midsection, East side			x
T3-N	-60	-12	2.00	x			x	Midsection, East side			x
T2-N	-60	-12	1.00	x			x	Midsection, East side			x
T1-N	-60	-12	0.00	x			x	Bottom, East side	x		
AMB	-84	-12	12.00	x		x		Ambient temperature	x		
JDG1-S	10	0	0		x	x		Inner edge			x
JDG6-S	74	0	0		x	x		Outer edge			x
JDG1-N	-10	0	0	x		x		Inner edge			x
JDG6-N	-74	0	0	x		x		Outer edge			x
POT1-S	12	0	-1.88		x		x	Below joint surface	x		
POT2-S	36	0	-1.88		x		x	Below joint surface	x		
POT3-S	60	0	-1.88		x		x	Below joint surface	x		
POT1-N	-12	0	-1.88	x			x	Below joint surface	x		
POT2-N	-36	0	-1.88	x			x	Below joint surface	x		
POT3-N	-60	0	-1.88	x			x	Below joint surface	x		
LVDT1-SW	96	156	-5.00		x	x		On South/West corner	x		
LVDT2-SE	96	-156	-5.00		x	x		On South/East corner	x		
LVDT1-NW	-96	156	-5.00	x		x		On North/West corner	x		
LVDT2-NE	-96	-156	-5.00	x		x		On North/East corner	x		
ECS6-S	75	0	0		x	x		Outer edge			x
ECS6-N	-75	0	0	x		x		Outer edge			x

NOTES:

1. Z - VERTICAL DISTANCE IN INCHES MEASURED FROM BOTTOM OF ASPHALT LAYER IN UPWARD DIRECTION.

INSTRUMENT KEY					
EG	EMBEDDED DYNATEST STRAIN GAGE		LVDT	LINEAR VARIABLE DISPLACEMENT TRANSDUCER
JDG	JOINT DISPLACEMENT GAGE		SG	SURFACE STRAIN GAGE
POT	POTENTIOMETER		T	THERMOCOUPLE
ECS	EDDY CURRENT SENSOR			

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NEW JERSEY 08234

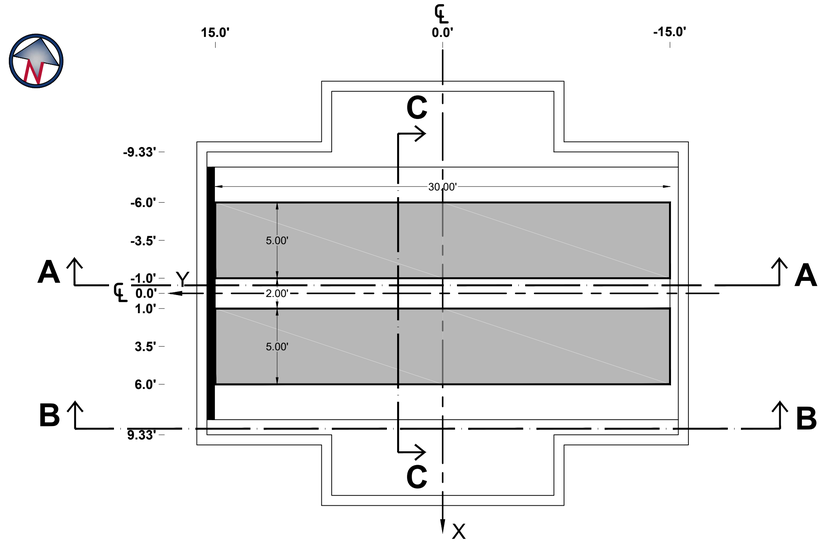
	NAME	DATE
DRAWN	J.S. / M.M.	06/10/2019
CHECKED	H.YIN	
FAA APPROVAL DATE:		
PROJECT NO:		

NAPTF REFLECTIVE CRACKING

PHASE VI AS-BUILT DRAWINGS INSTRUMENTATION PLAN

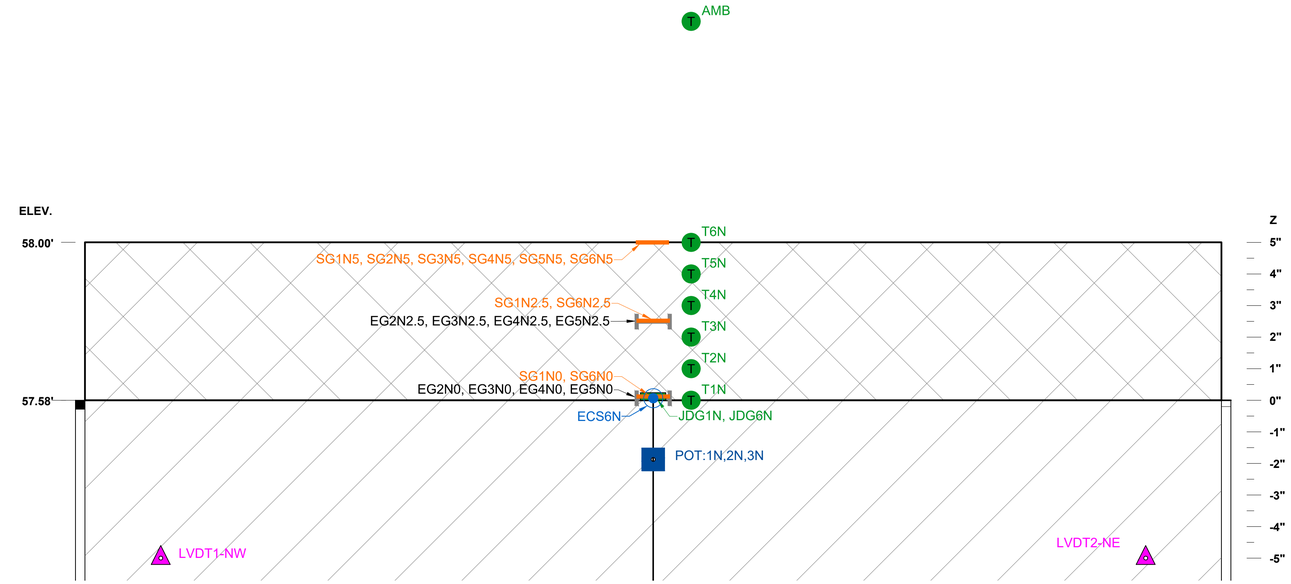
SIZE: ANSI D | SCALE: AS NOTED | SHEET 7 OF 8

CAD FILE: REFL-CRACK-PHA6-INSTR-ABLT.DWG



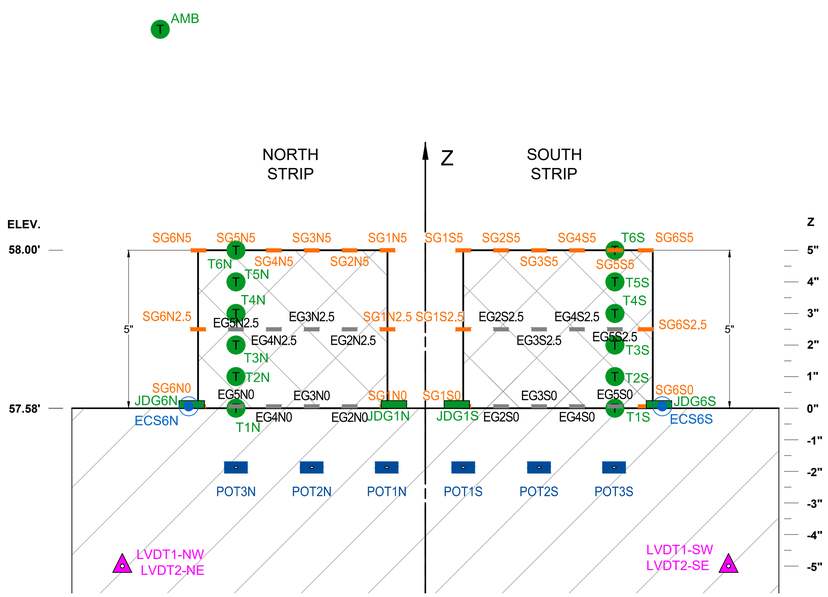
PLAN VIEW

SCALE: 1"=5'



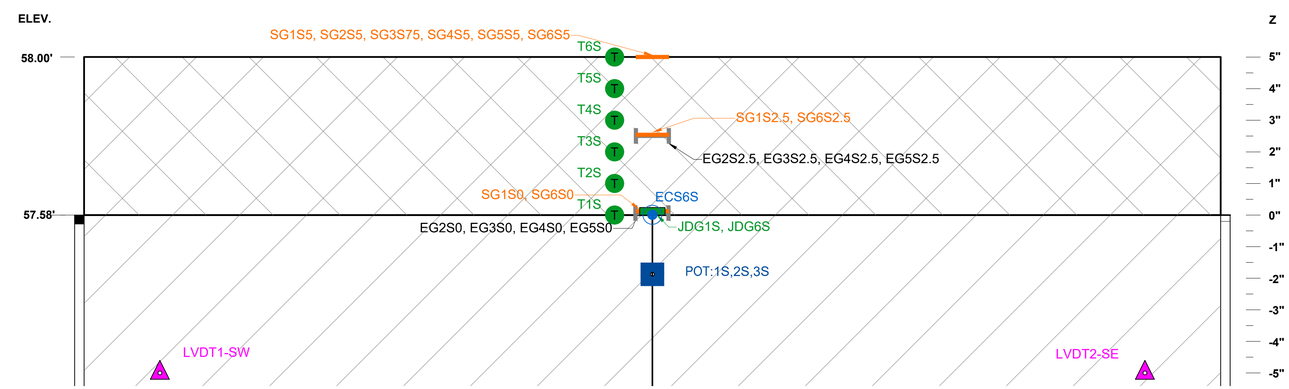
SIDE VIEW A-A (NORTH STRIP)

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'



SIDE VIEW C-C

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'



SIDE VIEW B-B (SOUTH STRIP)

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'

LEGEND:

P-401 PLANT MIX BITUMINOUS PAVEMENT

INSTRUMENT KEY					
	EG	EMBEDDED DYNATEST STRAIN GAGE		LVDT	LINEAR VARIABLE DISPLACEMENT TRANSDUCER
	JDG	JOINT DISPLACEMENT GAGE		SG	SURFACE STRAIN GAGE
	POT	POTENTIOMETER		T	THERMOCOUPLE
	ECS	EDDY CURRENT SENSOR			

NO.	REVISIONS	DATE	BY	CHK	APR

GENERAL DYNAMICS
Information Technology
200 DECADON DRIVE
EGG HARBOR TOWNSHIP
NEW JERSEY 08234
PHONE: (609) 677-8543

FOR

NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT
NEW JERSEY 08234

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NAPTF REFLECTIVE CRACKING

PHASE VI AS-BUILT DRAWINGS
INSTRUMENTATION PLAN SIDE VIEWS

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 8 OF 8

CAD FILE: REFL-CRACK-PHA6-INSTR-ABLT.DWG