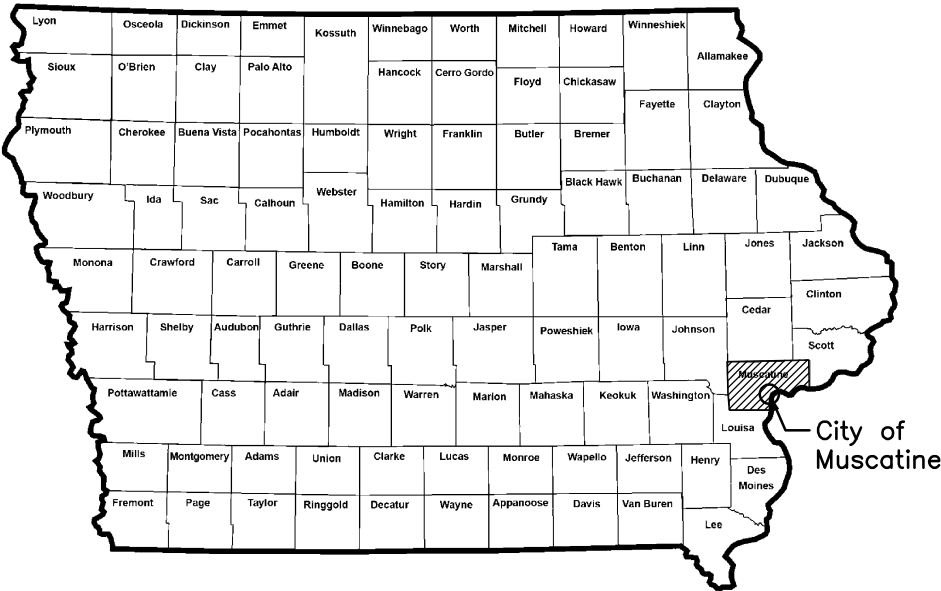


PLAN OF IMPROVEMENTS FOR:

**RECONSTRUCT RUNWAY 6/24
AND ASSOCIATED TAXIWAYS**

CITY OF MUSCATINE, IOWA

FAA AIP PROJECT NUMBER:
3-19-0063-020



CITY OF MUSCATINE

CITY HALL
215 SYCAMORE STREET
Muscatine, Iowa 52761-3899

BUILDING & ZONING DEPARTMENT

Phone (563) 262-4141
FAX (563) 262-4142

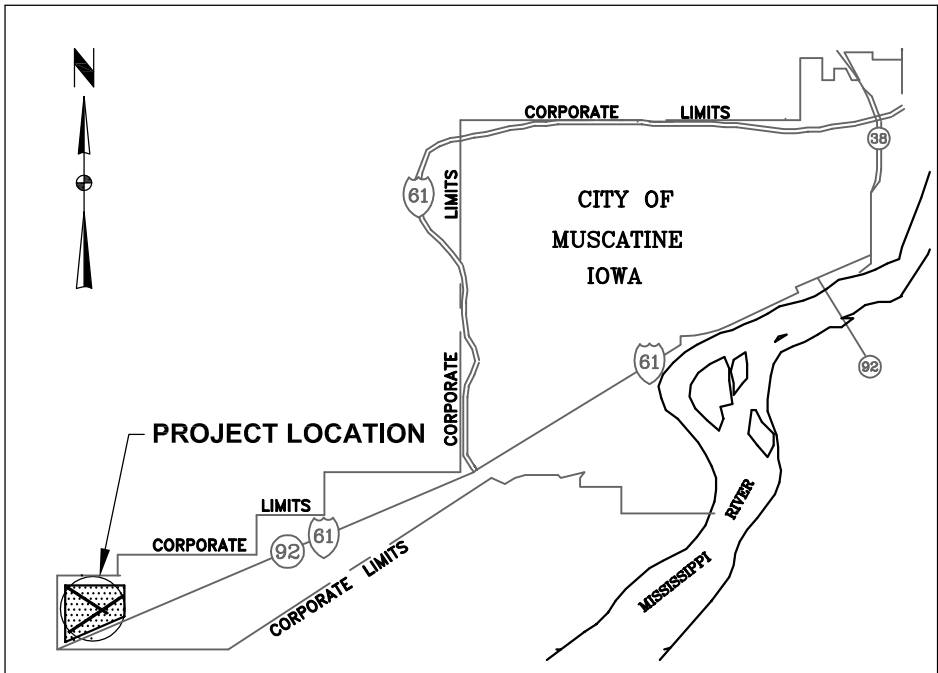
MUSCATINE MUNICIPAL AIRPORT

Phone (563) 263-8672
FAX (563) 263-8693

PROJECT ENGINEER

ANDERSON BOGERT
4001 River Ridge Dr. NE
Cedar Rapids, Iowa 52402

Phone (319) 377-4629
FAX (319) 377-8498



LOCATION MAP
NOT TO SCALE

PLANS PREPARED FOR:



CITY COUNCIL:

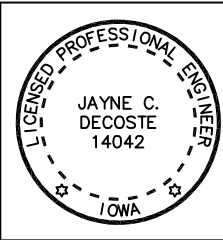
MAYOR: DeWayne Hopkins
1ST WARD: Philip Fitzgerald
2nd WARD: Michael Rehwaldt
3rd WARD: Tom Spread
4th WARD: Bob Bynum
5th WARD: Jeanette Phillips
AT LARGE: Scott Natvig
AT LARGE: Osama Shihadeh

AIRPORT ADVISORY COMMISSION:

Steve Bradford
Bill Leddy
Stacy Lewis
Scott Natvig
Jerry Page, Chairman
Janet Lewis, Airport Manager
Mike Woerly, Line Manager
Adam Thompson,
Community Development
Coordinator

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A.01	COVER SHEET
A.02	OVERALL AIRPORT MAP
A.03	PROJECT LAYOUT PLAN
A.04-A.11	SAFETY AND CONSTRUCTION PHASING PLAN
B.01-B.03	TYPICAL PAVEMENT CROSS SECTIONS
C.01-C.03	QUANTITY TABULATIONS
D.01-D.11	RUNWAY PLAN AND PROFILE SHEETS
E.01-E.07	TAXIWAY PLAN AND PROFILE SHEETS
G.01-G.02	SURVEY CONTROL
L.01-L.09	PAVEMENT JOINTING PLAN
M.01-M.03	CULVERT PLAN AND PROFILE AND DRAINAGE DETAILS
N.01-N.04	PAVEMENT MARKING PLAN
P.01-P.06	EDGE LIGHTING AND GUIDANCE SIGNS PLAN
Q.01-Q.05	GRADING, EROSION CONTROL AND POLLUTION PREVENTION PLAN
R.01	REMOVAL PLAN
X.01-X.14	RUNWAY CROSS SECTION SHEETS

Runway Data				
Runway 6/24	D-II	Lower than 3/4 mile	Associated Taxiways	TDG 2
Runway 12/30	B-II	Not lower than 1 mile	Taxiway B North	TDG 2



I hereby certify that this Engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Engineer under the laws of the State of Iowa.

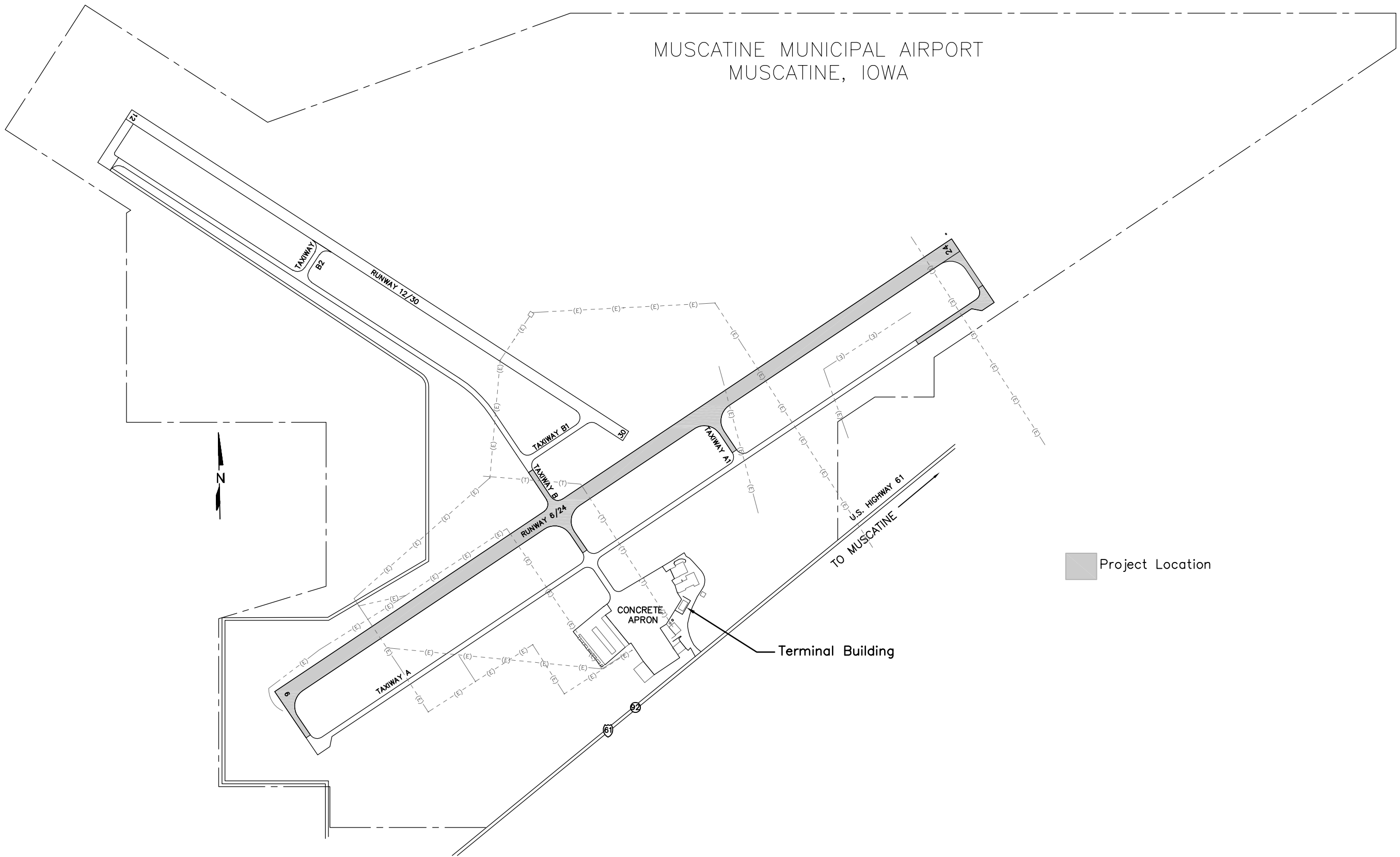
Jayne C. DeCoste Iowa Reg No. 14042
My License renewal date is December 31, 2016
Pages covered by this seal: ALL



PLANS PREPARED BY:

ANDERSON BOGERT

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
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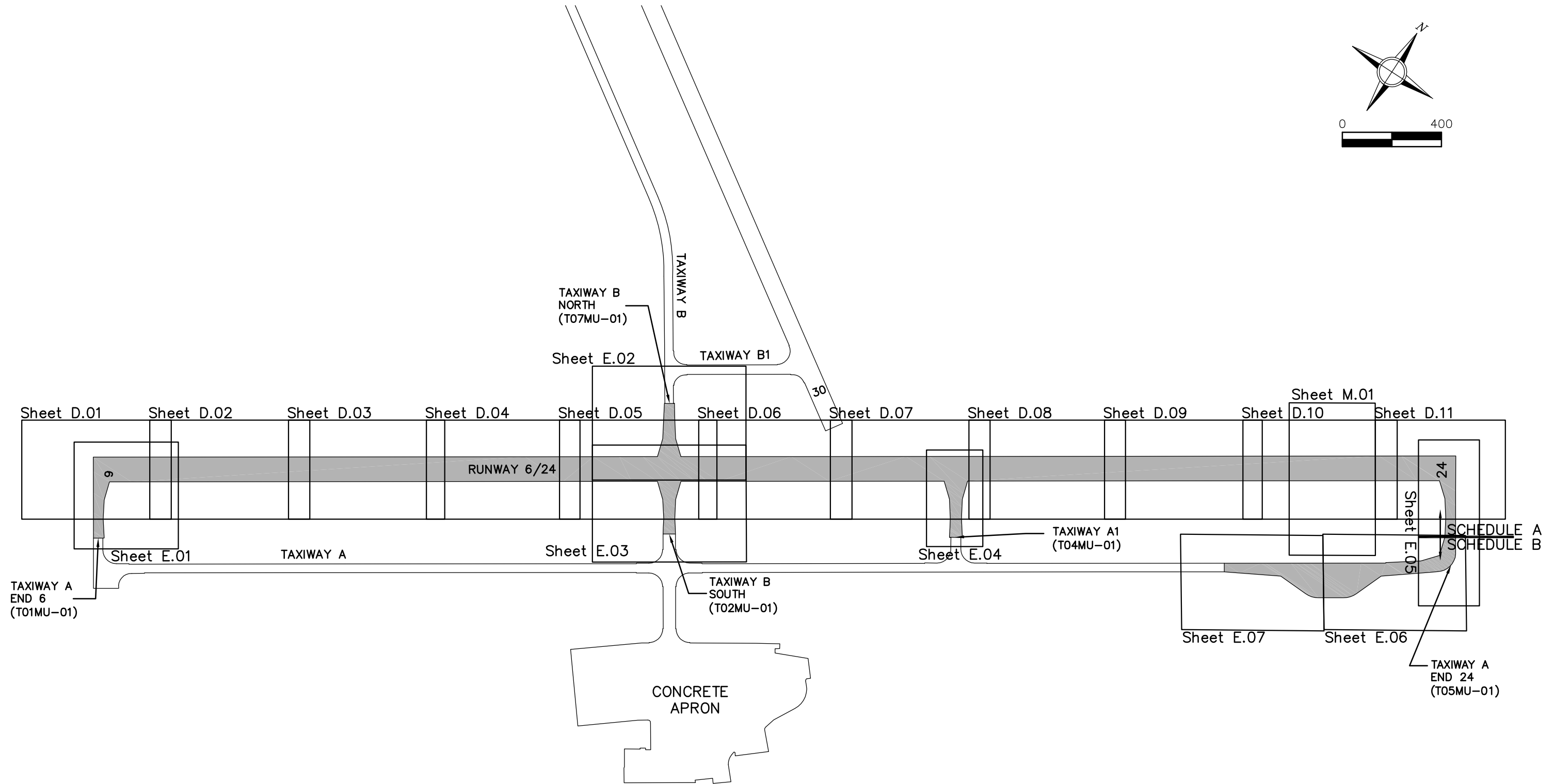
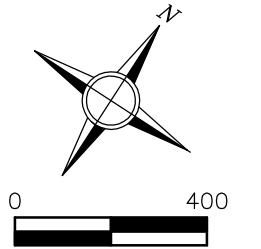
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Overall Airport
Map

SHEET NO.
A.02
OF
A.11

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

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Muscatine, Iowa 52761
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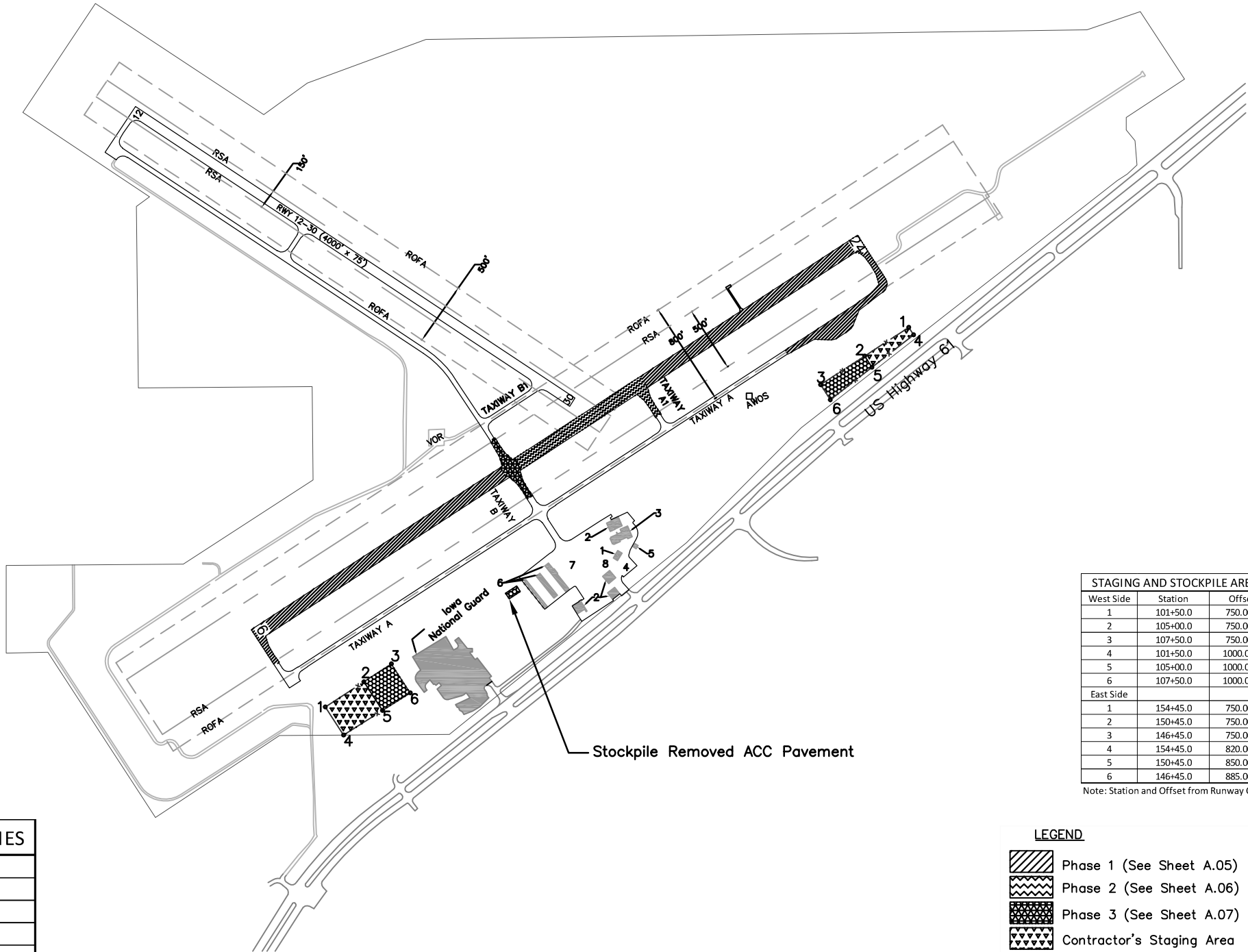
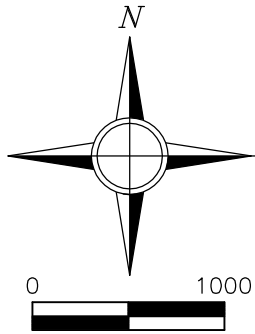
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Project Layout
Plan

SHEET NO.
A.03
OF
A.11

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BUILDINGS AND FACILITIES	
1	TERMINAL - FBO
2	CORPORATE HANGARS
3	MUNICIPAL HANGARS
4	VEHICLE PARKING
5	FUEL STORAGE
6	T HANGARS
7	AIRCRAFT PARKING APRON
8	ELECTRICAL VAULT

STAGING AND STOCKPILE AREAS		
West Side	Station	Offset
1	101+50.0	750.00 R
2	105+00.0	750.00 R
3	107+50.0	750.00 R
4	101+50.0	1000.00 R
5	105+00.0	1000.00 R
6	107+50.0	1000.00 R
East Side	Station	Offset
1	154+45.0	750.00 R
2	150+45.0	750.00 R
3	146+45.0	750.00 R
4	154+45.0	820.00 R
5	150+45.0	850.00 R
6	146+45.0	885.00 R

Note: Station and Offset from Runway Center

LEGEND	
	Phase 1 (See Sheet A.05)
	Phase 2 (See Sheet A.06)
	Phase 3 (See Sheet A.07)
	Contractor's Staging Area
	Stockpile Material Area

TABLE A - OVERALL WORKING DAY CONSTRUCTION SCHEDULE BY PHASE	
Phase	Number of Working Days
1	80
2	20
3	20
Total Number of Days	120

TABLE B - AIRFIELD NAVAID, AND IAP AVAILABILITY BY PHASE			
	PHASE 1 80 WORKING DAYS	PHASE 2 20 WORKING DAYS	PHASE 3 20 WORKING DAYS
RUNWAY AND TAXIWAY STATUS			
RUNWAY 6-24	CLOSED	CLOSED	CLOSED
RUNWAY 12-30	OPEN	PARTIALLY CLOSED (Southeast of Twy B1)	OPEN
TAXIWAY A	CLOSED	CLOSED	CLOSED
TAXIWAY A - END 6 (T01MU-01)	CLOSED	CLOSED	CLOSED
TAXIWAY B - SOUTH (T02MU-01)	OPEN	OPEN	CLOSED
TAXIWAY B - NORTH (T07MU-01)	OPEN	OPEN	CLOSED
TAXIWAY A1 (T04MU-01)	CLOSED	CLOSED	OPEN
TAXIWAY A - END 24 (T05MU-01)	CLOSED	CLOSED	CLOSED
HOLDING BAY AREA (T06MU-03)	CLOSED	CLOSED	CLOSED
ON-AIRPORT NAVAID STATUS			
BEACON	ACTIVE	ACTIVE	ACTIVE
RWY 06 VASI*	OFF	OFF	OFF
RWY 06 REIL*	OFF	OFF	OFF
RWY 24 GS*	OFF	OFF	OFF
RWY 24 MALSR*	OFF	OFF	OFF
RWY 24 PAPI*	OFF	OFF	OFF
RWY 12 REIL	OFF	OFF	OFF
RWY 12 PAPI	OFF	OFF	OFF
RWY 30 PAPI	OFF	OFF	OFF
RWY 30 REIL	OFF	OFF	OFF
INSTRUMENT APPROACH PROCEDURE (IAP) AVAILABILITY			
ILS or LOC RWY 24	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
RNAV (GPS) RWY 24	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
RNAV (GPS) RWY 06	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
RNAV (GPS) RWY 12	AVAILABLE	NOT AVAILABLE	AVAILABLE
RNAV (GPS) RWY 30	AVAILABLE	NOT AVAILABLE	AVAILABLE
VOR RWY 06	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
Notes:			
a) NAVAIDS marked with an asterisk are owned by the FAA.			

TABLE C - AREAS AVAILABLE TO THE CONTRACTOR			
Area	Phase 1	Phase 2	Phase 3
1	Yes	Yes	Yes
2	No	Yes	No
3	No	No	Yes



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

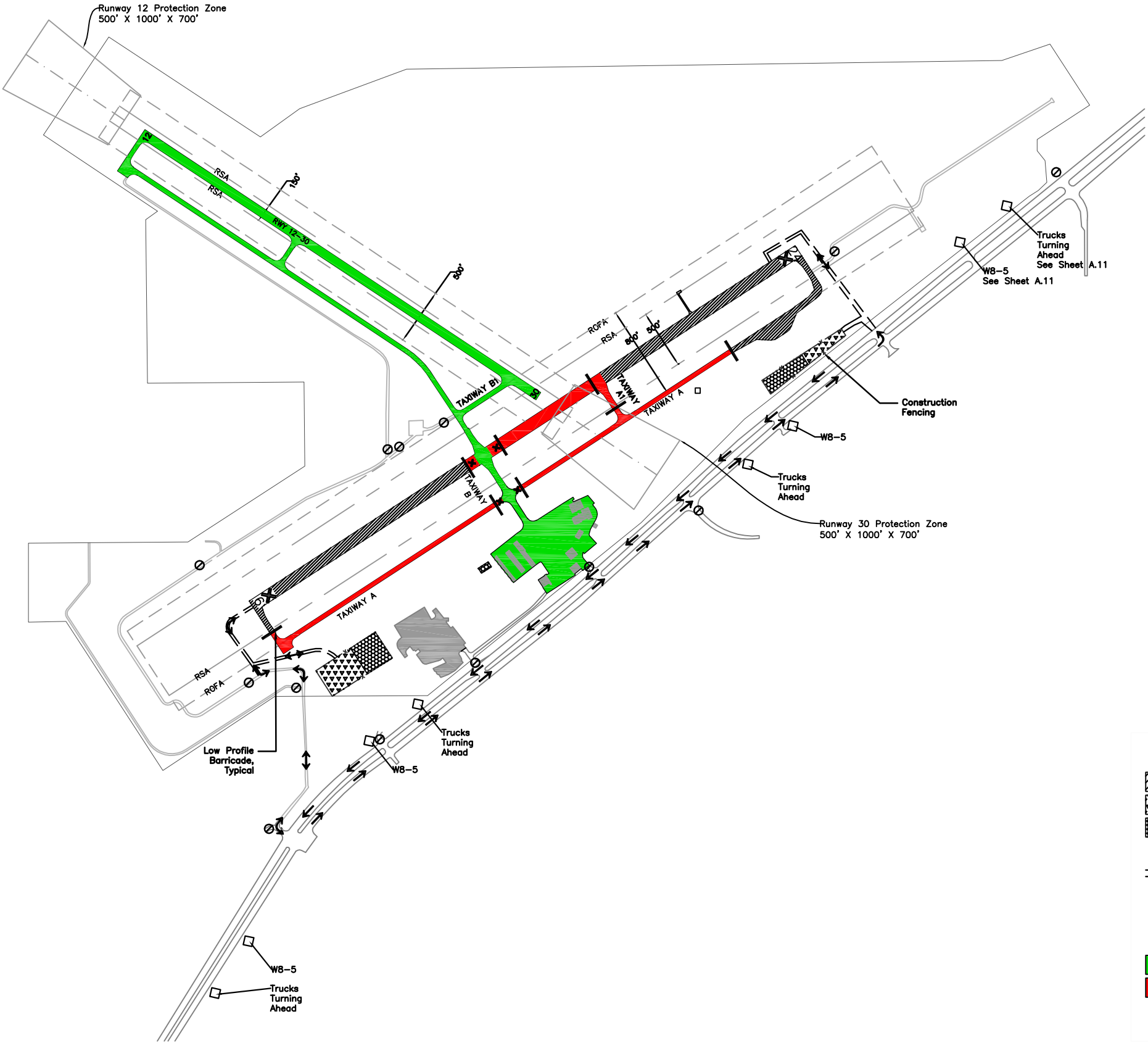
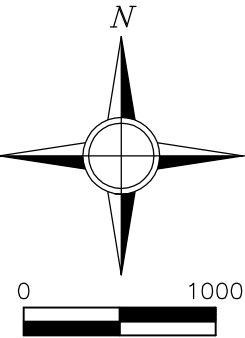
Phasing

SHEET NO.
A.04
OF
A.11

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

- Notes:
1. Contractor is not allowed to cross the Runway 30 Protection Zone during Phase 1.
 2. Refer to Sheet A.11 for Safety and Construction Phasing Details.



LEGEND

- Work Area
- Contractor's Staging Area
- Stockpile Material Area
- Contractor's Access Route
- Contractor's Temporary Construction Haul Road
- Runway Closure Marker
- Closed Runway/Taxiway Marker
- Low-Profile Flasher Barricades
- Pavement Open to Aircraft Traffic
- Pavement Closed to Aircraft Traffic
- Road Closed to Contractor

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Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

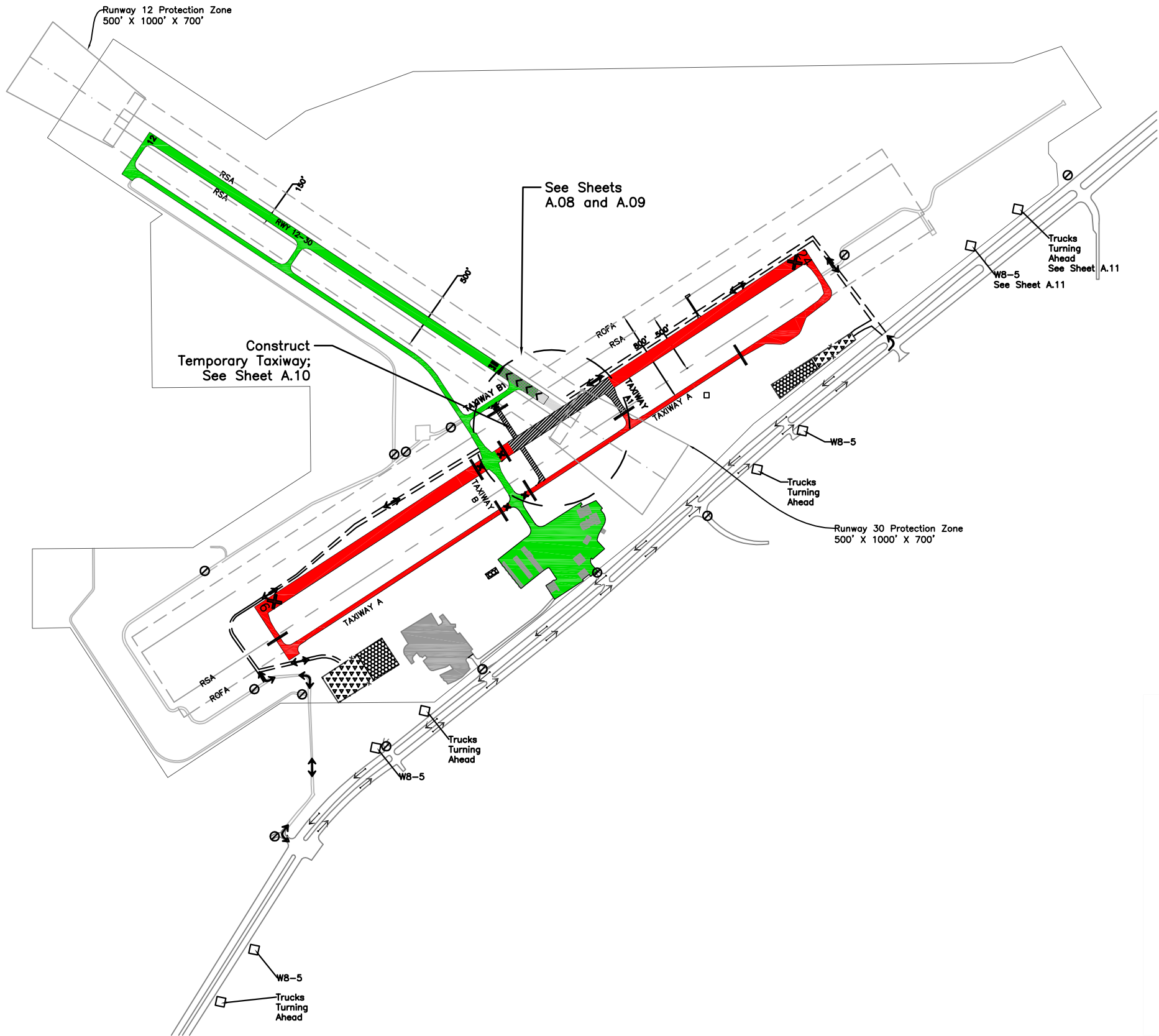
Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 1

SHEET NO.
A.05
OF
A.11

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- Notes:
1. Taxiway B1 will be closed when the Temporary Taxiway is attached.
 2. Refer to Sheet A.11 for Safety and Construction Phasing Details.



LEGEND	
	Work Area
	Runway Safety Area (RSA) Beyond Runway End
	Contractor's Staging Area
	Stockpile Material Area
	Contractor's Access Route
	Contractor's Temporary Construction Haul Road
	Runway Closure Marker
	Closed Runway/Taxiway Marker
	Low-Profile Flasher Barricades
	Pavement Open to Aircraft Traffic
	Pavement Closed to Aircraft Traffic
	Road Closed to Contractor
	Buffer Between Work Area and RSA

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



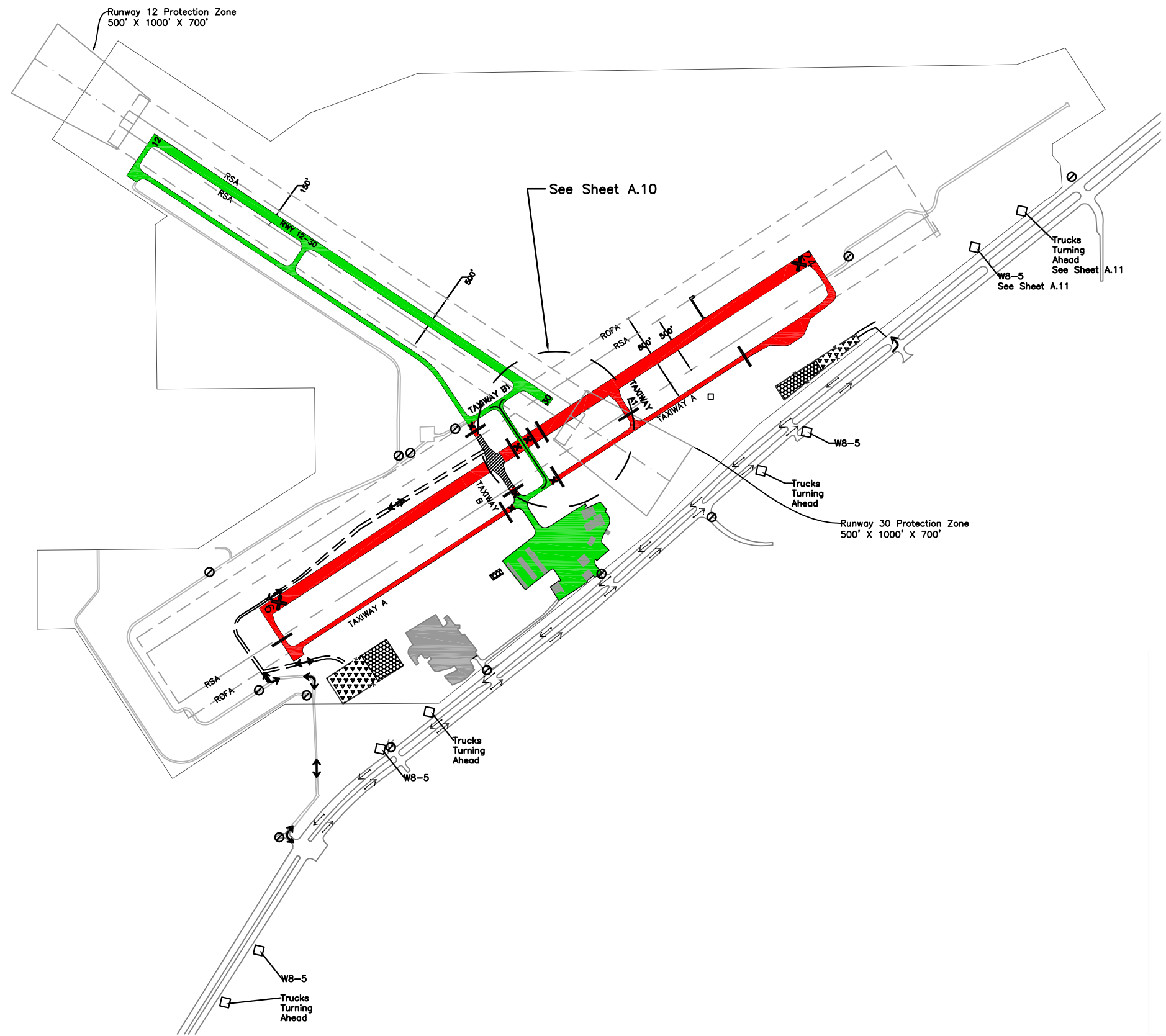
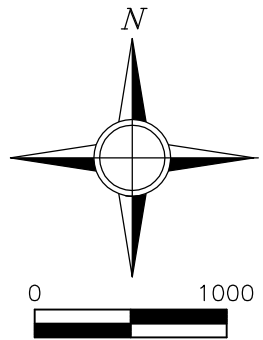
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 2

SHEET NO.
A.06
OF
A.11

Note:
1. Refer to Sheet A.11 for Safety
and Construction Phasing Details.



- LEGEND
- Work Area
 - Contractor's Staging Area
 - Stockpile Material Area
 - Contractor's Access Route
 - Contractor's Temporary Construction Haul Road
 - Runway Closure Marker
 - Closed Runway/Taxiway Marker
 - Low-Profile Flasher Barricades
 - Pavement Open to Aircraft Traffic
 - Pavement Closed to Aircraft Traffic
 - Road Closed to Contractor

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Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
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Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

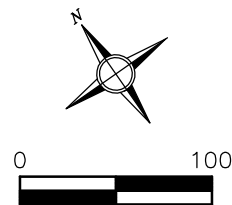
Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 3

SHEET NO.
A.07
OF
A.11

Notes:

1. The aiming point markings shall be relocated to 1020' from the relocated threshold.
2. Refer to Sheet A.11 for Safety and Construction Phasing Details.



LEGEND

 Buffer Between Work Area and RSA

			///
			///
			///
			///
NO.	REVISION DESCRIPTION	APPROVED	DATE

Client:	City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142
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Date: 5-21-2015
Project No. 214009

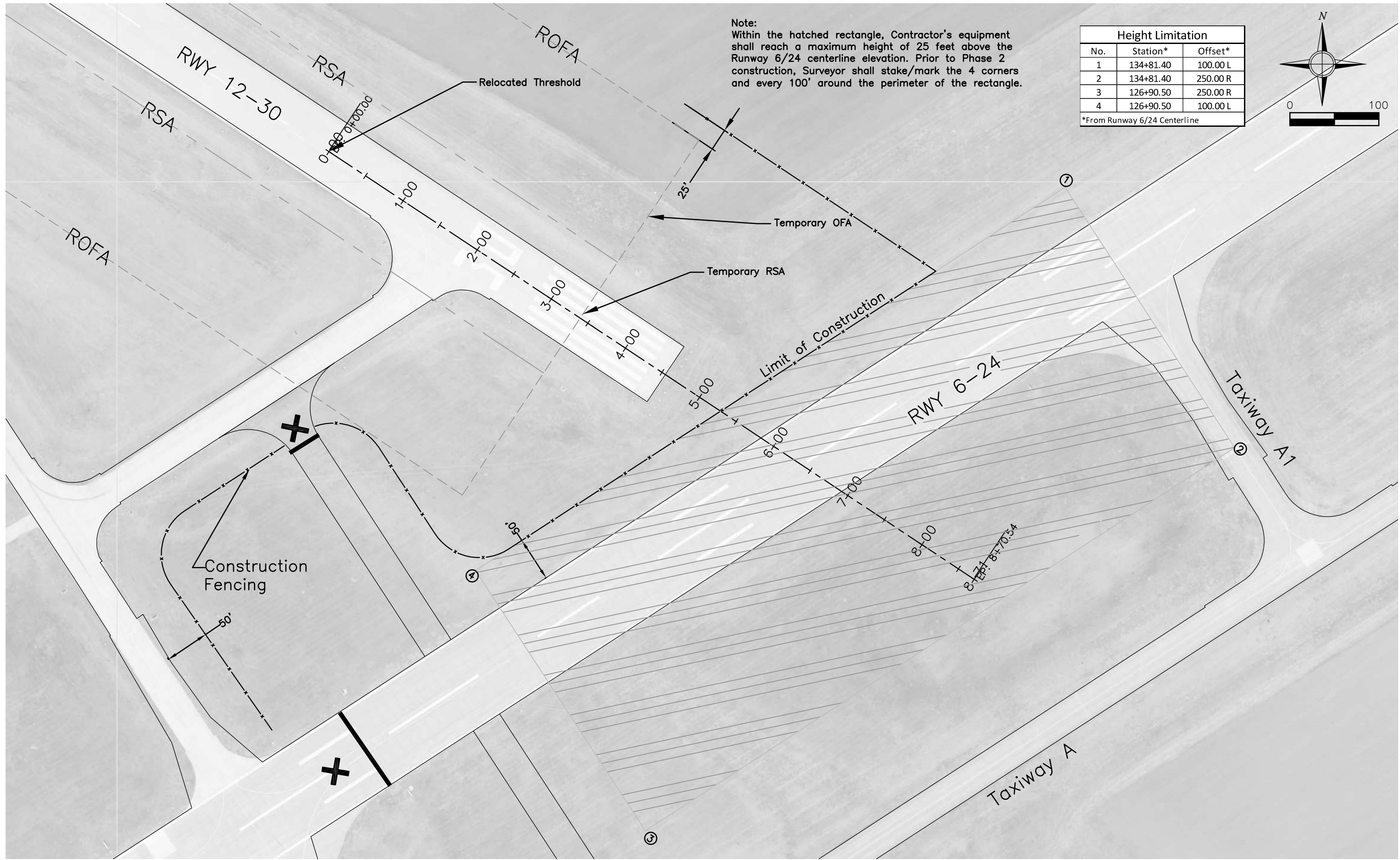
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 2
Temporary Relocated
Threshold

HEET NO.
A.08
F
A.11

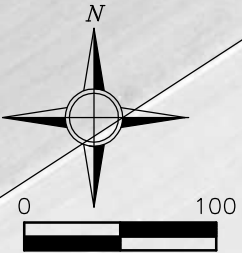
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Note:
Within the hatched rectangle, Contractor's equipment shall reach a maximum height of 25 feet above the Runway 6/24 centerline elevation. Prior to Phase 2 construction, Surveyor shall stake/mark the 4 corners and every 100' around the perimeter of the rectangle.

Height Limitation		
No.	Station*	Offset*
1	134+81.40	100.00 L
2	134+81.40	250.00 R
3	126+90.50	250.00 R
4	126+90.50	100.00 L

*From Runway 6/24 Centerline



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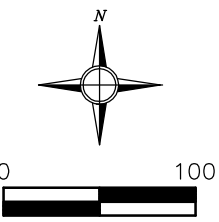
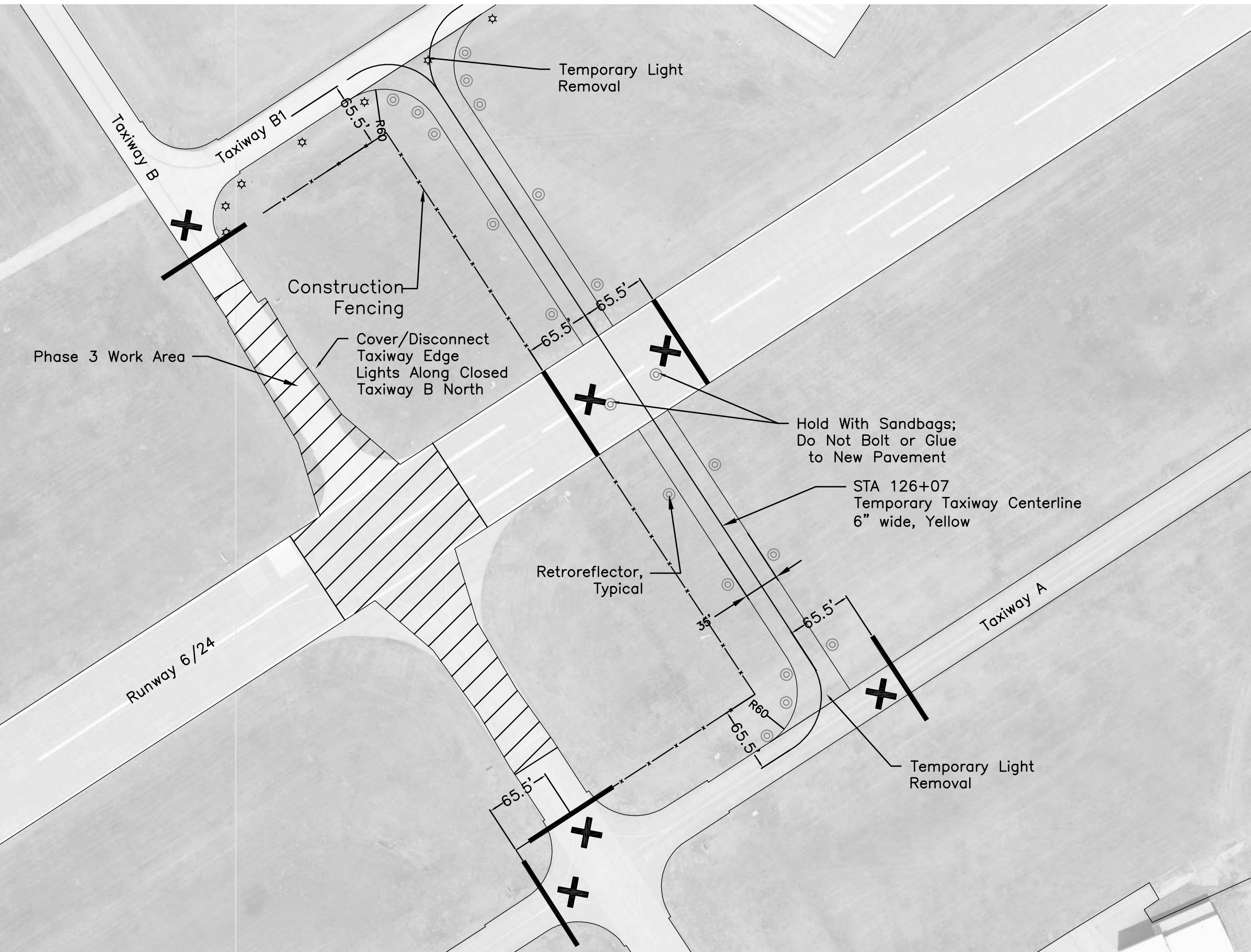
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 2 Relocated Threshold
Height Limitations

SHEET NO.
A.09
OF
A.11

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- Notes:
- 1 The Contractor shall construct a temporary 35 foot wide asphalt Taxiway connecting Taxiway A to Taxiway B1 during Phase 2 for use during Phase 3.
 - 2 The temporary Taxiway shall be approximately 2" thick (P-403) and shall provide a smooth transition to the existing pavements.
 - 3 The fillets connecting the temporary Taxiway to Taxiway A and Taxiway B1 shall be approximately 2" thick to provide a smooth transition to the existing pavements.
 - 4 Taxiway edge marking curve radius centers are concentric to Temporary Taxiway centerline marking radius.
 - 5 The cross slope of the temporary taxiway must be between 1.0% - 1.5%.
 - 6 The cross slope of the shoulders of the temporary taxiway must between 1.5% - 3.0%.
 - 7 The maximum longitudinal grade shall be 1.5%. The maximum longitudinal grade change shall be 3.0%. When grade changes are necessary, a minimum length of parabolic vertical curve is 100 feet for each 1.0 percent of change. A vertical curve is not necessary when the grade change is less than 0.40 percent. The minimum distance between points of intersection of vertical curves is 100 feet.
 - 8 Refer to Sheet A.11 for Safety and Construction Phasing Details.

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Date: 5-21-2015
Project No. 214009

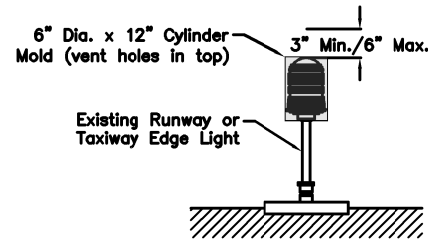
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Phase 3
Temporary Pavement

SHEET NO.
A.10
OF
A.11

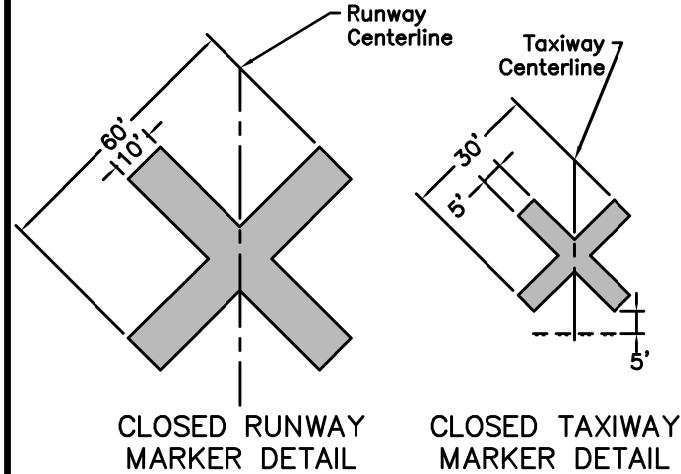
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TEMPORARY EDGE LIGHT COVER DETAIL

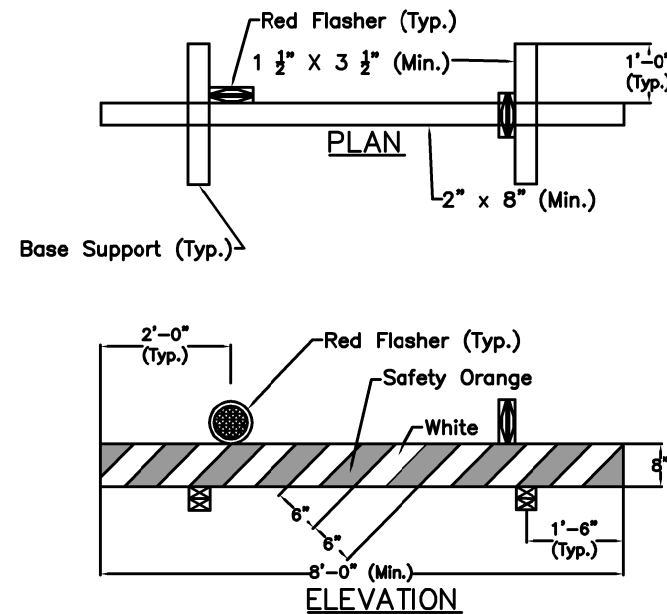
TEMPORARY EDGE LIGHT COVER NOTES:

1. Temporary cover shall be provided by the contractor and shall be incidental to Traffic Control.
2. The Contractor shall be responsible for installations, maintenance, and removal of the temporary cover.
3. Contractor shall insure cover is secured to avoid Foreign Object Debris (FOD) hazard by adjacent aircraft.
4. Contractor shall insure cover is ventilated and adequate in size to avoid fixture overheating damage.



CLOSED RUNWAY AND TAXIWAY PAVEMENT MARKER NOTES:

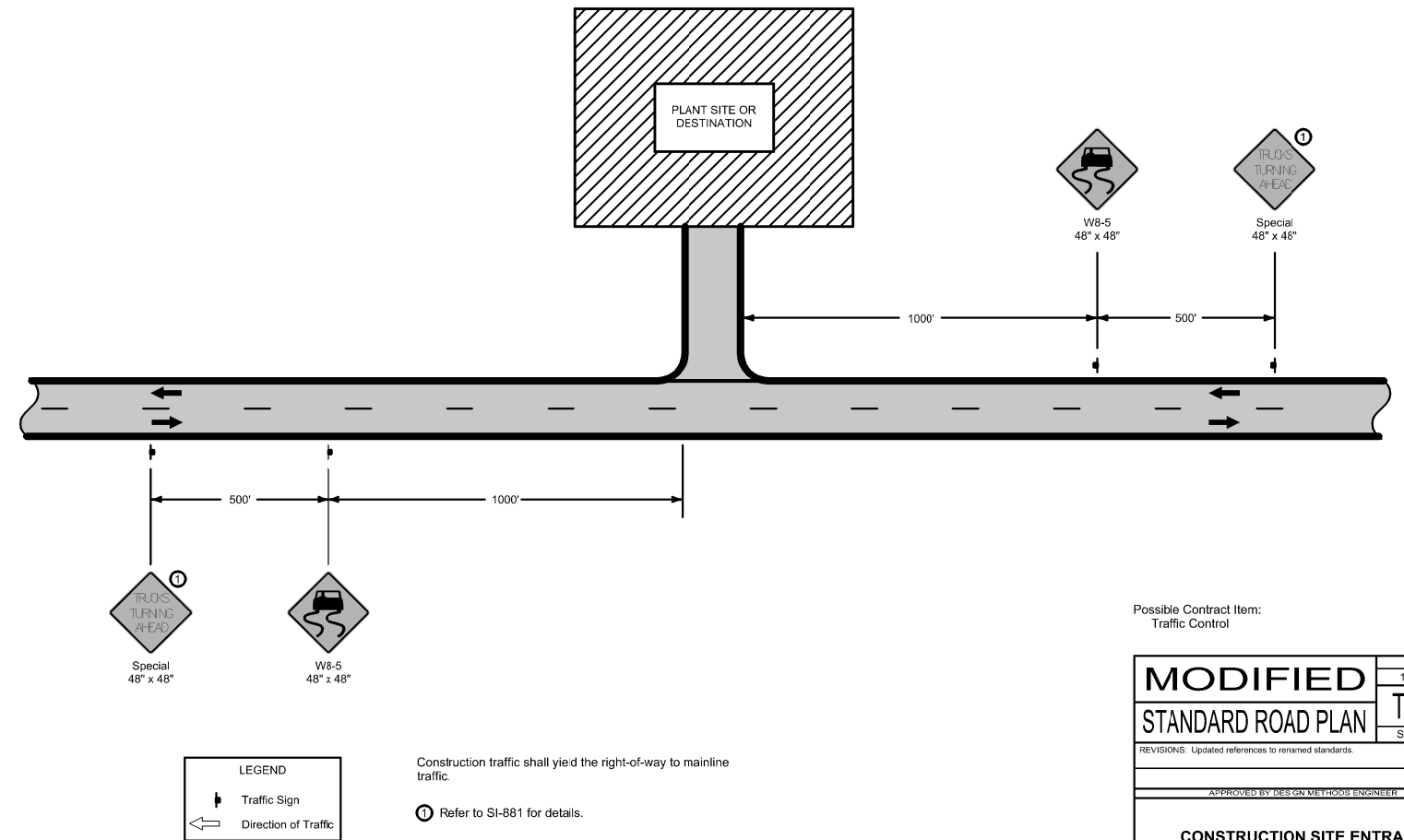
1. Temporary marker shall be provided by the Contractor.
2. Temporary marker shall be standard dimensions and meet all other requirements of AC 150/5340-1L, current edition.
3. Sandbags used to hold down marker shall be yellow.
4. Marker shall be constructed of plastic sheeting plywood, or other material approved by Engineer.
5. All costs associated with providing, placement and maintenance of temporary pavement markers shall be considered incidental to Traffic Control.
6. The Contractor shall be responsible for installations, maintenance and removal of marker.



LOW-PROFILE FLASHER BARRICADE DETAIL

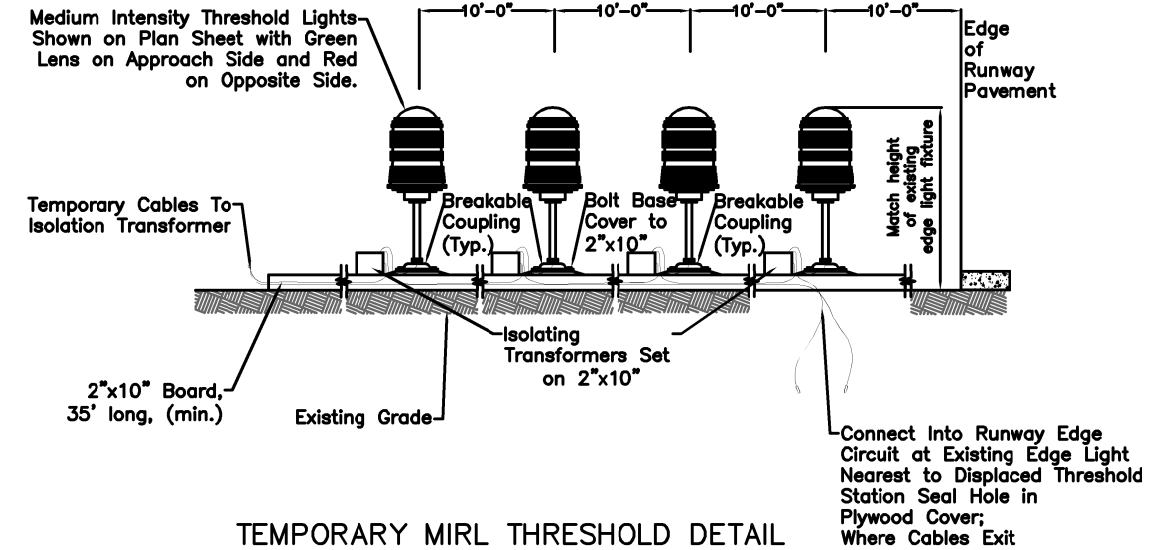
LOW-PROFILE FLASHER BARRICADE NOTES:

1. Contractor shall provide all low profile flasher barricades required for this project. Barricades shall meet the requirements of AC 150/5370-2, current edition. All costs associated with providing, placement and maintenance of low profile barricades shall be considered incidental to traffic control.
2. Flashers shall be battery or solar operated. Lens shall be red and be able to rotate 90 degrees. Each lens shall be mounted perpendicular to adjacent lens.
3. Low profile barricades shall be covered with reflective sheeting or other material approved by Engineer and meet the requirements of AC 150/5370-2, current edition.
4. A minimum of two sandbags shall be placed on each base support.
5. Low profile barricades shall be placed end-to-end along operational pavement adjacent to construction or as directed by the Engineer.
6. The Contractor shall provide continuous maintenance for all low profile barricades necessary for the progress of the work, at no additional cost to the Owner. Contractor shall dispose of spilled sand on airfield pavements on weekly basis or as directed by Engineer.
7. Contractor shall dispose of sandbags off-site upon completion of construction.
8. Contractor shall be responsible for removing low profile barricades upon completion of construction operations.



Possible Contract Item:
Traffic Control

MODIFIED		REVISION
STANDARD ROAD PLAN		1 04-20-10
REVISIONS: Updated references to renamed standards.		TC-273
APPROVED BY DESIGN METHODS ENGINEER		SHEET 1 of 1
CONSTRUCTION SITE ENTRANCE		



TEMPORARY MRL THRESHOLD DETAIL

TEMPORARY MRL THRESHOLD NOTES:

1. Temporary displaced threshold lights shall be provided by Contractor and shall be considered incidental to traffic control.
2. Contractor shall disconnect the permanent threshold lights during temporary partial runway closure. After completion, Contractor shall return lights to original condition.
3. Contractor shall anchor 2 inch by 10 inch board to the ground.

ANDERSON  BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

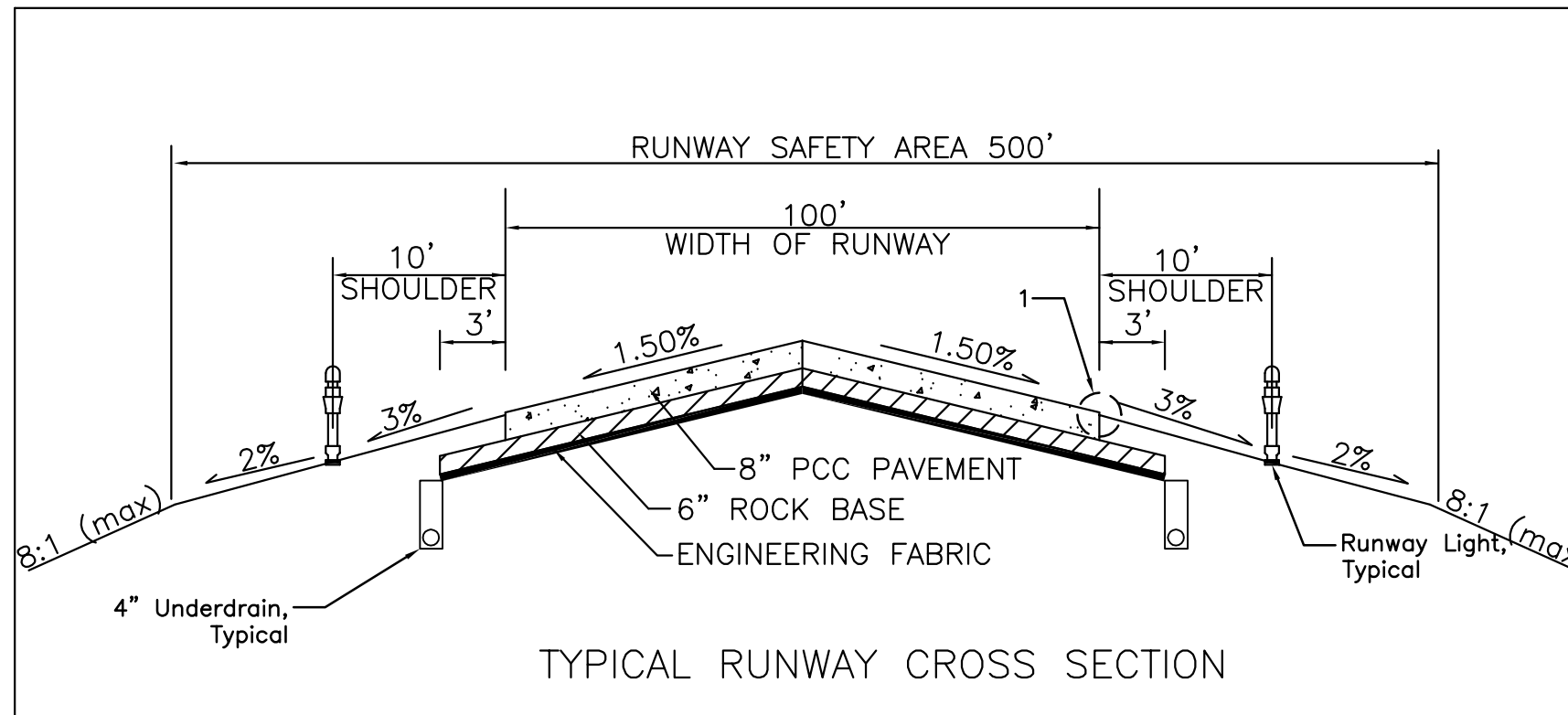
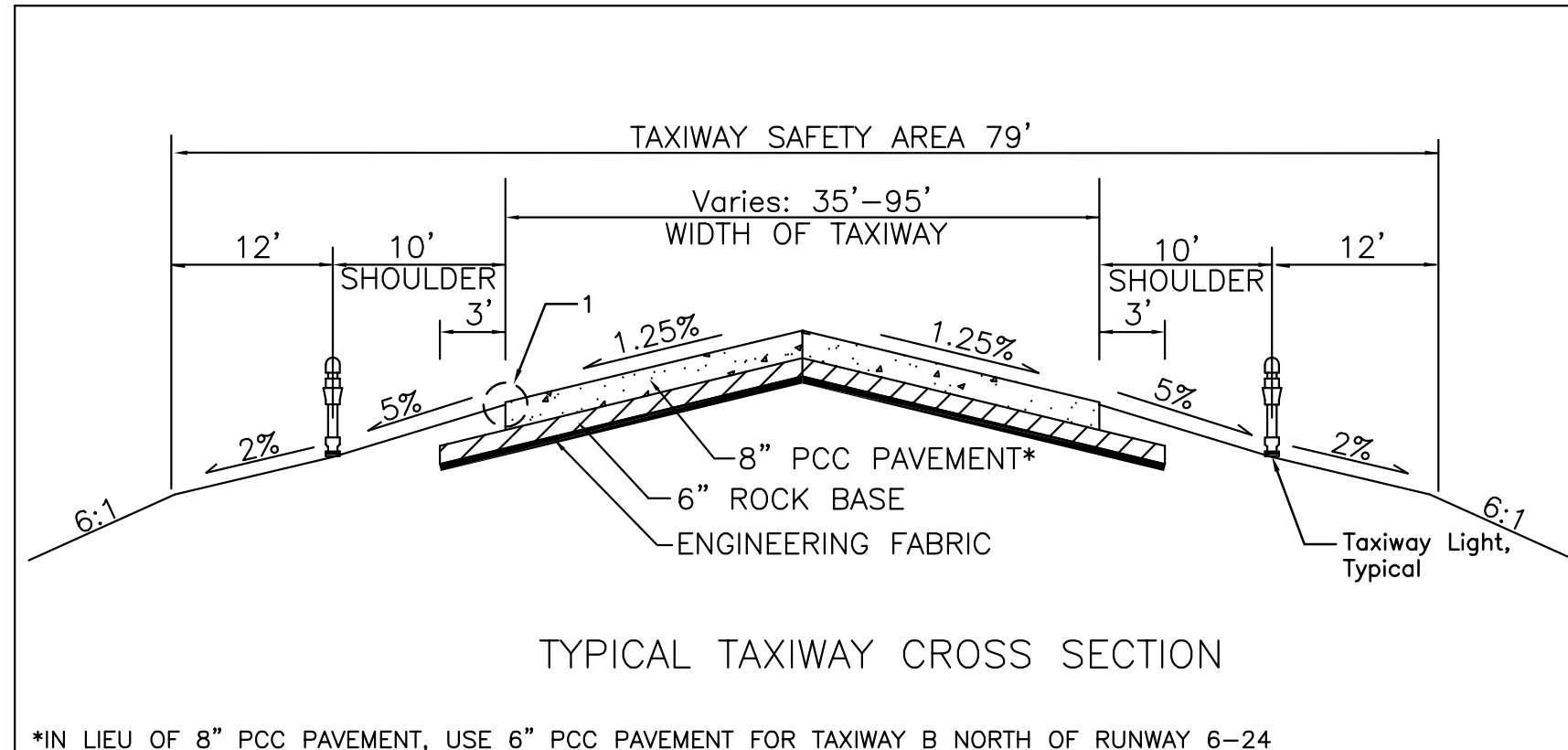
Safety and
Construction Phasing
Details

SHEET NO.
A.11
OF
A.11

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
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Fax: (563) 262-4142

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- Notes:
1. 1.5" drop from pavement to shoulder.
 2. See L Sheets for jointing plan, location, and sizing.

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Client: City of Muscatine
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Muscatine, Iowa 52761
Phone: (563) 262-4141
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ANDERSON BOGERT

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Date: 5-21-2015
Project No. 214009

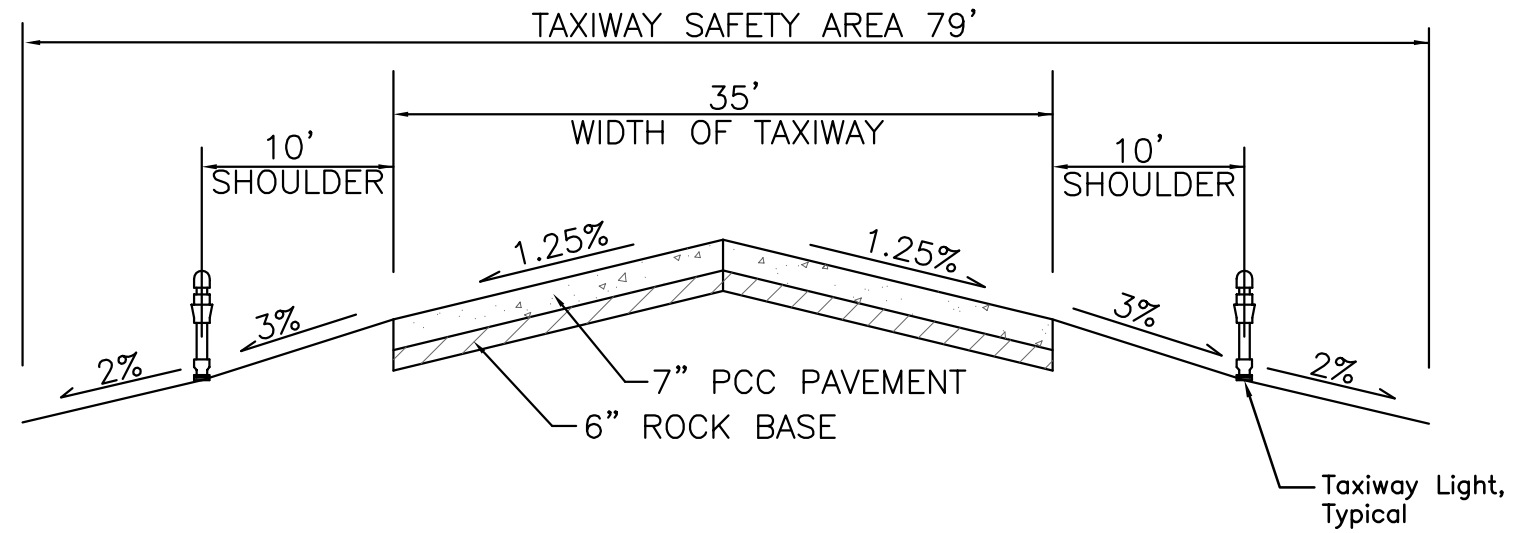
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

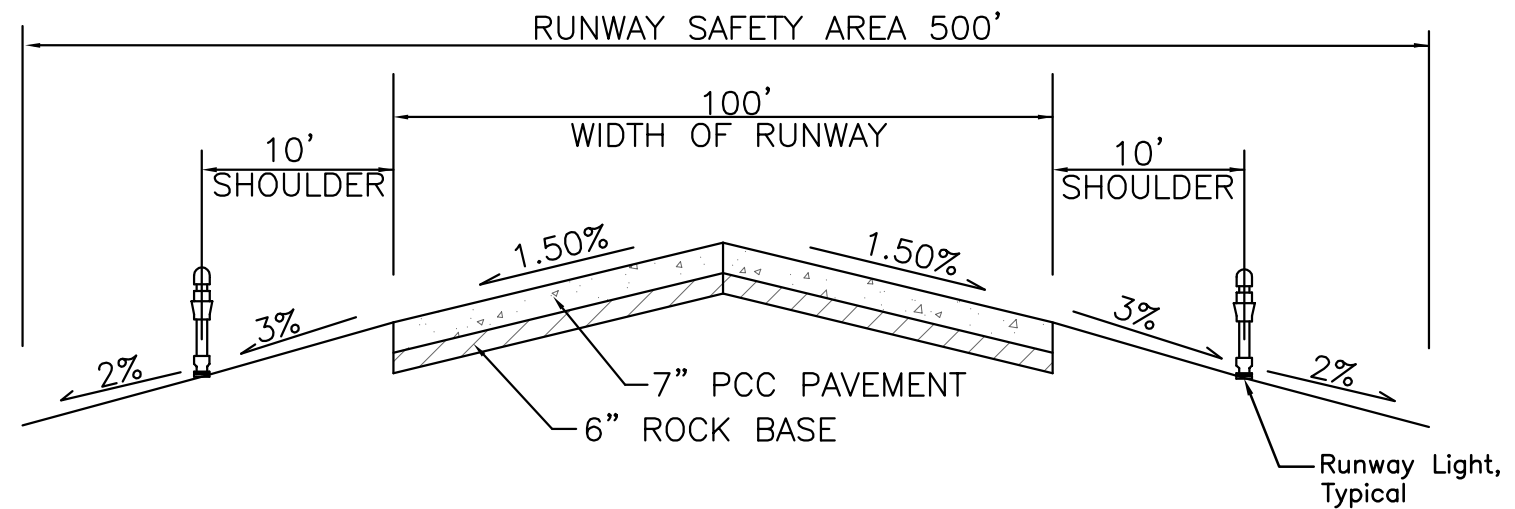
Typical Pavement
Cross Section

SHEET NO.
B.01
OF
B.03

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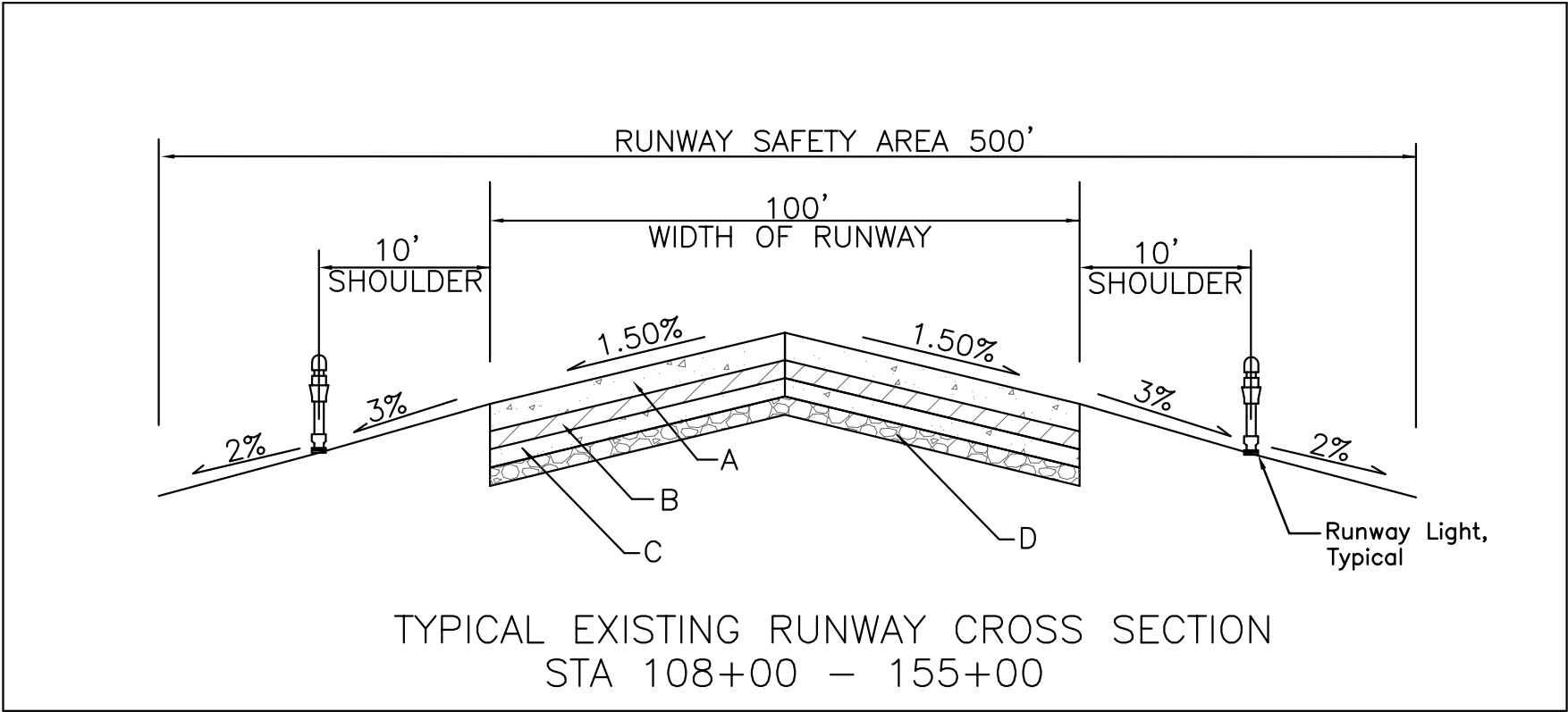
TYPICAL EXISTING TAXIWAY CROSS SECTION



TYPICAL EXISTING RUNWAY CROSS SECTION
STA 100+00 - 108+00

NO.	REVISION DESCRIPTION	APPROVED	DATE

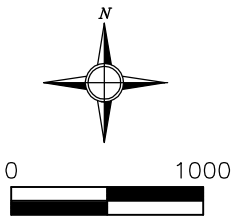
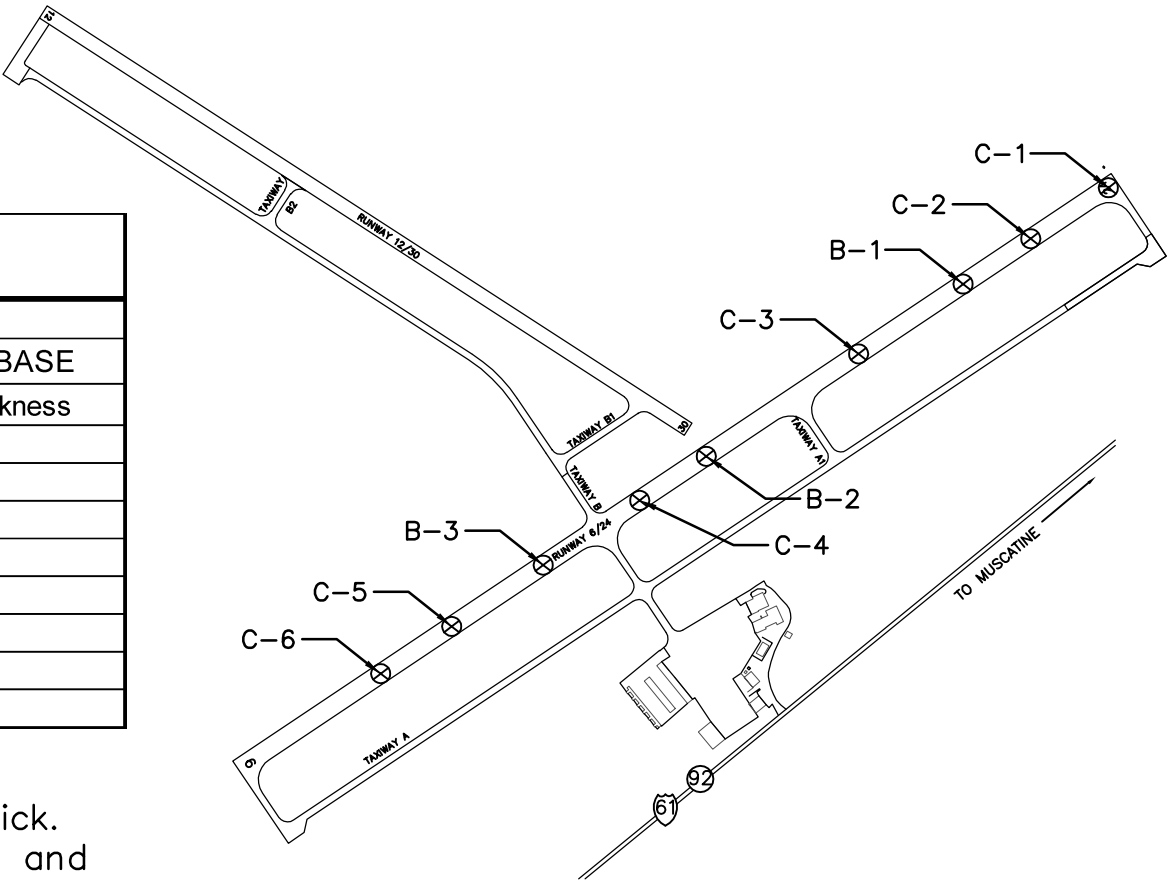
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EXISTING PAVEMENT STA 108+00 - 155+00					
LOCATION	APPROXIMATE STATION, OFFSET	A PCC ¹	B ASPHALT ²	C PCC	D GRANULAR BASE
C-1	154+94, 0'	7"	5.5"	---	Unknown Thickness
C-2	149+78, 40' R	7"	3.5"	---	7"
B-1	145+45, 0'	7"	7.5"	8"	---
C-3	138+85, 40' L	7"	4"	---	7"
B-2	129+30, 0'	7"	8"	---	---
C-4	125+25, 40' R	7"	5.5"	---	7"
B-3	119+15, 0'	7"	6.5"	---	---
C-5	113+30, 35' L	7"	4"	---	6"
C-6	108+41, 0'	7"	6"	8.5"	---

Notes:

1. Some areas of the existing PCC overlay may be up to 12" thick.
2. Contractor shall mill existing asphalt, salvage existing asphalt, and stockpile existing asphalt at the location shown on Sheet A.04



NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Existing Typical Pavement
Cross Section

SHEET NO.
B.03
OF
B.03

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ESTIMATED QUANTITIES					
SCHEDULE A. BASE BID					
ITEM NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
1	GP 105	Mobilization	L.S.	1	
2	GP 70-08	Traffic Control	L.S.	1	
3	GP 50-06	Construction Surveying	L.S.	1	
4	P-152	Unclassified Excavation	C.Y	4,555	
5	P-152	Pavement Removal	S.Y.	78,117	
6	P-156	Temporary Seeding	Acre	14	
7	P-156	Silt Fence	L.F.	8,820	
8	IDOT 4196	Paving Engineering Fabric	S.Y.	71,858	
9	P-209 / P-219	Crushed Aggregate or Recycled Concrete Aggregate Base Course	S.Y.	71,858	
10	P-501	6" PCC Taxiway Pavement (North of RW 6/24 only)	S.Y.	1,393	
11	P-501	8" PCC Pavement	S.Y.	69,485	
12	P-620	Runway Marking - White	S.F.	78,478	
13	P-620	Taxiway Marking - Yellow	S.F.	1,356	
14	P-620	Runway and Taxiway Marking - Black	S.F.	9,922	
15	P-621	Saw-Cut Grooves	S.Y.	45,833	
16	D-701	18", Class III RCP	L.F.	300	
17	D-701	Flared End Section - 18" RCP	Each	1	
18	D-701	Culvert Inlet Protection	Each	5	
19	D-705	4" PVC Pipe Underdrain	L.F.	10,710	
20	D-705	4" PVC Pipe Underdrain Cleanouts	Each	43	
21	D-705	Underdrain Outlets	Each	7	
22	T-901	Seeding	Acre	14	
23	T-901	Excelsior Blanket	S.Y.	4,921	
24	T-905	Topsoiling	C.Y	1,200	
25	L-108	Underground Power Cable Installed in Conduit	L.F.	1,559	
26	L-108	Counterpoise Wire	L.F.	1,559	
27	L-110	2" HDPE Conduit	L.F.	1,429	
28	L-125	Runway and Taxiway Signs - Install New Base/New Sign	Each	2	
29	L-125	Runway and Taxiway Signs - Install New Base/Reuse Existing Sign	Each	1	
30	L-125	Remove and Relocate Medium Intensity Edge Light with new Base	Each	36	
31	L-126	Spare Parts for Various Electrical Items	L.S.	1	

ESTIMATED QUANTITIES					
SCHEDULE B. TURNAROUND					
ITEM NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
1	-	Construction Surveying	L.S.	1	
2	P-152	Unclassified Excavation	C.Y	1,500	
3	P-152	Pavement Removal	S.Y.	1,008	
4	P-156	Temporary Seeding	Acre	2	
5	P-156	Silt Fence	L.F.	1,325	
6	IDOT 4196	Paving Engineering Fabric	S.Y.	9,000	
7	P-209 / P-219	Crushed Aggregate or Recycled Concrete Aggregate Base Course	S.Y.	9,000	
8	P-501	8" PCC Pavement	S.Y.	8,744	
9	P-620	Taxiway Marking - Yellow	S.F.	899	
10	P-620	Taxiway Marking - Black	S.F.	1,799	
11	T-901	Seeding	Acre	2	
12	T-905	Topsoiling	C.Y	283	
13	L-108	Underground Power Cable Installed in Conduit	L.F.	2,334	
14	L-108	Counterpoise Wire	L.F.	2,334	
15	L-110	2" HDPE Conduit	L.F.	2,140	
16	L-125	Remove and Relocate Medium Intensity Edge Light with new Base	Each	16	

ESTIMATED QUANTITIES					
SCHEDULE C. SIGNS					
ITEM NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
1	L-125	Runway and Taxiway Signs - Reuse Existing Base/New Sign	Each	13	

NO.	REVISION	DESCRIPTION	APPROVED	DATE

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Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Quantity Tabulations

SHEET NO.
C.01
OF
C.03

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RUNWAY AND TAXIWAY SIGNS - INSTALL NEW BASE/NEW SIGN - SCHEDULE A						
LOCATION	NO	STATION	OFFSET	PROPOSED STATION	PROPOSED OFFSET	REMARKS
Taxiway A - End 24	1	502+50.15	29.52 R	205+50.21	29.52 R	NEW MANDATORY INSTRUCTION/ LOCATION SIGN
Taxiway A1	2	402+48.58	29.60 R	402+49.01	35.05 R	NEW MANDATORY INSTRUCTION/ LOCATION SIGN

RUNWAY AND TAXIWAY SIGNS - INSTALL NEW BASE/REUSE EXISTING SIGN- SCHEDULE A						
LOCATION	NO	STATION	OFFSET	PROPOSED STATION	PROPOSED OFFSET	REMARKS
Taxiway B - North	3	297+48.33	27.49 L	297+40.25	35.23 L	REUSE MANDATORY INSTRUCTION/ LOCATION SIGN

RUNWAY AND TAXIWAY SIGNS - REUSE EXISTING BASE/NEW SIGN - SCHEDULE C				
LOCATION	NO	STATION	OFFSET	REMARKS
Runway 6/24	4	101+73.84	63.09 R	NEW DIRECTION SIGN
	5	121+73.20	61.91 L	NEW DIRECTION SIGN
	6	124+89.27	60.00 L	NEW DIRECTION SIGN
	7	124+92.54	62.93 R	NEW DIRECTION SIGN
	8	133+25.48	63.41 R	NEW DIRECTION SIGN
	9	153+18.89	63.02 R	NEW DIRECTION SIGN
Taxiway A - End 6	10	202+51.55	27.68 R	NEW MANDATORY INSTRUCTION/LOCATION SIGN
Taxiway B - South	11	302+36.58	35.36 R	NEW MANDATORY INSTRUCTION/LOCATION SIGN
Taxiway A*	12	101+02.49	372.30 R	NEW LOCATION SIGN
	13	122+31.52	372.48 R	NEW DIRECTION SIGN
	14	122+89.60	480.14 R	NEW DIRECTION SIGN
	15	124+78.51	429.54 R	NEW DIRECTION SIGN
	16	133+55.68	427.98 R	NEW LOCATION SIGN

*Note: All Taxiway A station/offsets are obtained from Runway 6/24 alignment

TABULATION OF SILT FENCING					
STATION	OFFSET	STATION	OFFSET	LENGTH (FT)	REMARKS
99+74.72	319.29 R	103+43.09	184.95 L	817	
101+73.26	245.69 R	104+99.14	268.52 R	351	
104+18.43	111.11 L	114+18.30	60.84 L	1021	
113+26.79	143.15 L	122+69.49	84.14 L	941	
120+76.98	231.05 R	122+11.76	303.95 R	214	
120+84.97	240.47 L	121+02.47	296.56 L	174	
123+63.95	316.48 L	125+32.41	305.91 L	280	
124+24.13	299.90 R	125+39.96	285.69 R	151	
126+59.15	249.98 L	131+13.75	62.04 L	534	
130+63.19	184.91 R	133+67.91	304.32 R	447	
130+98.06	108.32 L	140+51.87	61.62 L	986	
140+40.45	99.27 L	144+23.73	100.66 L	388	
144+81.53	89.17 L	150+55.17	61.55 L	578	
146+67.63	256.50 R	151+58.48	246.52 R	1098	
150+10.47	88.65 L	154+94.16	61.67 L	495	
155+32.29	75.27 L	155+62.87	251.20 R	345	
144+80.00	583.24 R	155+62.59	261.28 R	1325	Schedule B
Total				10145	

UNDERDRAIN CLEANOUT			
NO.	STATION	OFFSET	SIDE
1	100+00.00	56	L
2	100+67.00	56	R
3	102+92.00	56	L
4	102+96.00	54	L
5	102+98.00	56	L
6	102+92.00	56	R
7	102+96.00	55	R
8	102+96.00	65	R
9	102+98.00	56	R
10	106+50.00	56	L
11	106+50.00	56	R
12	111+35.00	56	L
13	111+35.00	56	R
14	116+50.00	56	L
15	116+50.00	56	R
16	121+42.00	56	L
17	121+46.00	58	L
18	121+42.00	56	R
19	121+46.00	54	R
20	124+05.00	56	L
21	124+05.00	56	R
22	128+75.00	56	L
23	128+75.00	56	R
24	131+42.22	56	L
25	131+46.00	58	L
26	131+48.36	56	R
27	131+51.00	54	R
28	132+32.00	56	L
29	132+32.00	56	R
30	137+00.00	56	L
31	137+00.00	56	R
32	143+00.00	56	L
33	143+00.00	56	R
34	149+42.00	56	L
35	149+46.00	58	L
36	149+42.00	56	R
37	149+46.00	54	R
38	149+70.00	56	L
39	149+70.00	56	R
40	154+25.00	56	L
41	154+29.00	58	L
42	154+25.00	56	R
43	154+21.00	54	R

2" HDPE CONDUIT AND UNDERGROUND CABLE			
STATION TO STATION		LENGTH (FEET)	REMARKS
200+59.03; 143.73' R	201+61.49; 34.19' R	193	
298+75.38; 28.91' L	299+39.88; 64.87' L	80	
298+75.55; 29.13' R	299+38.48; 69.31' R	83	
300+59.91; 151.15' L	301+51.51; 35.58' L	190	
300+58.98; 150.58' R	301+49.85; 35.33' R	188	
400+59.26; 143.34' L	401+55.22; 35.56' L	186	
400+59.36; 143.04' R	401+61.34; 34.22' R	192	
500+59.91; 152.59' L	506+33.86; 27.88' L	586	Partial Schedule B
503+40.17; 27.5' R	517+16.57; 27.53' R	1545	Schedule B
	10% Discretionary	324	
	Total	3568	
UNDERGROUND CABLE			
	10% Discretionary	324	
	Total	3893	

TABULATION OF UNDERDRAIN			
STATION TO STATION		SIDE	LENGTH (FT)
100+00	155+00	R	5200
100+00	155+00	L	5000
	5% Discretionary		510
TOTAL			10710

TABULATION OF UNDERDRAIN OUTLET		
NO.	STATION	OFFSET
1	102+96.70	222.46 R
2	121+38.20	239.55 L
3	121+45.87	238.69 L
4	131+41.92	155.10 L
5	131+47.73	156.72 L
6	149+56.35	150.45 L
7	149+61.23	150.47 L

NO.	REVISION	DESCRIPTION	DATE

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Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Quantity Tabulations

SHEET NO.
C.02
OF
C.03

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TABULATION OF PAVEMENT MARKINGS											
1. Threshold Markings (Configuration B, White)			3. Designation Marking (White)			5. Touchdown Zone (White)			7. Taxiway Centerline (Yellow)		9. Black Border
2. Edge Markings (White)			4. Aiming Point (White)			6. Runway Centerline (White)			8. Holding Position		
LOCATION		STATION TO STATION	LENGTH (FT)							REMARKS	
			1	2	3	4	5	6	7		
Taxiway A - End 6											
		200+59.60 202+33.43							174		348
		202+43.50								120	217 Filled in Area (SF)
Taxiway B - North											
		297+83.80 300+00.0							216		432
		299+37.19 300+00.0							294		589 Right Side, 60° Radius + 200'
		299+37.19 300+00.0							294		588 Left Side, 60° Radius + 200'
		297+73.94								132	221 Filled in Area (SF)
Taxiway B - South											
		300+00.0 302+33.70							234		467
		300+00.0 300+63.19							294		588 Right Side, 60° Radius + 200'
		300+00.0 300+63.19							294		589 Left Side, 60° Radius + 200'
		302+43.70								141	258 Filled in Area (SF)
Taxiway A1											
		400+63.04 402+36.55							174		347
		400+00.0 400+63.04							294		588 Right Side, 60° Radius + 200'
		400+00.0 400+63.04							294		588 Left Side, 60° Radius + 200'
		402+43.71								147	252 Filled in Area (SF)
Taxiway A - End 24											
		500+63.51 502+33.54							170		340
		502+50.85 512+75.86							1025		2050 Partial Schedule B
		504+34.25 512+75.86							918		1836 Holding Bay Centerline - Schedule B
		502+42.85								127	198 Filled in Area (SF)
Runway 6/24											
		100+20.0 101+70.0	1200								2400 Right and Left Sides, 8 Lines
		100+20.0 154+80.0		10920							Right and Left Sides, 2 Lines
		102+10.0 102+73.0			63						226 Number 6
		103+10.0 104+30.0						120			240
		105+10.0 106+30.0						120			240
		107+10.0 108+30.0						120			240
		109+10.0 110+30.0						120			240
		111+10.0 112+30.0						120			240
		113+10.0 114+30.0						120			240
		115+10.0 116+30.0						120			240
		117+10.0 118+30.0						120			240
		119+10.0 120+30.0						120			240
		121+10.0 122+30.0						120			240
		123+10.0 124+30.0						120			240
		125+10.0 126+30.0						120			240
		127+10.0 127+90.0						80			160
		128+70.0 129+90.0						120			240
		130+70.0 131+90.0						120			240
		132+70.0 133+90.0						120			240
		134+70.0 135+90.0						120			240
		136+70.0 137+90.0						120			240
		138+70.0 139+90.0						120			240
		140+70.0 141+90.0						120			240
		142+70.0 143+90.0						120			240
		144+70.0 145+90.0						120			240
		146+70.0 147+90.0						120			240
		148+70.0 149+90.0						120			240
		150+70.0 151+90.0						120			240
		110+20.0 111+70.0				300					600 Right and Left Sides, 2 Lines
		124+05.0 124+80.0					150				300 Right and Left Sides, 2 Lines
		129+05.0 129+80.0					150				300 Right and Left Sides, 2 Lines
		134+05.0 134+80.0					300				600 Right and Left Sides, 4 Lines
		139+05.0 139+80.0					300				600 Right and Left Sides, 4 Lines
		149+05.0 149+80.0					450				900 Right and Left Sides, 6 Lines
		143+30.0 144+80.0				300					600 Right and Left Sides, 2 Lines
		152+30.0 152+90.0			60						408 Number 24
		153+30.0 154+80.0	1200								2400 Right and Left Sides, 8 Lines
Length Subtotals (FT)			2400	10920	123	600	1350	2960	4676	667	24605
Quantity Factors (FT)			5.75	3	Varies	20	4	3	0.5	1	0.5
Total			13800	32760	1901	12000	5400	8880	2338	667	12876
5% Discretionary			4531 SF								
Total Area			95152 SF								

Remove and Relocate Medium Intensity Edge Light with New Base						
LOCATION	NO	EXISTING		PROPOSED		REMARKS
Taxiway A - End 6 (T01MU-01)	1	200+75.72	91.20 L	200+59.98	54.81 L	
	2	201+00.38	61.09 L	201+11.86	39.61 L	
	3	201+35.97	39.40 L	201+90.74	30.75 L	
	4	201+75.30	31.38 L	201+99.08	27.57 R	
	5	201+76.78	27.52 R	502+78.37	27.52 R	Relocate to Taxiway A - End 24
Taxiway B - North (T07MU-01)	6	297+41.54	27.49 L	297+39.99	35.20 L	
	7	297+42.04	28.03 R	297+36.47	28.85 R	
	8	298+21.95	27.49 L	298+20.74	33.45 L	
	9	298+22.26	28.58 R	298+23.26	32.84 R	
	10	299+00.25	29.89 L	298+76.55	35.99 L	
	11	298+96.25	29.03 R	298+75.06	35.92 R	
	12	299+27.62	41.91 L	299+38.41	54.35 L	
	13	299+27.17	40.48 R	299+39.95	54.88 R	
	14	299+38.48	69.31 L	503+40.17	27.67 L	Relocate to Taxiway A - End 24
	15	299+39.88	64.87 R	511+89.33	35.28 L	Relocate to Taxiway A - End 24
Taxiway B - South (T02MU-01)	16	300+68.99	106.27 L	300+59.94	54.92 L	
	17	300+70.82	103.11 R	300+60.0	54.90 R	
	18	300+88.46	71.62 L	301+24.66	35.93 L	
	19	300+86.59	72.79 R	301+23.45	35.99 R	
	20	301+19.88	45.29 L	302+00.46	32.49 L	
	21	301+16.23	47.32 R	302+00.45	32.49 R	
	22	301+49.85	35.33 L	512+93.62	27.31 L	Relocate to Taxiway A - End 24
	23	301+51.51	35.58 R			Extra
Taxiway A1 (T04MU-01)	24	400+76.30	91.54 L	400+60.0	54.86 L	
	25	400+75.84	90.57 R	400+60.04	54.88 R	
	26	401+00.38	60.60 L	401+24.66	35.91 L	
	27	400+99.36	60.53 R	401+24.65	35.96 R	
	28	401+35.91	39.59 L	402+00.0	32.51 L	
	29	401+32.65	39.56 R	402+00.05	32.51 R	
	30	401+75.98	31.13 L			Extra
	31	401+73.50	30.51 R			Extra
Taxiway A - End 24 (T05MU-01)	32	500+75.83	92.37 R	500+60.23	55.73 R	
	33	501+00.78	59.61 R	501+24.73	35.94 R	
	34	501+35.34	38.97 R	502+00.07	32.10 R	
	35	501+74.02	30.98 R	502+75.43	35.94 R	
	36	501+74.05	27.58 L	501+21.85	27.55 L	
	37	503+26.28	28.06 R	503+87.65	54.48 R	Schedule B
	38	503+25.13	27.50 L	501+99.08	27.56 L	Schedule B
	39	503+76.11	46.96 L	503+85.86	27.81 L	Schedule B
	40	503+86.58	36.21 R	504+30.53	27.51 L	Schedule B
	41	503+91.78	74.69 L	504+98.58	35.94 R	Schedule B
	42	504+02.30	112.84 L	504+98.58	32.73 L	Schedule B
	43	504+14.76	98.15 L	506+27.52	42.85 L	Schedule B
	44	504+30.18	90.16 L	506+54.08	44.75 L	Schedule B
	45	504+46.20	26.39 R	507+51.34	113.69 L	Schedule B
	46	504+66.71	90.99 L	507+78.36	127.91 L	Schedule B
	47	504+73.87	48.31 L	508+08.57	132.41 L	Schedule B
	48	505+11.55	27.17 L	509+10.32	132.48 L	Schedule B
	49	506+32.14	27.48 L	509+42.61	127.25 L	Schedule B
	50	508+18.90	27.07 L	509+71.58	112.08 L	Schedule B
	51	510+05.43	27.37 L	510+66.70	44.66 L	Schedule B
	52	511+91.56	27.75 L	510+92.94	42.58 L	Schedule B

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Project No. 214009

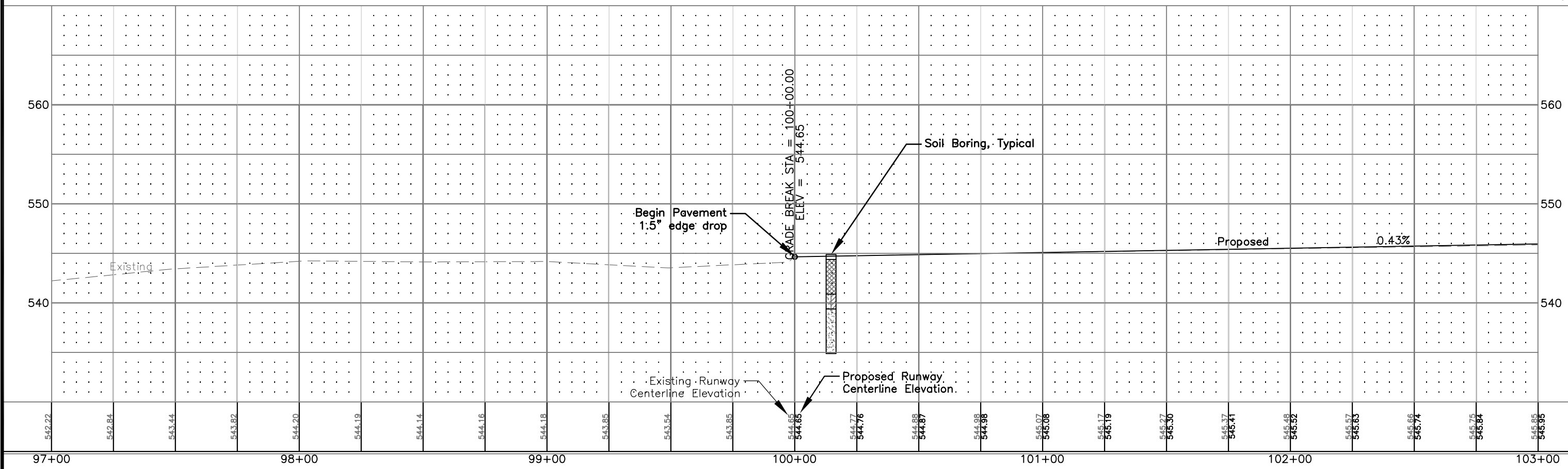
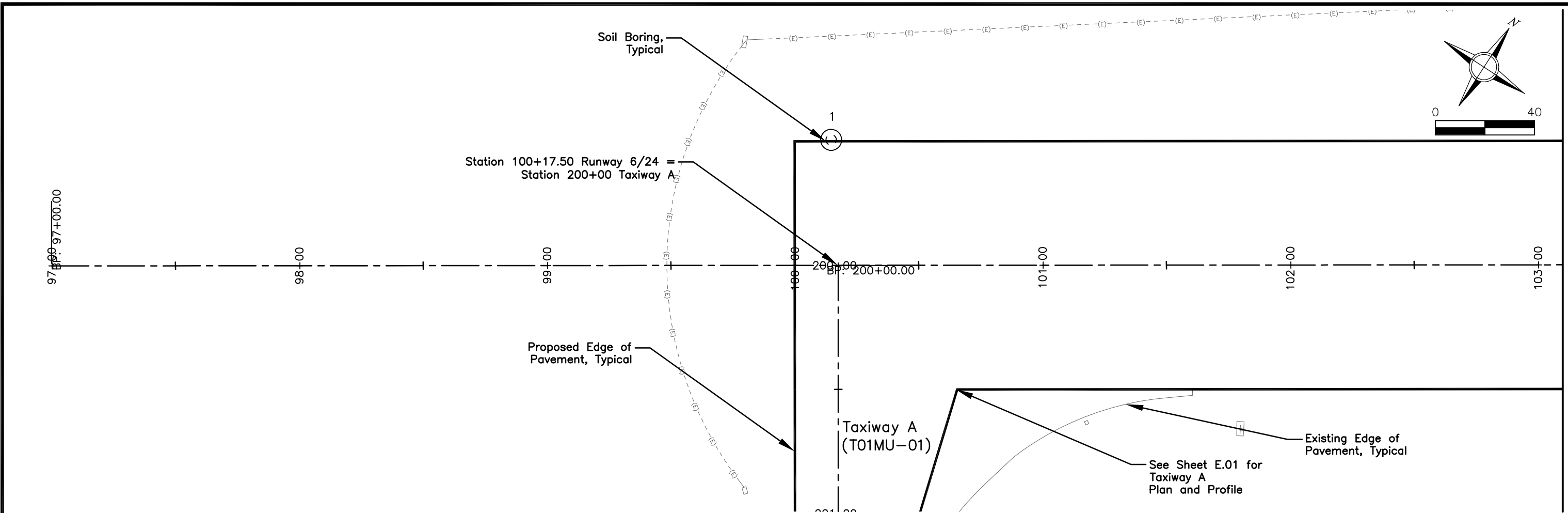
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Quantity Tabulations

SHEET NO.
C.03
OF
C.03

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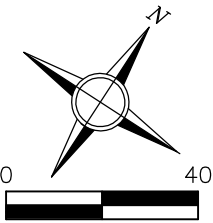


Client: City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142				ANDERSON BOGERT		Drawn By: MJP Date: 5-21-2015 Project No. 214009	Approved By: JCD Scale: See Bar Scale	Muscatine Municipal Airport Reconstruct Runway 6/24 and Associated Taxiways	Runway Plan and Profile	SHEET NO. D.01 OF D.11
NO.	REVISION	DESCRIPTION	APPROVED	DATE						

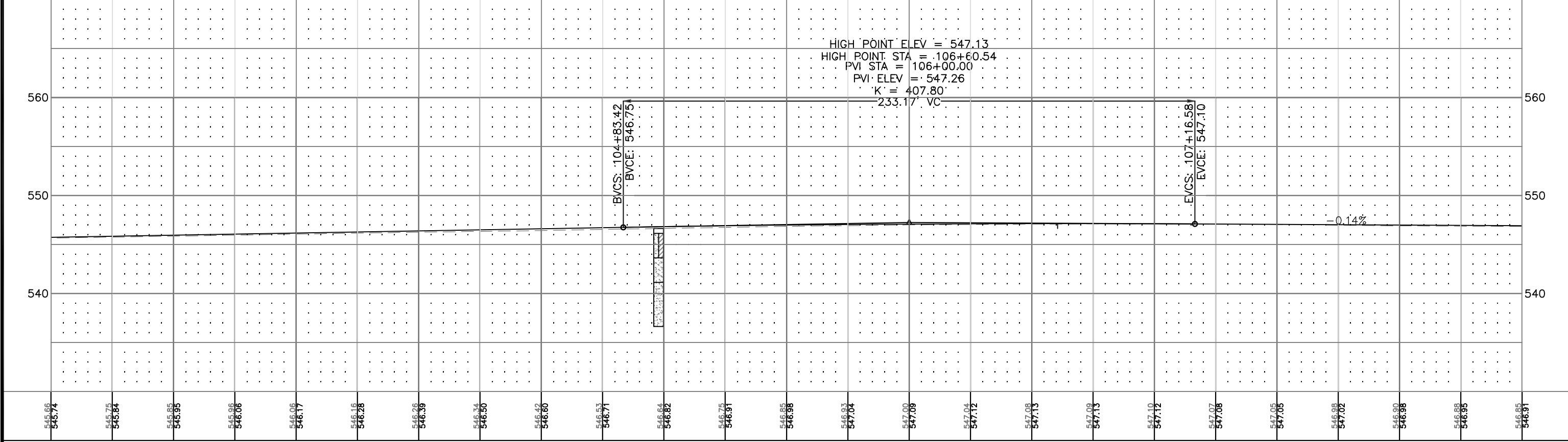
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See Sheet D.01

See Sheet D.03



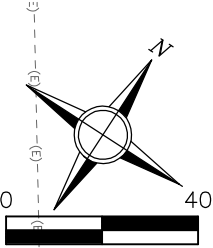
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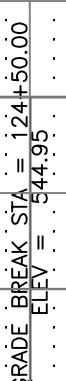
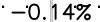
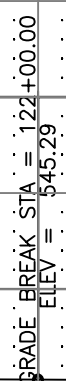
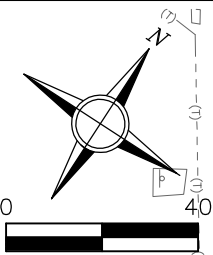


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Client: City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142	ANDERSON BOGERT	Drawn By: MJP Date: 5-21-2015 Project No. 214009	Approved By: JCD Scale: See Bar Scale	Muscatine Municipal Airport Reconstruct Runway 6/24 and Associated Taxiways	Runway Plan and Profile	SHEET NO. D.02 OF D.11
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ANDERSON  BOGERT

Drawn By: MJP Approved By: JCD
Date: 5-21-2015 Scale: See Bar Scale
Project No. 214009

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

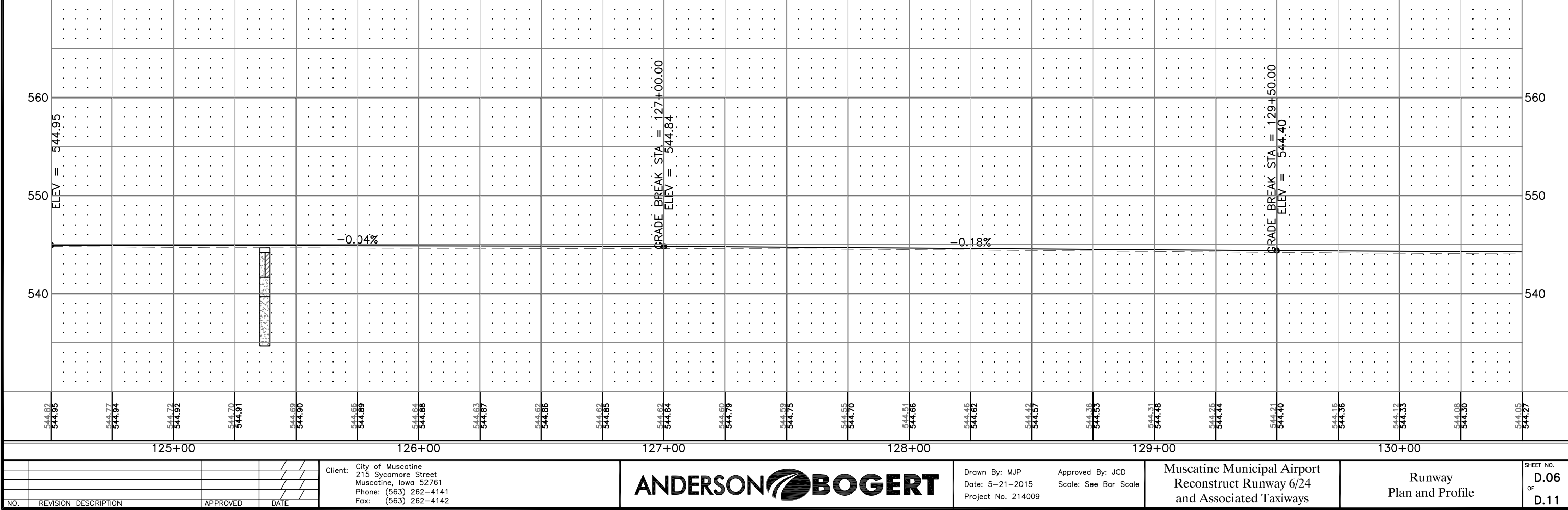
Runway Plan and Profile

SHEET NO.
D.05
OF
D.11

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See Sheet D.05

See Sheet D.07



Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

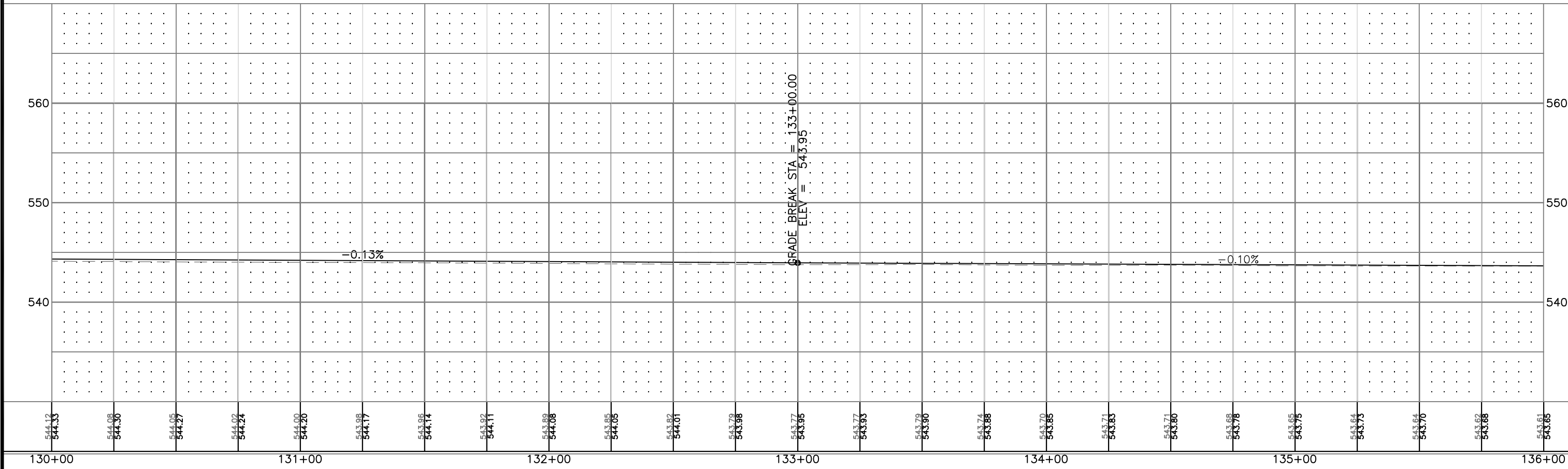
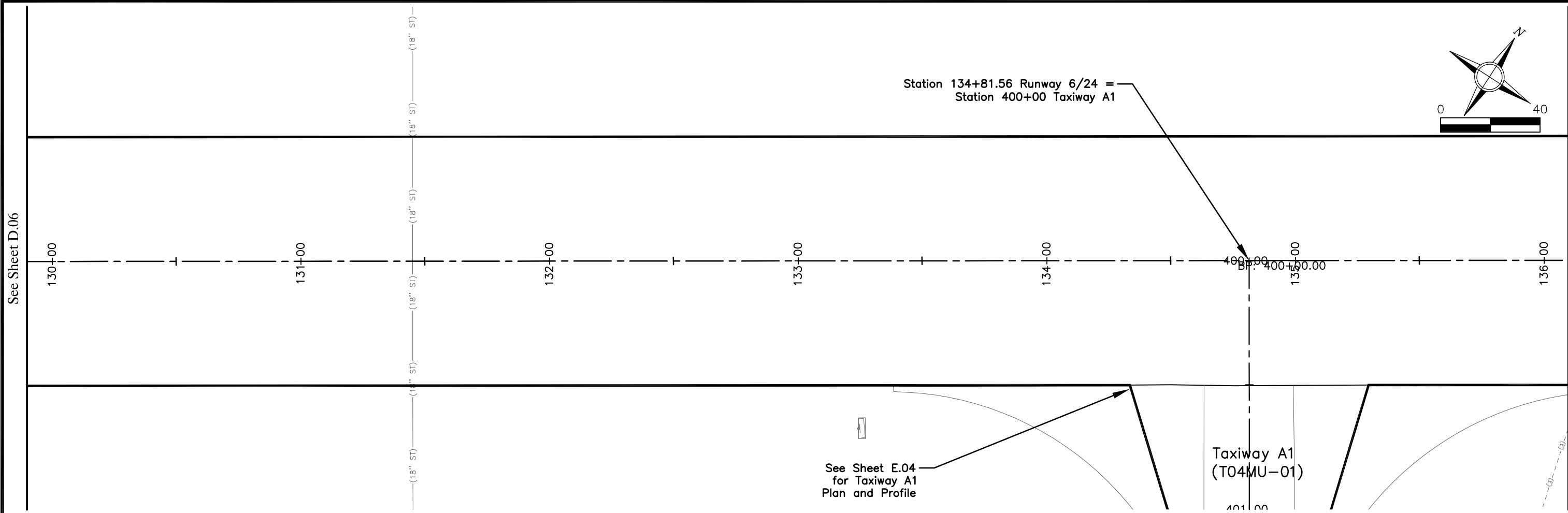
Runway
Plan and Profile

SHEET NO.
D.06
OF
D.11

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See Sheet D.06

See Sheet D.08

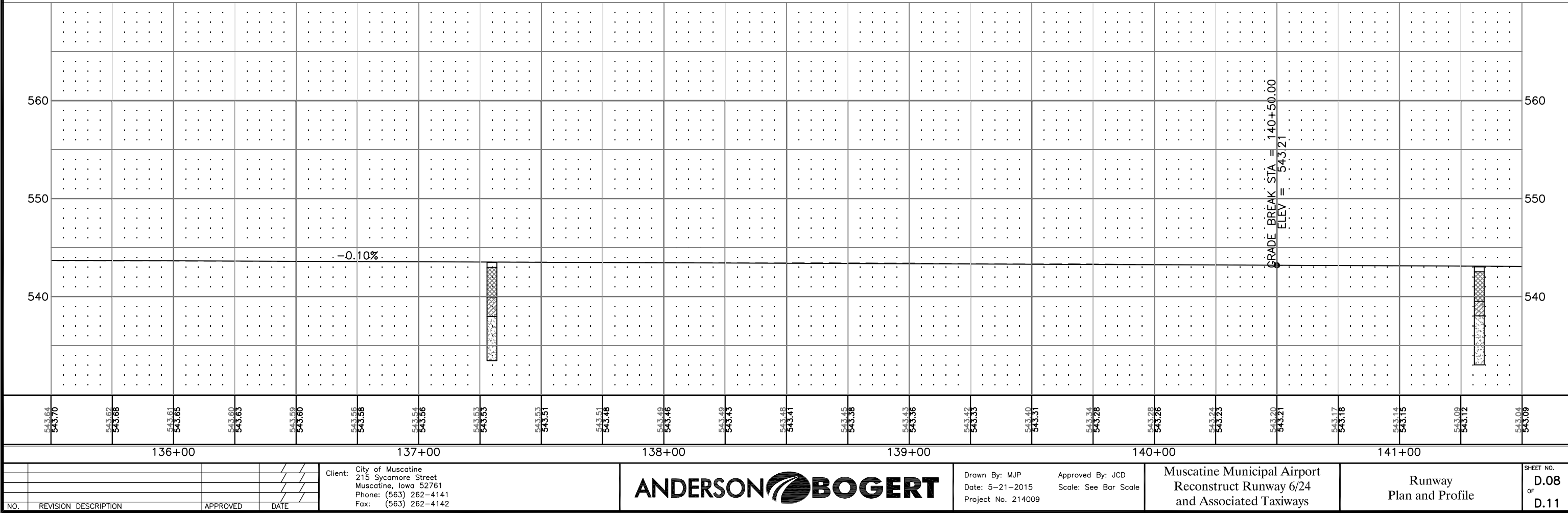


						Client: City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142		Drawn By: MJP Date: 5-21-2015 Project No. 214009	Approved By: JCD Scale: See Bar Scale	Muscatine Municipal Airport Reconstruct Runway 6/24 and Associated Taxiways	Runway Plan and Profile	SHEET D. OF D.
NO.	REVISION	DESCRIPTION	APPROVED	DATE								

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See Sheet D.07

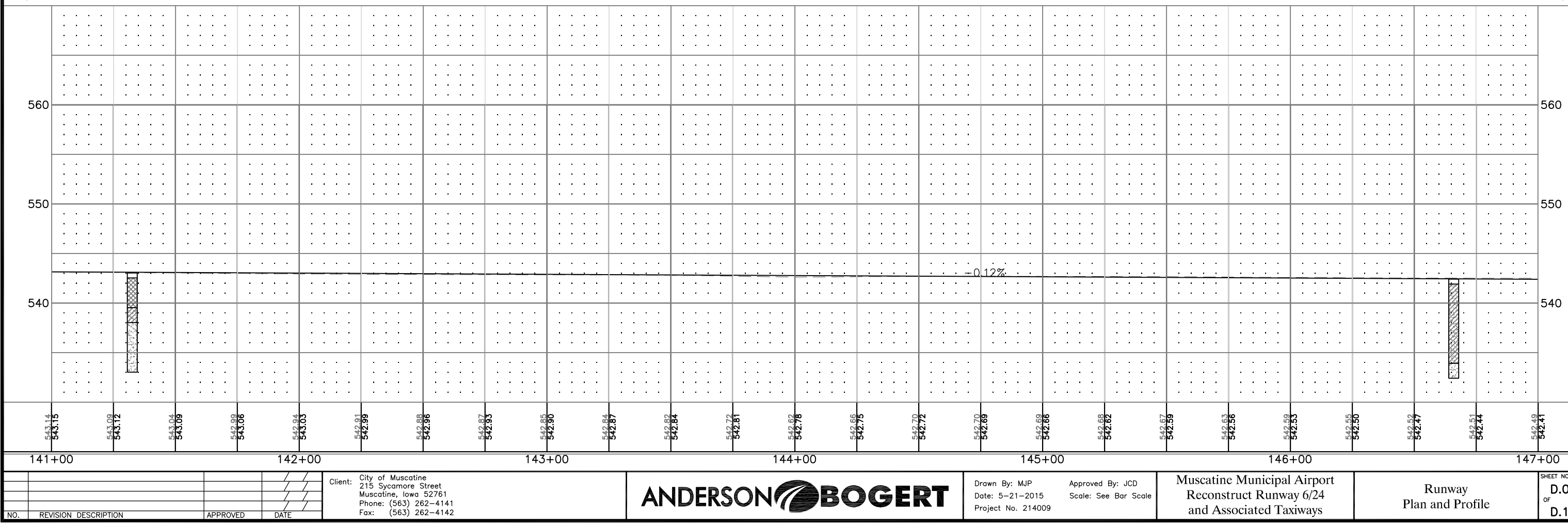
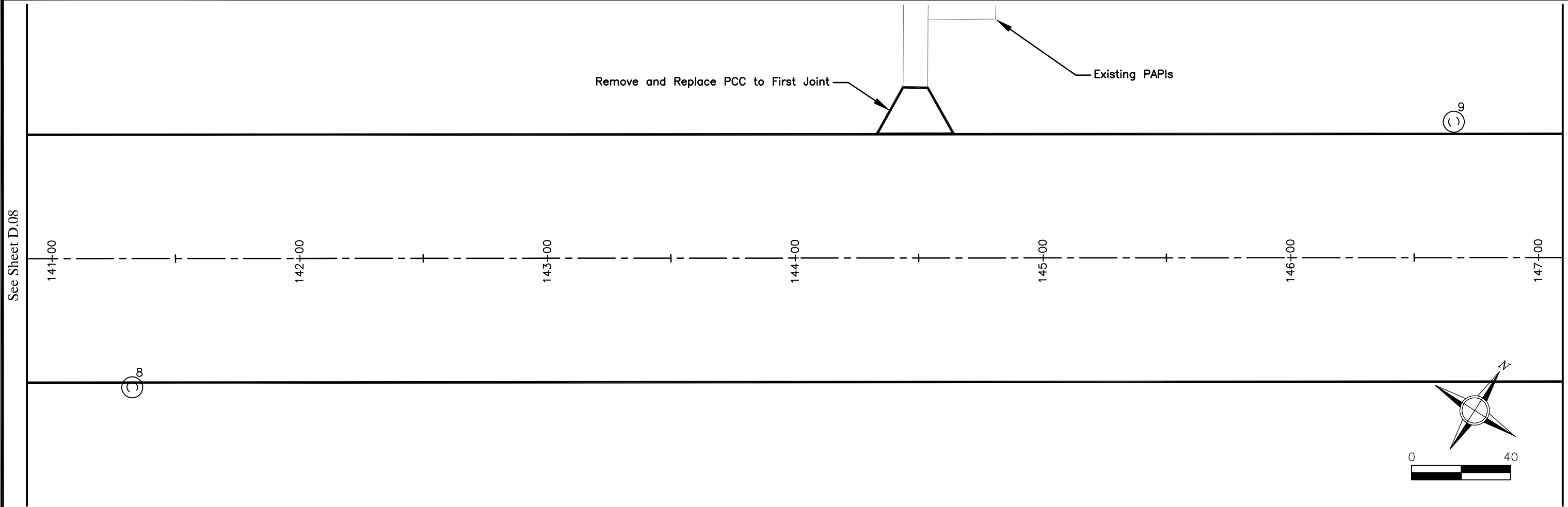
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See Sheet D.08

See Sheet D.10



NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

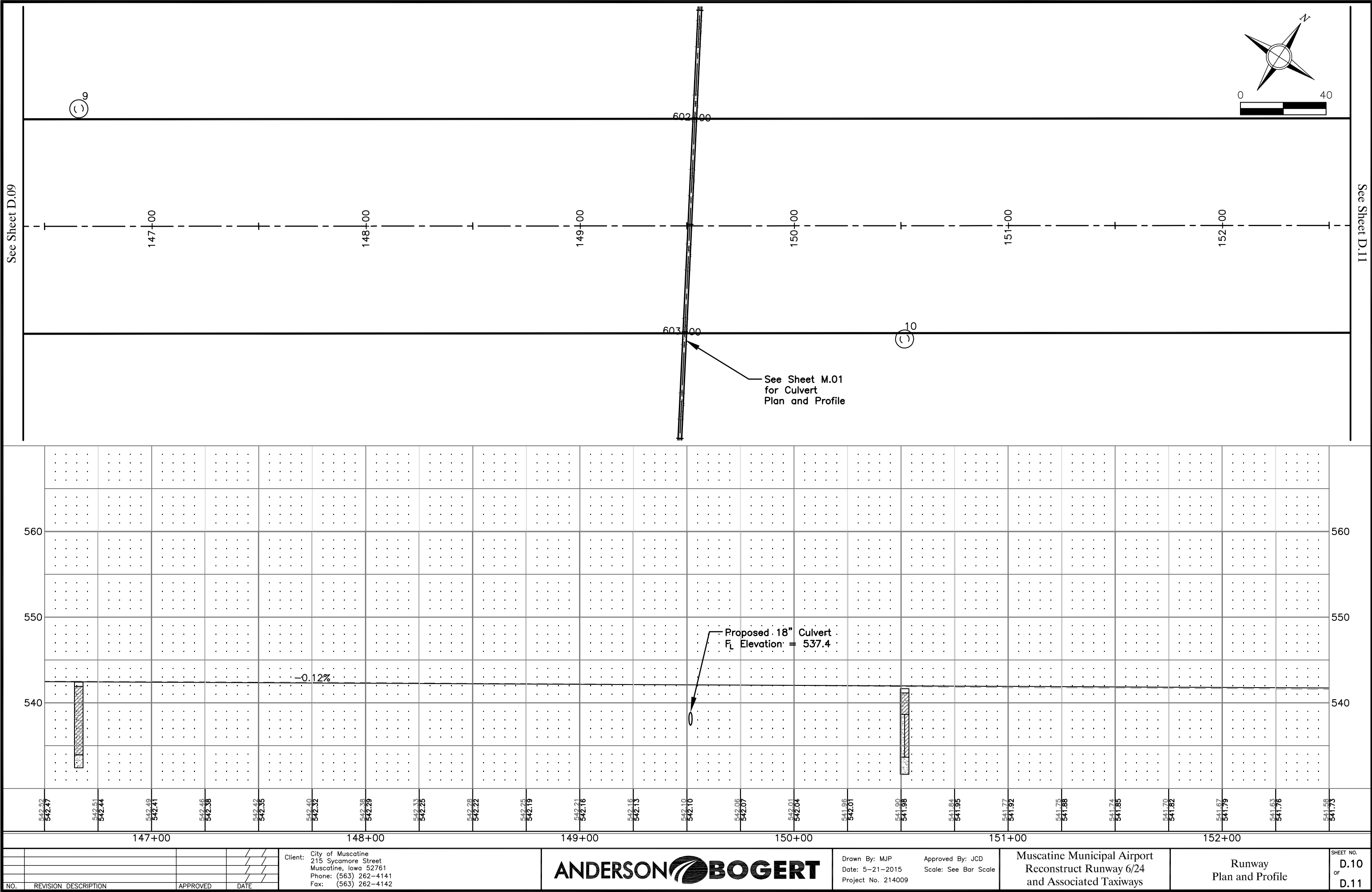
Runway
Plan and Profile

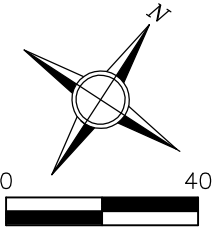
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OF
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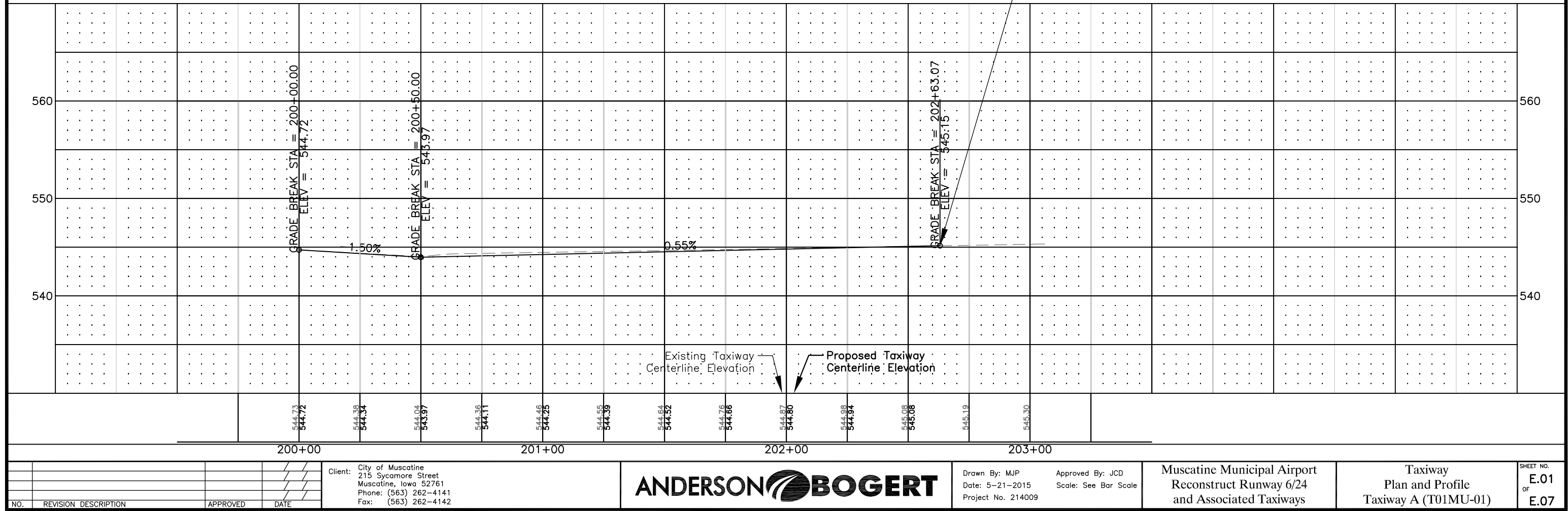
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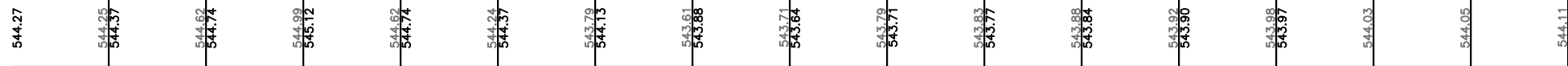
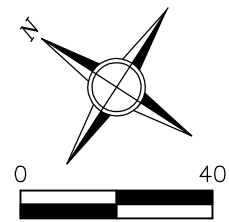
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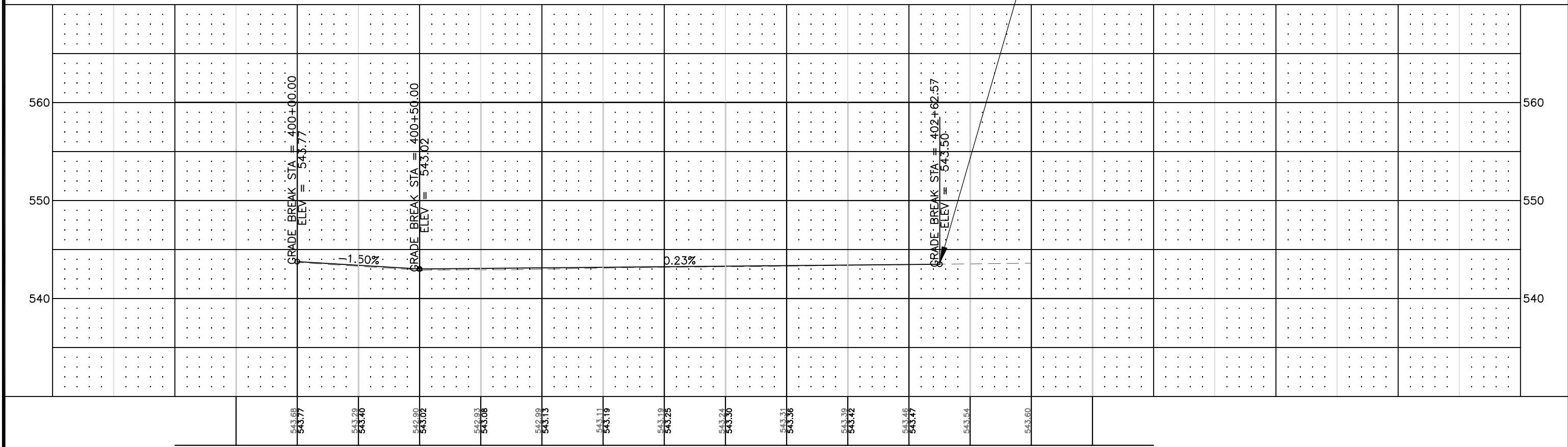
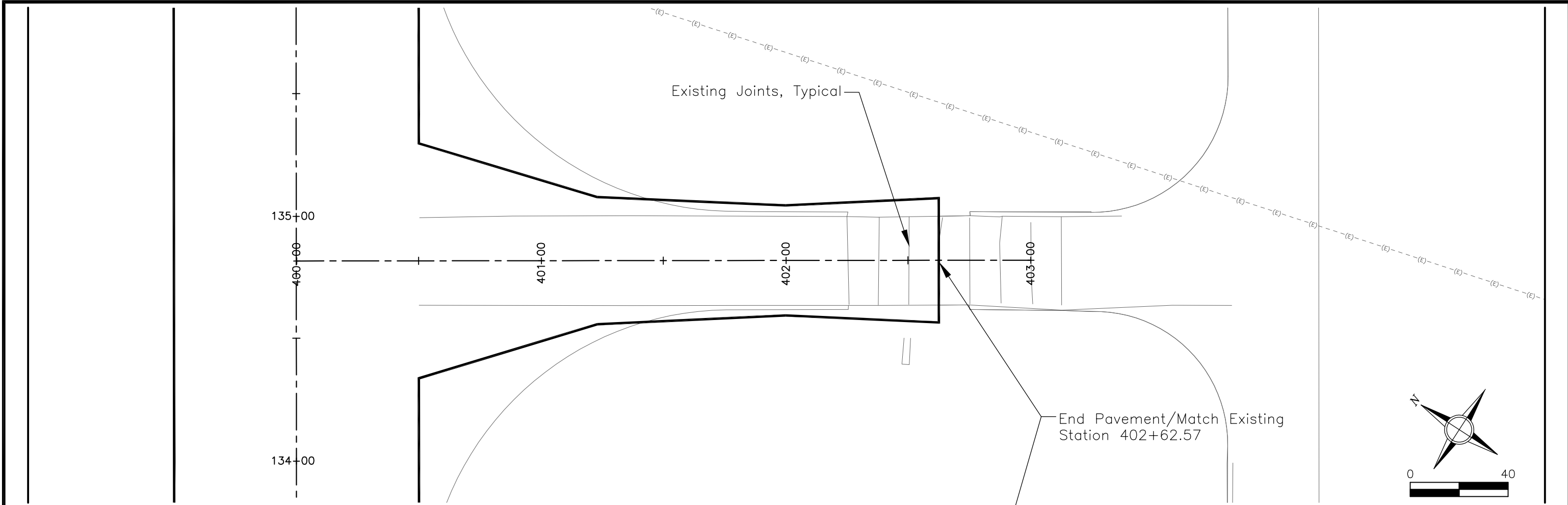




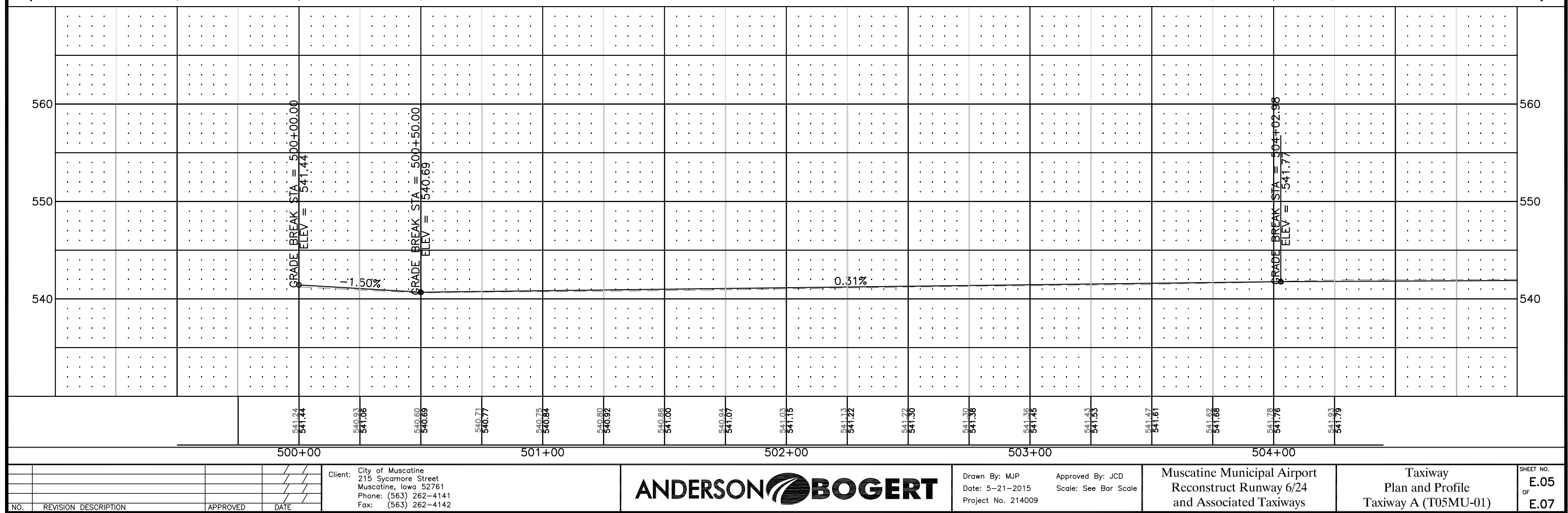
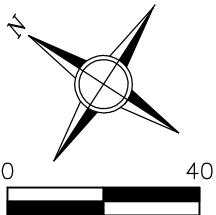


					Client: City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142		Drawn By: MJP Date: 5-21-2015 Project No. 214009	Approved By: JCD Scale: See Bar Scale	Muscatine Municipal Airport Reconstruct Runway 6/24 and Associated Taxiways	Taxiway Plan and Profile Taxiway B (T02MU-01)	SHEET NO. E.03 OF E.07
NO.	REVISION	DESCRIPTION	APPROVED	DATE							

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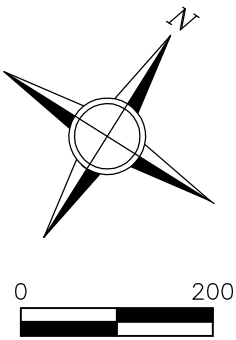
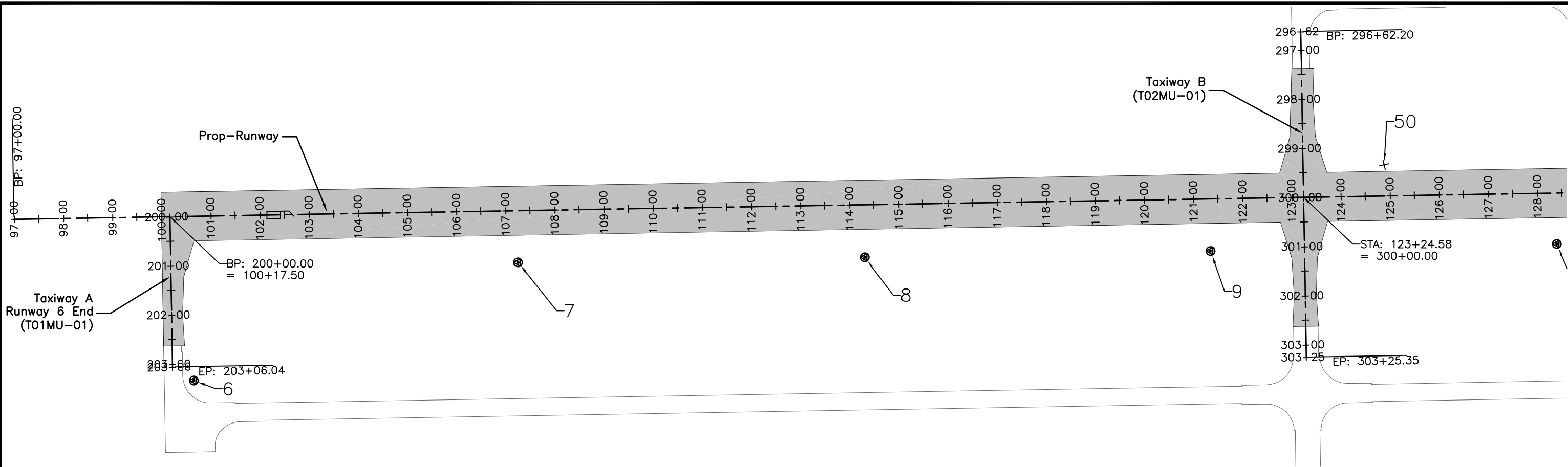
400+00					401+00					402+00					403+00									
					Client: City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142						Drawn By: MJP		Approved By: JCD		Muscatine Municipal Airport Reconstruct Runway 6/24 and Associated Taxiways		Taxiway Plan and Profile Taxiway A1 (T04MU-01)		SHEET NO. E.04 OF E.07					
				Date: 5-21-2015							Scale: See Bar Scale													
NO.	REVISION	DESCRIPTION	APPROVED	DATE																				







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ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Prop-Runway	BP	97+00.00	504847.878	2283951.502
	EP	157+67.51	508157.051	2289037.173

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Taxiway A Runway 6 End (T01MU-01)	BP	200+00.00	505021.040	2284217.624
	EP	203+06.04	504764.452	2284384.428

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Taxiway B (T02MU-01)	BP	296+62.20	506562.437	2285967.140
	EP	303+25.35	506006.601	2286328.814

SURVEY CONTROL DATA				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	504764.091	2284435.992	544.78	CP 1/2 REBAR
7	505318.204	2284867.064	545.22	CP 1/2 REBAR
8	505701.62	2285459.364	543.82	CP 1/2 REBAR
9	506086.181	2286049.105	543.14	CP 1/2 REBAR
10	506472.376	228638.323	543.29	CP 1/2 REBAR
11	506840.148	2287243.559	541.93	CP 1/2 REBAR
12	507245.716	2287816.741	541.04	CP 1/2 REBAR
13	507630.924	2288406.731	541.12	CP 1/2 REBAR
14	507751.873	2288901.934	540.99	CP 1/2 REBAR
50	506422.441	2286255.068	543.66	BM X IN PCC
51	507773.093	2288907.746	540.88	BM X IN PCC
327	505450.97	2283910.13	540.08	GPSMON327

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



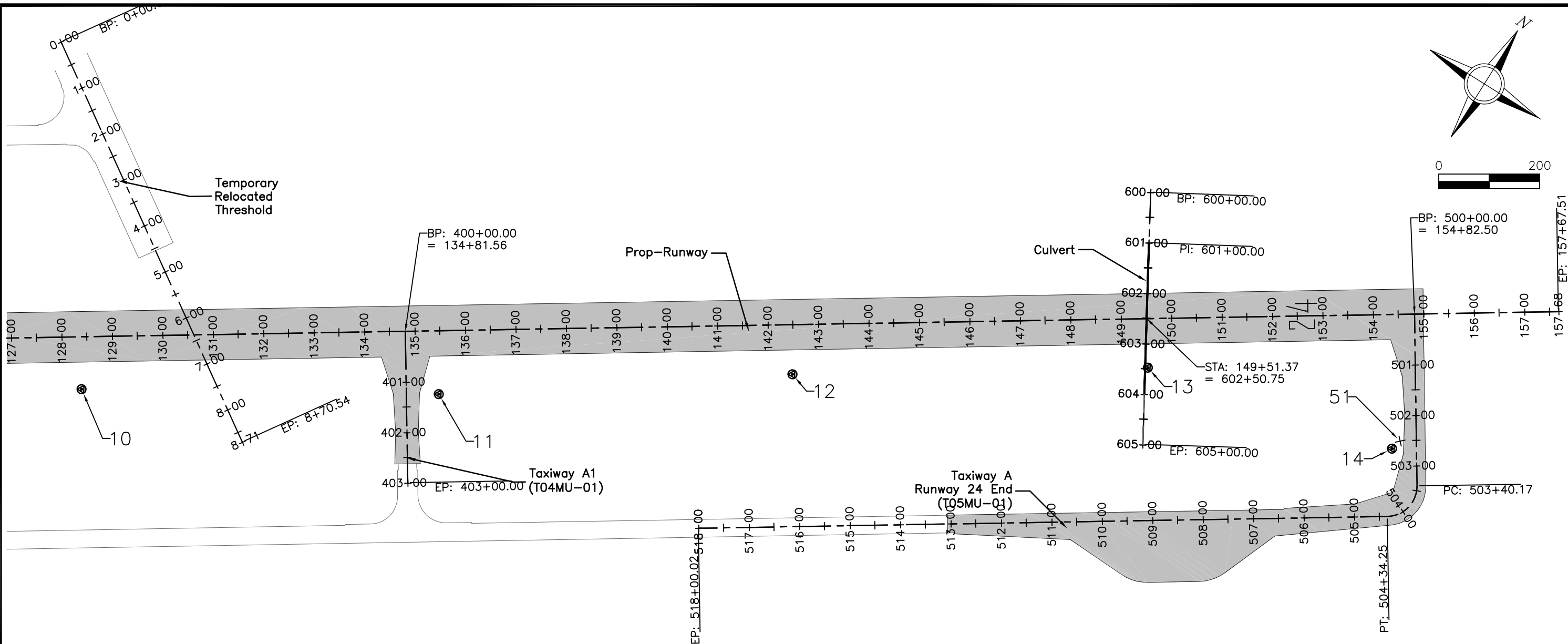
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Survey Control

SHEET NO.
G.01
OF
G.02

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ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Prop-Runway	BP	97+00.00	504847.878	2283951.502
	EP	157+67.51	508157.051	2289037.173

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Taxiway A1 (T04MU-01)	BP	400+00.00	506910.312	2287121.134
	EP	403+00.00	506658.888	2287284.799

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Culvert	BP	600+00.000	507928.640	2288226.952
	PI	601+00.000	507842.037	2288276.952
	EP	605+00.000	507496.821	2288479.007

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Taxiway A Runway 24 End (T05MU-01)	BP	500+00.00	508001.610	2288798.281
	PC	503+40.17	507715.967	2288983.014
	PT	504+34.25	507633.096	2288965.358
	EP	518+00.02	506888.168	2287820.631

ALIGNMENT DATA				
ALIGNMENT NAME	POINT	STATION	NORTHING	EASTING
Temporary Relocated Threshold	BP	0+00.00	507034.163	2286238.130
	EP	8+70.54	506553.052	2286963.645

SURVEY CONTROL DATA				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	504764.091	2284435.992	544.78	CP 1/2 REBAR
7	505318.204	2284867.064	545.22	CP 1/2 REBAR
8	505701.62	2285459.364	543.82	CP 1/2 REBAR
9	506086.181	2286049.105	543.14	CP 1/2 REBAR
10	506472.376	228638.323	543.29	CP 1/2 REBAR
11	506840.148	2287243.559	541.93	CP 1/2 REBAR
12	507245.716	2287816.741	541.04	CP 1/2 REBAR
13	507630.924	2288406.731	541.12	CP 1/2 REBAR
14	507751.873	2288901.934	540.99	CP 1/2 REBAR
50	506422.441	2286255.068	543.66	BM X IN PCC
51	507773.093	2288907.746	540.88	BM X IN PCC
327	505450.97	2283910.13	540.08	GPSMON327

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

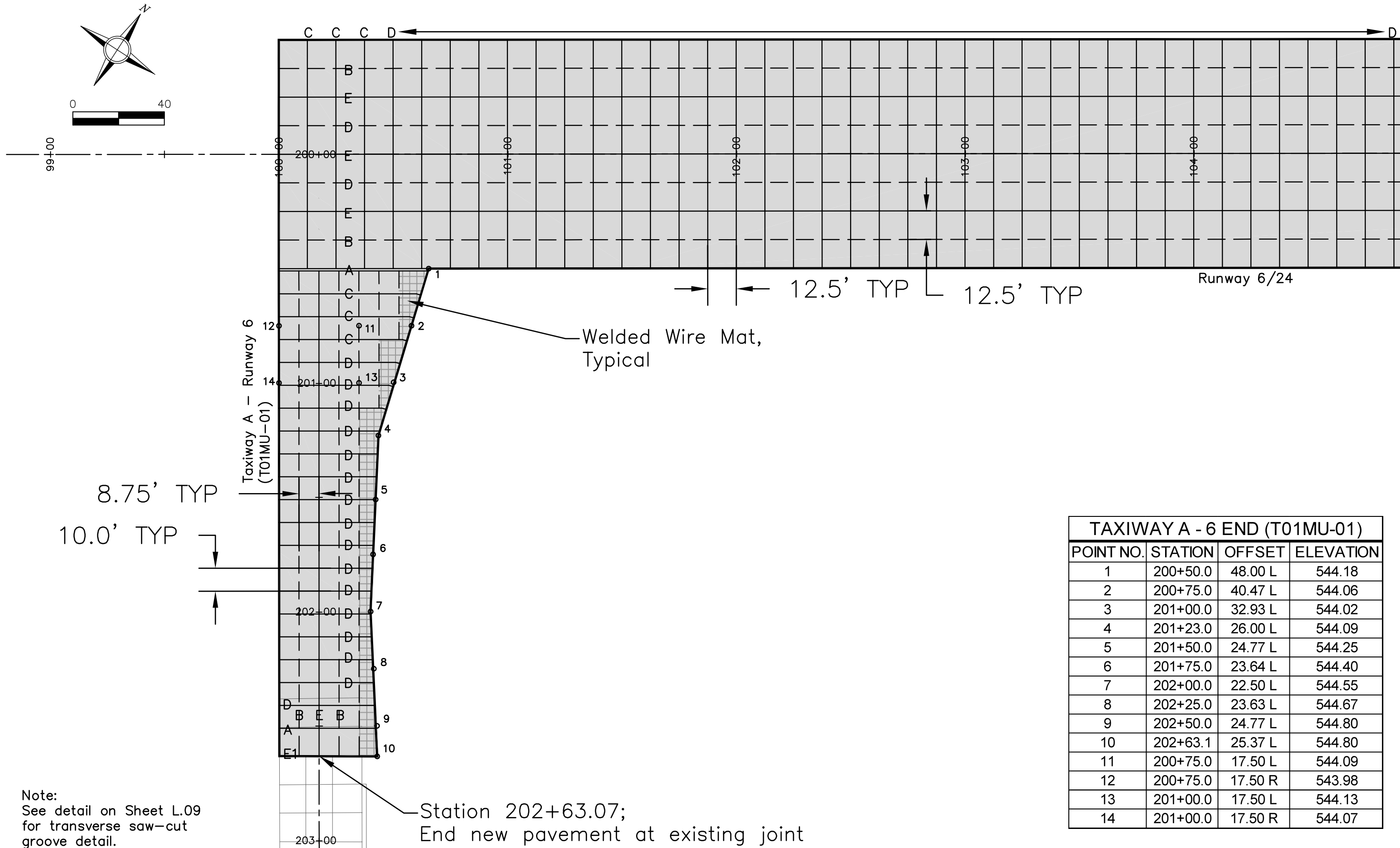
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Survey Control

SHEET NO.
G.02
OF
G.02

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TAXIWAY A - 6 END (T01MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	200+50.0	48.00 L	544.18
2	200+75.0	40.47 L	544.06
3	201+00.0	32.93 L	544.02
4	201+23.0	26.00 L	544.09
5	201+50.0	24.77 L	544.25
6	201+75.0	23.64 L	544.40
7	202+00.0	22.50 L	544.55
8	202+25.0	23.63 L	544.67
9	202+50.0	24.77 L	544.80
10	202+63.1	25.37 L	544.80
11	200+75.0	17.50 L	544.09
12	200+75.0	17.50 R	543.98
13	201+00.0	17.50 L	544.13
14	201+00.0	17.50 R	544.07

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

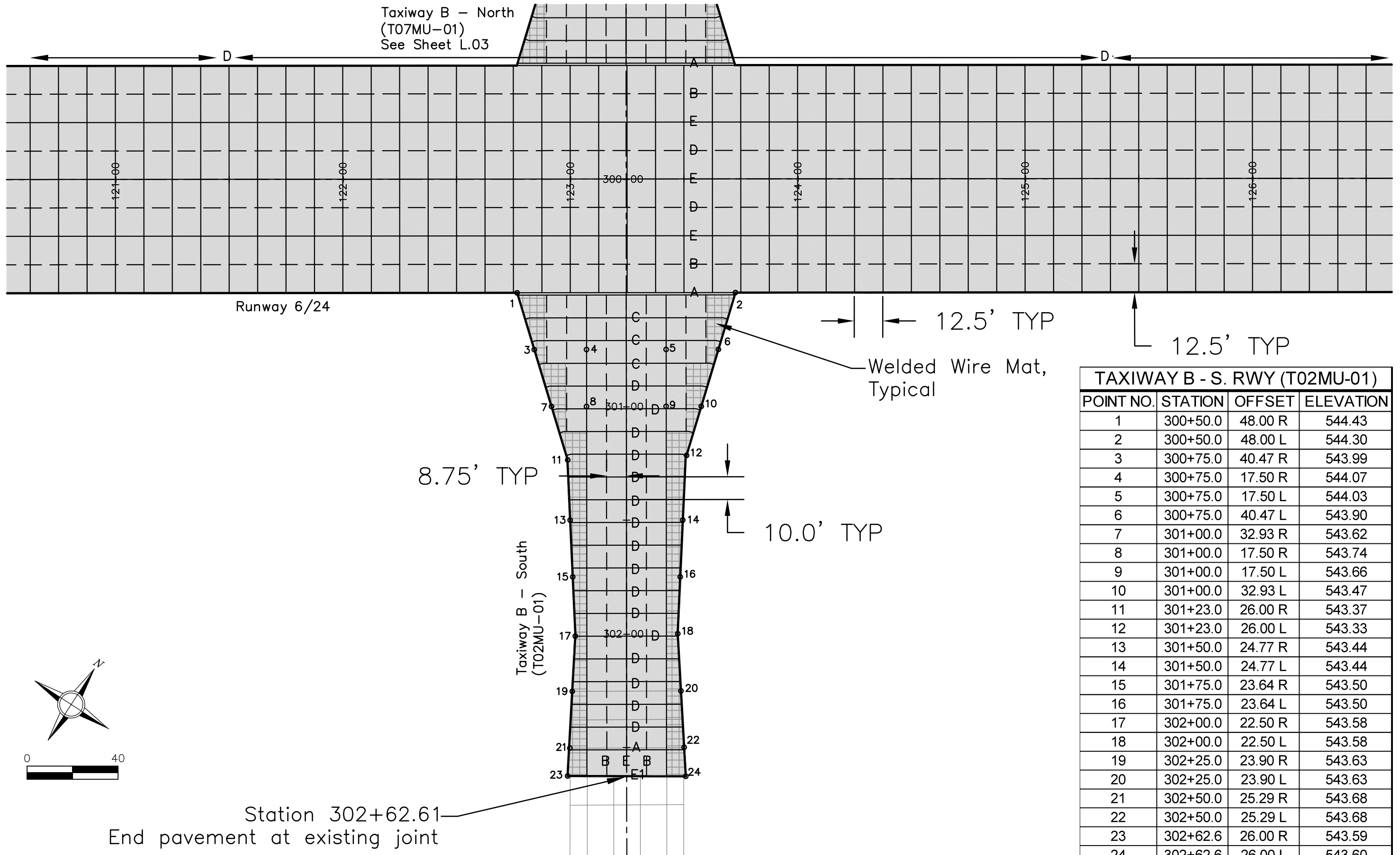
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Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

SHEET NO.
L.01
OF
L.09

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TAXIWAY B - S. RWY (T02MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	300+50.0	48.00 R	544.43
2	300+50.0	48.00 L	544.30
3	300+75.0	40.47 R	543.99
4	300+75.0	17.50 R	544.07
5	300+75.0	17.50 L	544.03
6	300+75.0	40.47 L	543.90
7	301+00.0	32.93 R	543.62
8	301+00.0	17.50 R	543.74
9	301+00.0	17.50 L	543.66
10	301+00.0	32.93 L	543.47
11	301+23.0	26.00 R	543.37
12	301+23.0	26.00 L	543.33
13	301+50.0	24.77 R	543.44
14	301+50.0	24.77 L	543.44
15	301+75.0	23.64 R	543.50
16	301+75.0	23.64 L	543.50
17	302+00.0	22.50 R	543.58
18	302+00.0	22.50 L	543.58
19	302+25.0	23.90 R	543.63
20	302+25.0	23.90 L	543.63
21	302+50.0	25.29 R	543.68
22	302+50.0	25.29 L	543.68
23	302+62.6	26.00 R	543.59
24	302+62.6	26.00 L	543.60

NO.	REVISION	DESCRIPTION	APPROVED	DATE

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Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

SHEET NO.
L.02
OF
L.09



Station 297+37.6
End pavement at existing joint

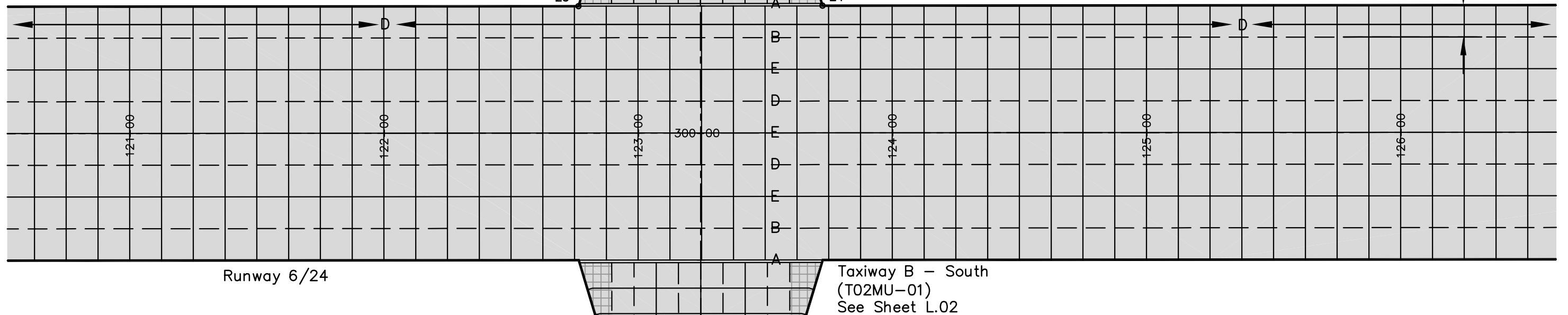
8.75' TYP

10.0' TYP

Welded Wire Mat,
Typical

12.5' TYP 12.5' TYP

TAXIWAY B - N. RWY (T07MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	297+37.6	19.51 R	543.31
2	297+37.6	25.40 L	543.21
3	297+50.0	20.09 R	543.32
4	297+50.0	24.83 L	543.25
5	297+75.0	21.25 R	543.41
6	297+75.0	23.66 L	543.36
7	298+00.0	22.42 R	543.50
8	298+00.0	22.50 L	543.47
9	298+25.0	23.58 R	543.60
10	298+25.0	23.64 L	543.56
11	298+50.0	24.74 R	543.65
12	298+50.0	24.77 L	543.65
13	298+77.0	26.00 R	543.75
14	298+77.0	26.00 L	543.75
15	299+00.0	32.94 R	543.90
16	299+00.0	17.50 R	544.03
17	299+00.0	17.50 L	543.95
18	299+00.0	32.93 L	543.76
19	299+25.0	40.47 R	544.29
20	299+25.0	17.50 R	544.21
21	299+25.0	17.50 L	544.17
22	299+25.0	40.46 L	544.04
23	299+50.0	48.00 R	544.43
24	299+50.0	48.00 L	544.30



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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

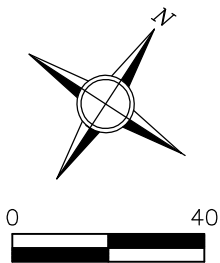
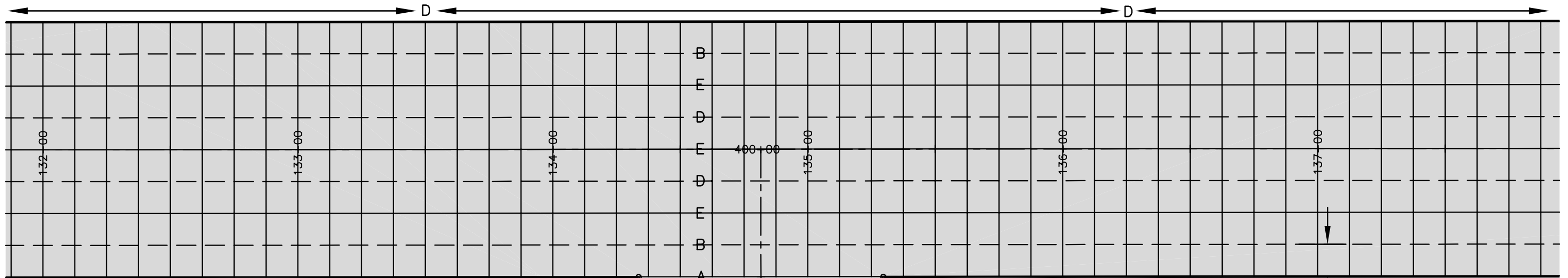
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

SHEET NO.
L.03
OF
L.09

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Welded Wire Mat,
Typical

12.5' TYP 12.5' TYP

8.75' TYP

10.0' TYP

Taxiway A1
(T04MU-01)

Station 402+62.57
End pavement at existing joint

TAXIWAY A1 (T04MU-01)

POINT NO.	STATION	OFFSET	ELEVATION
1	400+50.0	48.00 R	543.07
2	400+50.0	48.00 L	542.97
3	400+75.0	40.48 R	542.92
4	400+75.0	17.50 R	543.01
5	400+75.0	17.50 L	542.95
6	400+75.0	40.48 L	542.79
7	401+00.0	32.94 R	542.87
8	401+00.0	17.50 R	542.99
9	401+00.0	17.50 L	542.91
10	401+00.0	32.94 L	542.71
11	401+23.0	26.00 R	542.86
12	401+23.0	26.00 L	542.86
13	401+50.0	24.77 R	542.94
14	401+50.0	24.77 L	542.92
15	401+75.0	23.64 R	543.00
16	401+75.0	23.64 L	543.00
17	402+00.0	22.50 R	543.10
18	402+00.0	22.50 L	543.08
19	402+25.0	23.66 R	543.15
20	402+25.0	23.66 L	543.11
21	402+50.0	24.82 R	543.20
22	402+50.0	24.82 L	543.16
23	402+62.7	25.40 R	543.15
24	402+62.6	25.40 L	543.14

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

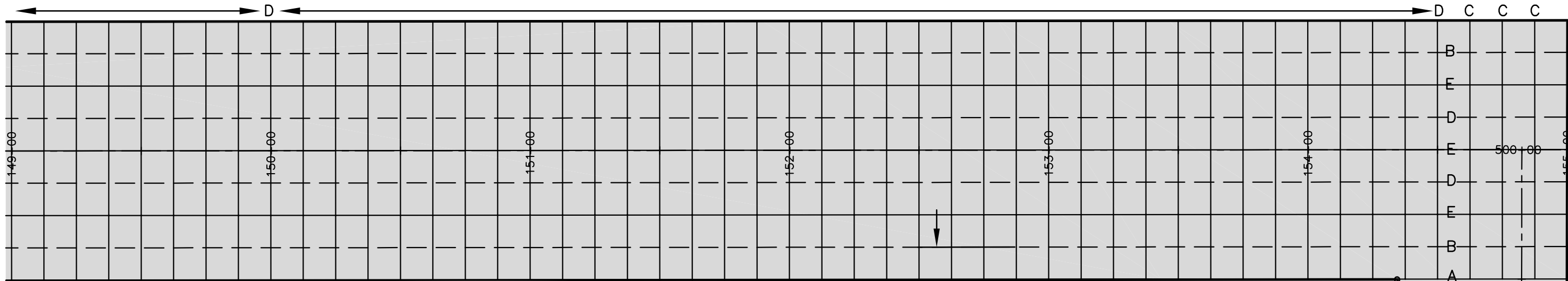
Pavement
Jointing
Plan

SHEET NO.
L.04
of
L.09

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

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12.5' TYP

12.5' TYP

10.0' TYP

8.75' TYP

Welded Wire Mat,
Typical

Taxiway A - Runway 24
(T05MU-01)

TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	500+50.0	48.00 R	540.75
2	500+75.0	40.48 R	540.63
3	500+75.0	17.50 R	540.71
4	500+75.0	17.50 L	540.68
5	501+00.0	32.94 R	540.58
6	501+00.0	17.50 R	540.70
7	501+00.0	17.50 L	540.69
8	501+23.0	26.00 R	540.58
9	501+50.0	24.77 R	540.69
10	501+75.0	23.64 R	540.77
11	502+00.0	22.50 R	540.87
12	502+25.0	23.64 R	540.93
13	502+50.0	24.77 R	540.98
14	502+77.0	26.00 R	541.02
15	503+00.0	32.75 R	541.04

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215 Sycamore Street
Muscatine, Iowa 52761
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Drawn By: MJP
Date: 5-21-2015
Project No. 214009

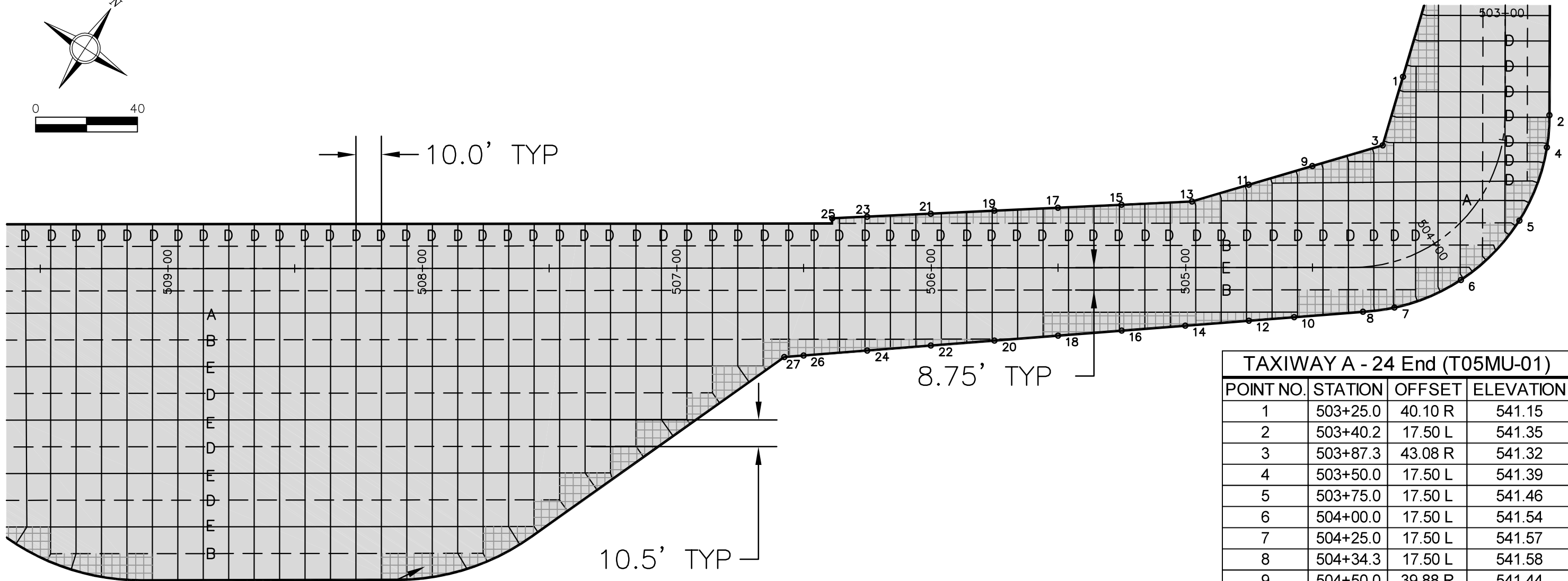
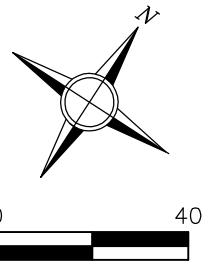
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

SHEET NO.
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OF
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TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	503+25.0	40.10 R	541.15
2	503+40.2	17.50 L	541.35
3	503+87.3	43.08 R	541.32
4	503+50.0	17.50 L	541.39
5	503+75.0	17.50 L	541.46
6	504+00.0	17.50 L	541.54
7	504+25.0	17.50 L	541.57
8	504+34.3	17.50 L	541.58
9	504+50.0	39.88 R	541.44
10	504+57.2	19.50 L	541.60
11	504+75.0	32.54 R	541.53
12	504+75.0	20.88 L	541.62
13	504+97.3	26.00 R	541.52
14	505+00.0	22.81 L	541.63
15	505+25.0	24.73 R	541.65
16	505+25.0	24.74 L	541.65
17	505+50.0	23.58 R	541.68
18	505+50.0	26.67 L	541.67
19	505+75.0	22.44 R	541.72
20	505+75.0	28.61 L	541.62
21	506+00.0	21.29 R	541.76
22	506+00.0	30.54 L	541.63
23	506+25.0	20.14 R	541.80
24	506+25.0	32.47 L	541.63
25	506+38.8	19.50 R	541.84
26	506+50.0	34.40 L	541.64
27	506+54.6	34.99 L	541.65

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Client: City of Muscatine
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Muscatine, Iowa 52761
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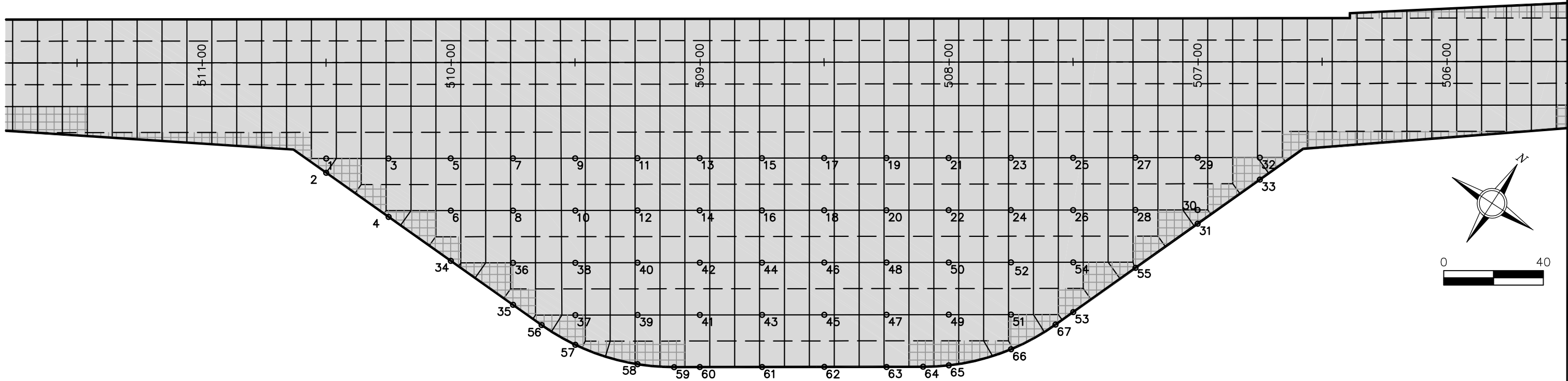
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

SHEET NO.
L.06
OF
L.09

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TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	510+50.0	38.50 L	542.19
2	510+50.0	44.24 L	542.15
3	510+25.0	38.50 L	542.05
4	510+25.0	61.96 L	541.76
5	510+00.0	38.50 L	541.96
6	510+00.0	59.50 L	541.65
7	509+75.0	38.50 L	541.93
8	509+75.0	59.50 L	541.62
9	509+50.0	38.50 L	541.96
10	509+50.0	59.50 L	541.69
11	509+25.0	38.50 L	542.03
12	509+25.0	59.50 L	541.89
13	509+00.0	38.50 L	542.00
14	509+00.0	59.50 L	541.86
15	508+75.0	38.50 L	541.97
16	508+75.0	59.50 L	541.83
17	508+50.0	38.50 L	541.94
18	508+50.0	59.50 L	541.80
19	508+25.0	38.50 L	541.91
20	508+25.0	59.50 L	541.77
21	508+00.0	38.50 L	541.88
22	508+00.0	59.50 L	541.74

TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
23	507+75.0	38.50 L	541.85
24	507+75.0	59.50 L	541.71
25	507+50.0	38.50 L	541.82
26	507+50.0	59.50 L	541.68
27	507+25.0	38.50 L	541.79
28	507+25.0	59.50 L	541.65
29	507+00.0	38.50 L	541.76
30	507+00.0	59.50 L	541.62
31	507+00.0	65.04 L	541.58
32	506+75.0	38.50 L	541.73
33	506+75.0	47.32 L	541.67
34	510+00.0	79.68 L	541.35
35	509+75.0	97.40 L	541.05
36	509+75.0	80.50 L	541.30
37	509+50.0	101.50 L	541.17
38	509+50.0	80.50 L	541.43
39	509+25.0	101.50 L	541.59
40	509+25.0	80.50 L	541.74
41	509+00.0	101.50 L	541.56
42	509+00.0	80.50 L	541.71
43	508+75.0	101.50 L	541.53
44	508+75.0	80.50 L	541.68

TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
45	508+50.0	101.50 L	541.50
46	508+50.0	80.50 L	541.65
47	508+25.0	101.50 L	541.47
48	508+25.0	80.50 L	541.62
49	508+00.0	101.50 L	541.44
50	508+00.0	80.50 L	541.59
51	507+75.0	101.50 L	541.41
52	507+75.0	80.50 L	541.56
53	507+50.0	100.49 L	541.39
54	507+50.0	80.50 L	541.53
55	507+25.0	82.95 L	541.49
56	509+63.5	105.54 L	541.04
57	509+50.0	113.48 L	541.02
58	509+25.0	121.30 L	541.45
59	509+10.3	122.50 L	541.43
60	509+00.0	122.50 L	541.41
61	508+75.0	122.50 L	541.39
62	508+50.0	122.50 L	541.36
63	508+25.0	122.50 L	541.33
64	508+10.3	122.50 L	541.31
65	508+00.0	121.87 L	541.30
66	507+75.0	115.44 L	541.31
67	507+57.1	105.54 L	541.37



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

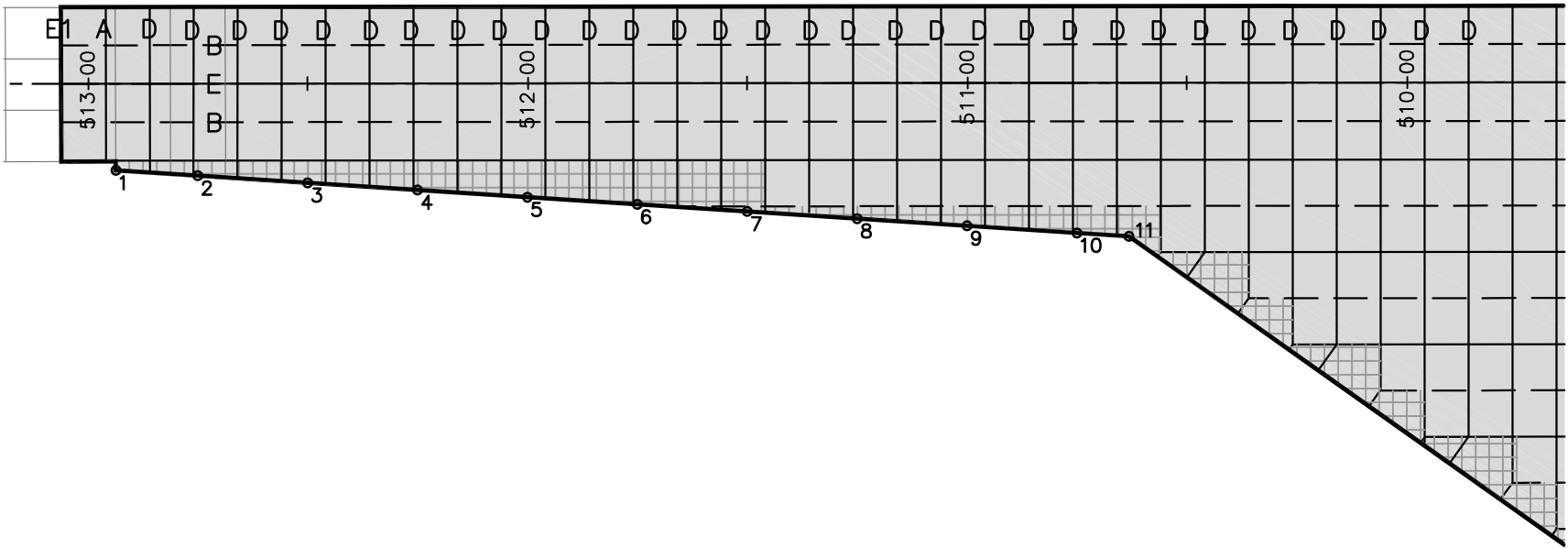
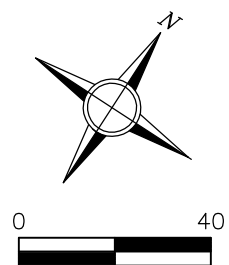
Pavement
Jointing
Plan

SHEET NO.
L.07
OF
L.09

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
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TAXIWAY A - 24 End (T05MU-01)			
POINT NO.	STATION	OFFSET	ELEVATION
1	512+93.6	19.50 L	542.73
2	512+75.0	20.90 L	542.59
3	512+50.0	22.55 L	542.54
4	512+25.0	24.20 L	542.50
5	512+00.0	25.85 L	542.46
6	511+75.0	27.51 L	542.42
7	511+50.0	29.16 L	542.38
8	511+25.0	30.81 L	542.34
9	511+00.0	32.46 L	542.29
10	510+75.0	34.11 L	542.25
11	510+63.2	34.90 L	542.24

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Muscatine, Iowa 52761
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Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

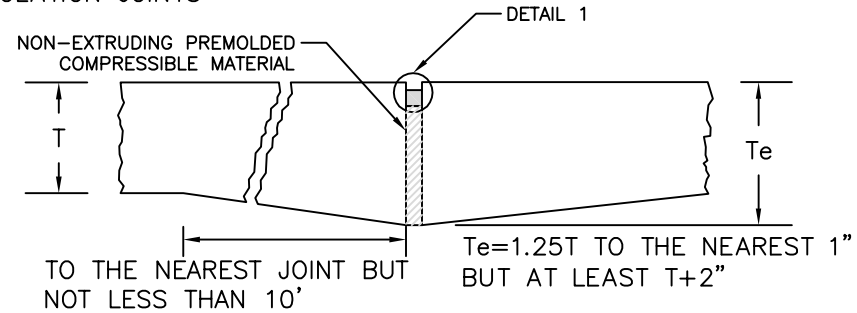
Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement
Jointing
Plan

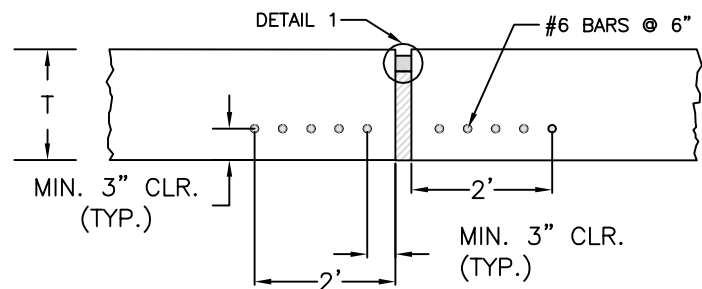
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L.08
OF
L.09

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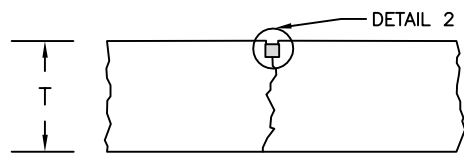
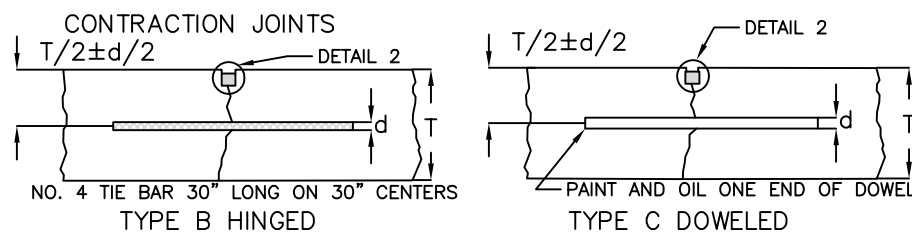
ISOLATION JOINTS



TYPE A THICKENED EDGE

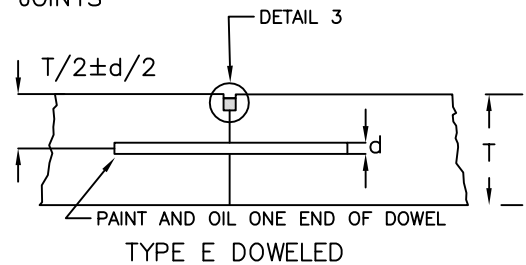


TYPE A-1 REINFORCED



TYPE D DUMMY

CONSTRUCTION JOINTS

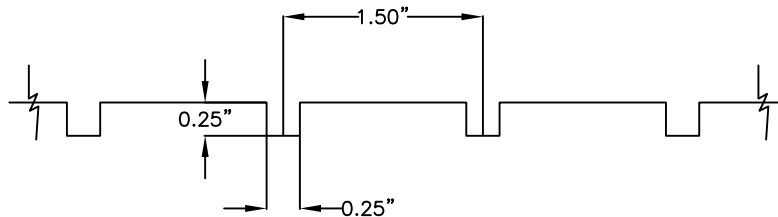


TYPE E Doweled

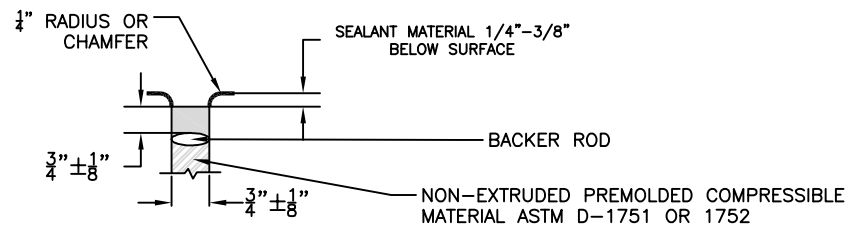
- NOTES:
1. SHADED AREA IS JOINT SEALANT.
 2. GROOVE MUST BE FORMED BY SAWING.

SAW CUT GROOVE

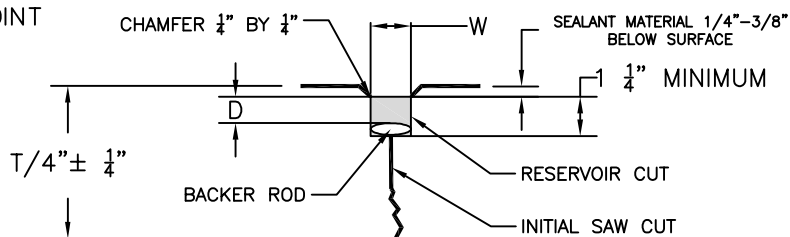
Saw cut grooves in the runway shall be $\frac{1}{4}$ " wide by $\frac{1}{4}$ " deep. Refer to Item P-621 in the project manual for additional information. The grooves must be continuous for the entire runway length. They shall be saw cut to 12.5' from the runway pavement edge.



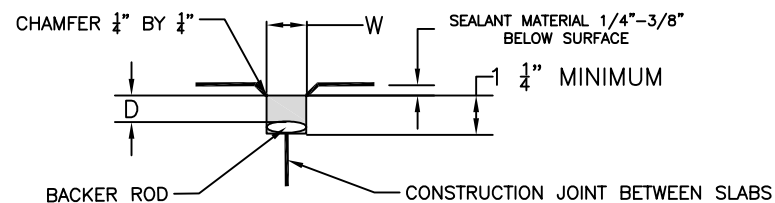
DETAIL 1 ISOLATION JOINT



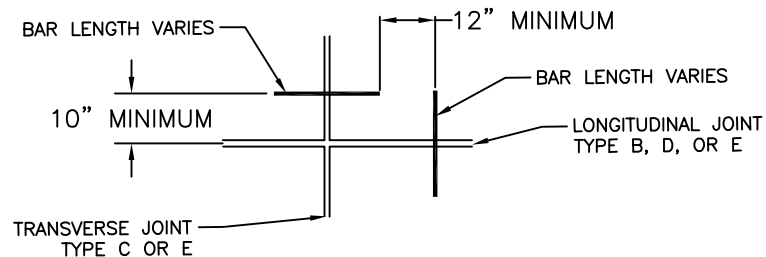
DETAIL 2 CONTRACTION JOINT



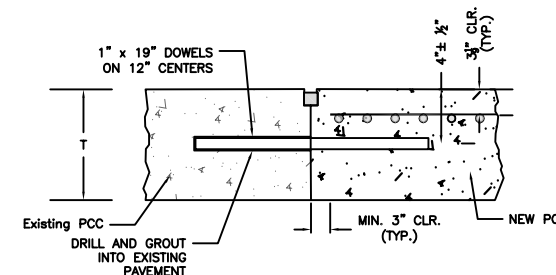
DETAIL 3 CONSTRUCTION JOINT



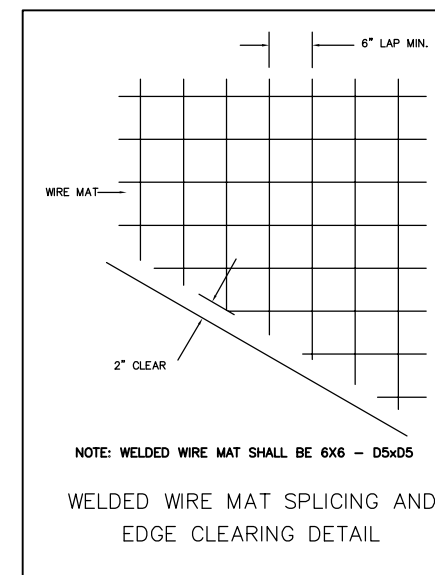
PLAN VIEW POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E



- NOTES:
1. SEALANT RESERVOIR SIZED TO PROVIDE PROPER SHAPE FACTOR, W/D. FIELD POURED AND PERFORMED SEALANTS REQUIRE DIFFERENT SHAPE FACTORS FOR OPTIMUM PERFORMANCE.
 2. BACKER ROD MATERIAL MUST BE COMPATIBLE WITH THE TYPE OF SEALANT USED AND SIZED TO PROVIDE THE DESIRED SHAPE FACTOR.
 3. RECESS SEALER $\frac{3}{8}$ INCHES TO $\frac{1}{2}$ INCHES FOR JOINTS PERPENDICULAR TO RUNWAY GROOVES.



TYPE E1 - Doweled Construction Joint
(AT EXISTING TIE-IN PAVEMENT)



WELDED WIRE MAT SPLICING AND
EDGE CLEARING DETAIL

Thickness of Slab	Diameter	Length	Spacing
6 in	3/4 in	18 in	12 in
8 in	1 in	19 in	12 in

DIMENSIONS AND SPACING
OF STEEL DOWELS

- NOTES:
1. CONTRACTOR REQUIRED TO DRILL HOLES FOR PLACEMENT OF ALL DOWEL BARS AT CONSTRUCTION JOINTS, RATHER THAN PLACING THE BARS WHILE THE CONCRETE IS WET.
 2. CONTRACTOR SHALL CONSTRUCT A $\frac{1}{4}$ " x $\frac{1}{4}$ " CHAMFER AT THE EDGES OF ALL JOINTS.
 3. THE WELDED WIRE MESH SHALL BE USED FOR ALL SLABS WHERE THE LENGTH-TO-WIDTH RATIO EXCEEDS 1.25 OR FOR ALL SLABS THAT ARE NOT RECTANGULAR IN SHAPE.

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
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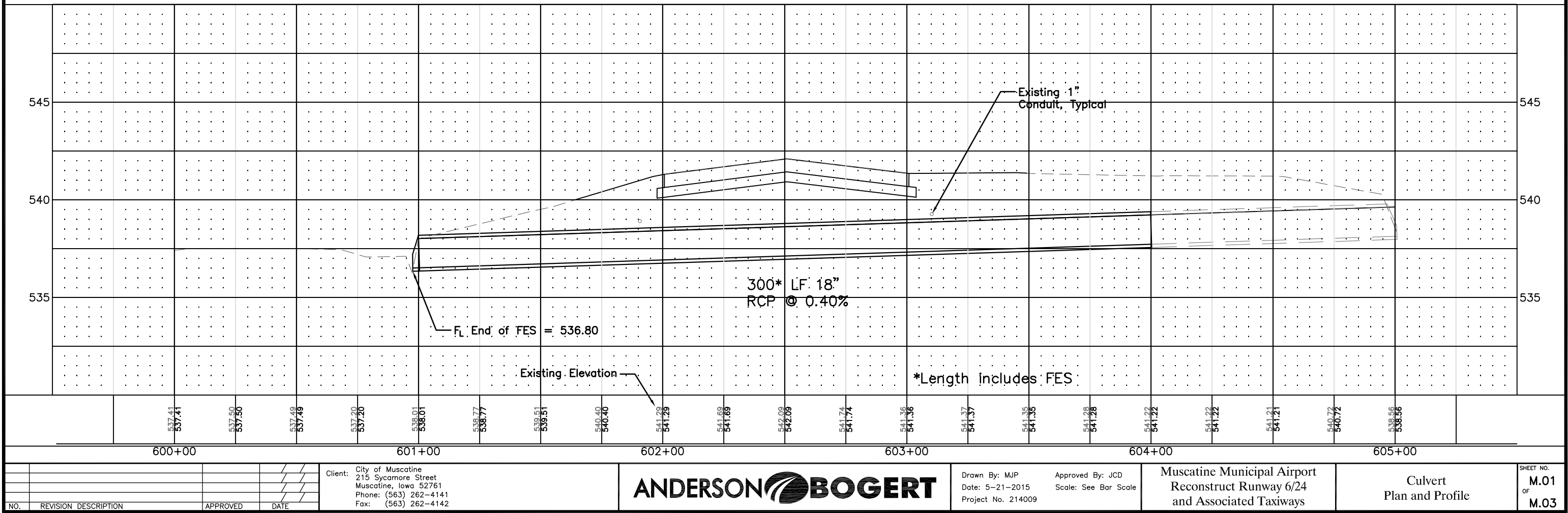
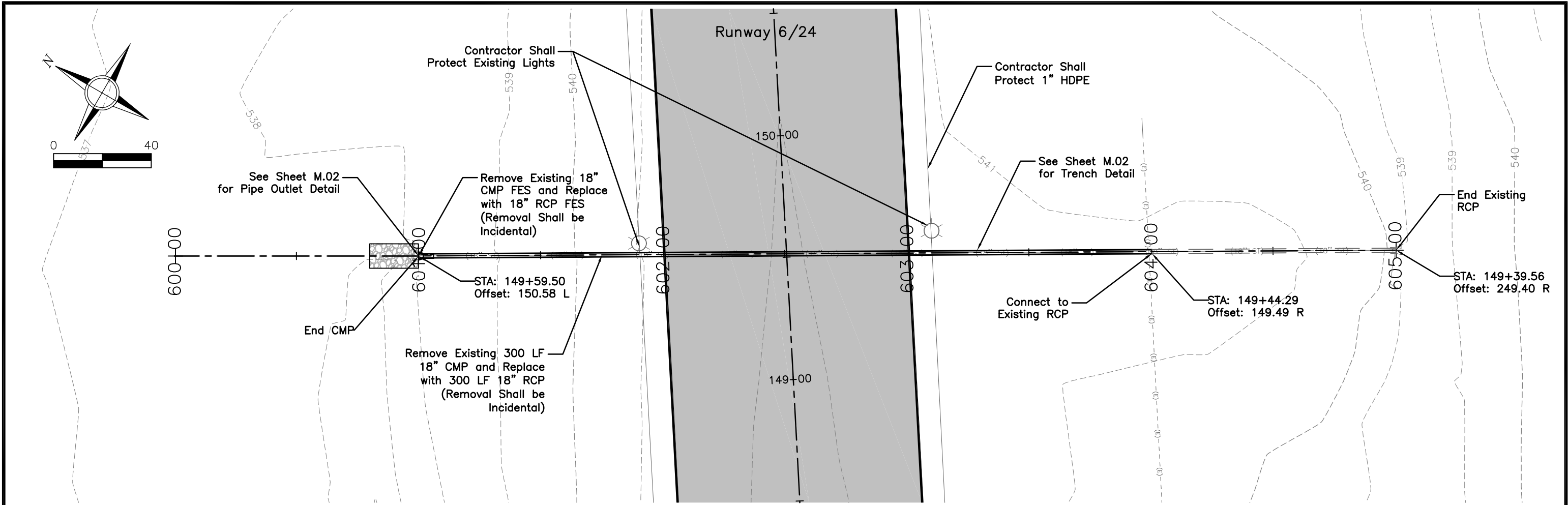
Pavement
Jointing
Plan

SHEET NO.
L.09
OF
L.09

NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
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ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

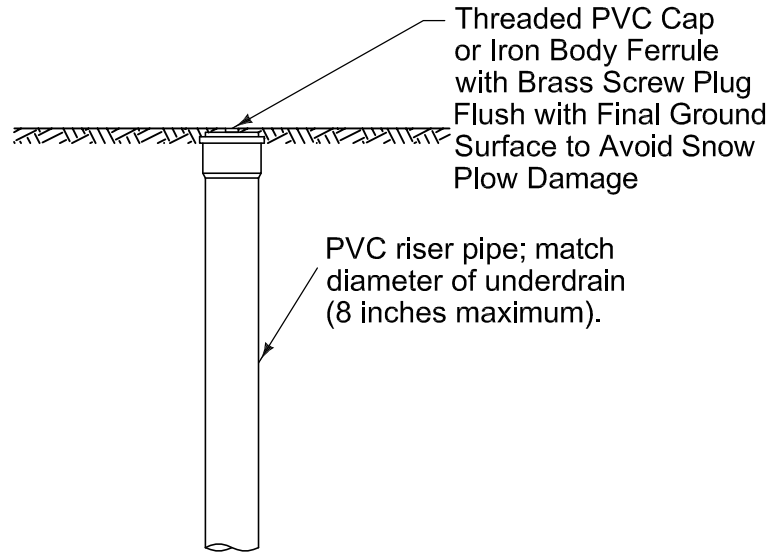
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

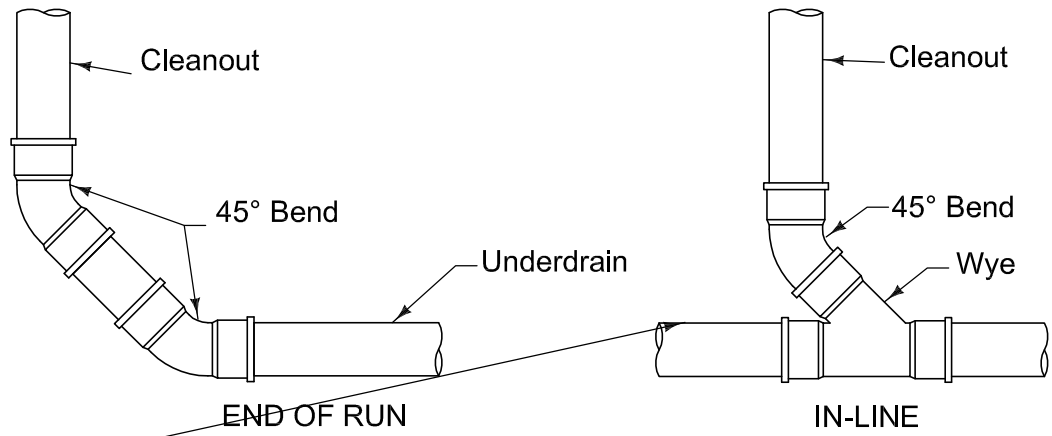
Culvert
Plan and Profile

SHEET NO.
M.01
OF
M.03

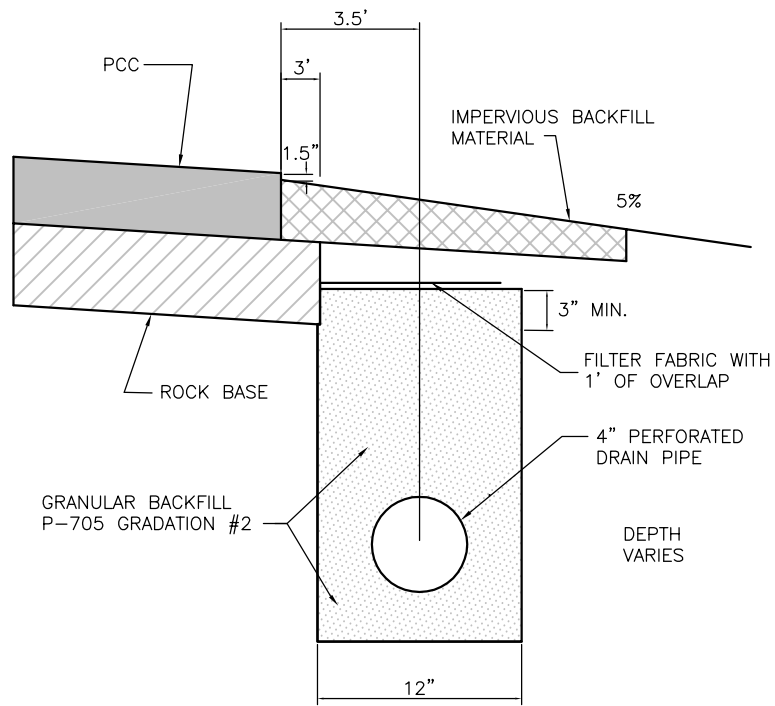
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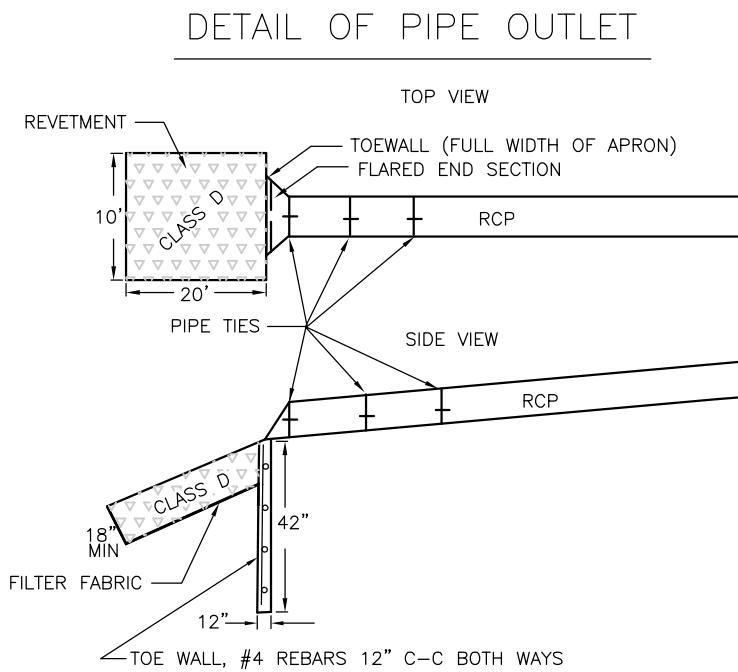
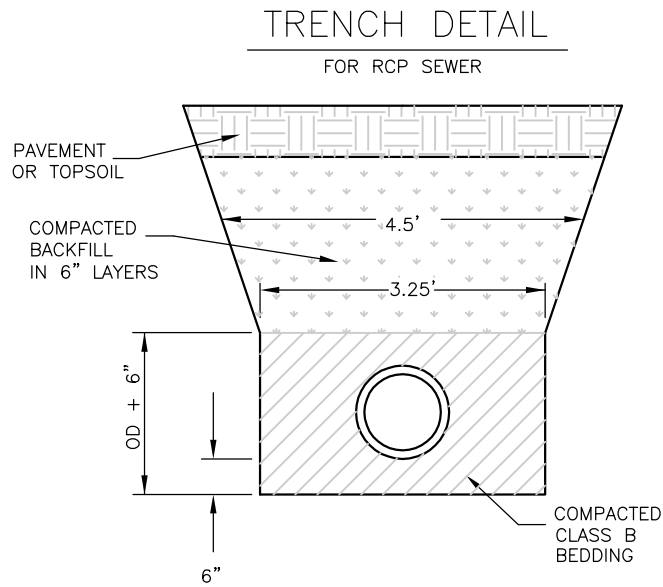
TYPE A-2 CLEANOUT
(Non-traffic areas only)



TYPE A UNDERDRAIN CLEANOUT CONNECTIONS

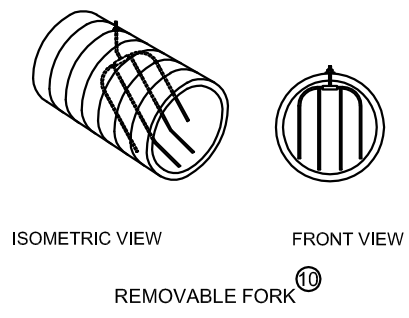
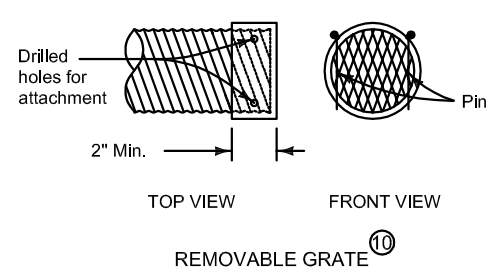


UNDERDRAIN DETAIL

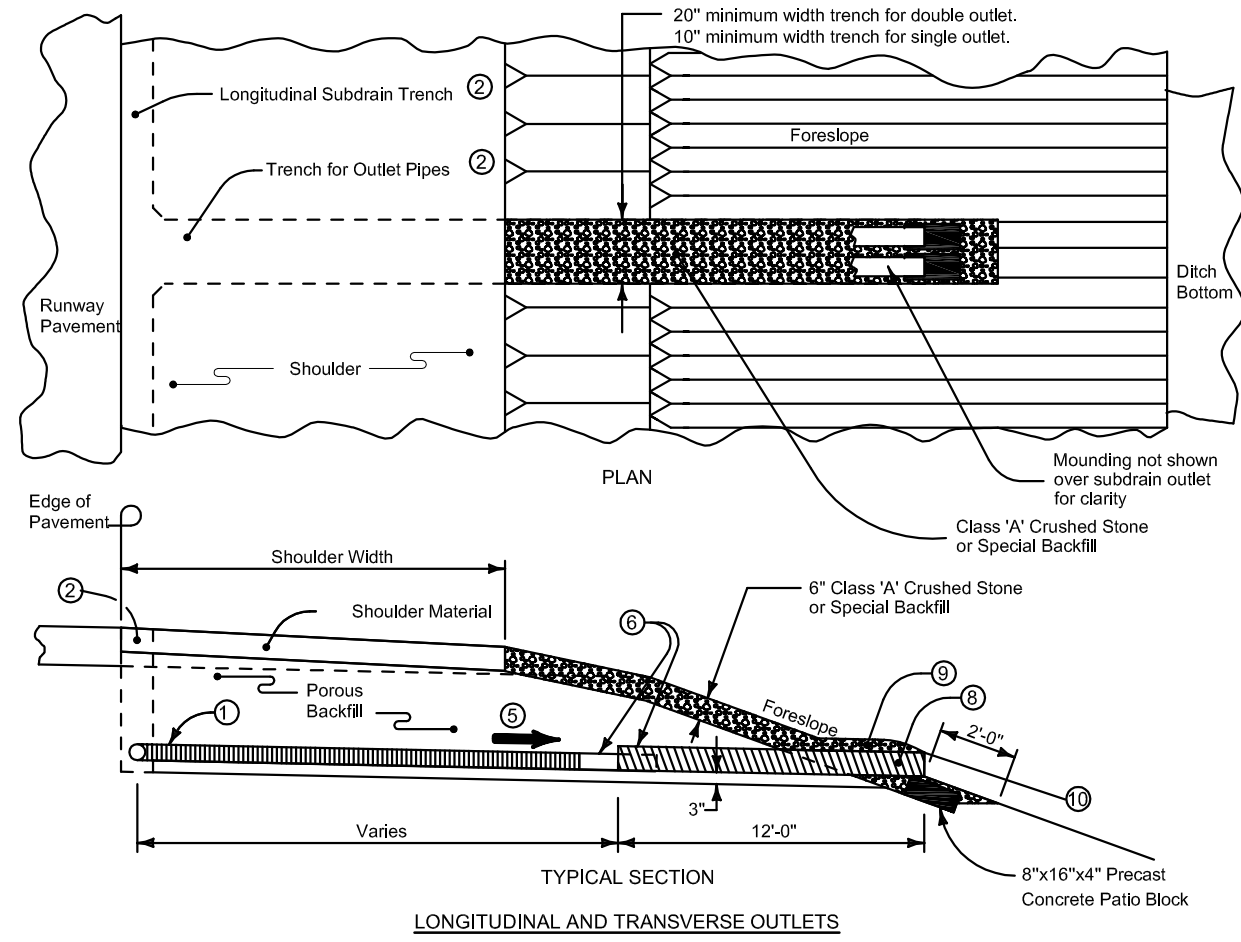


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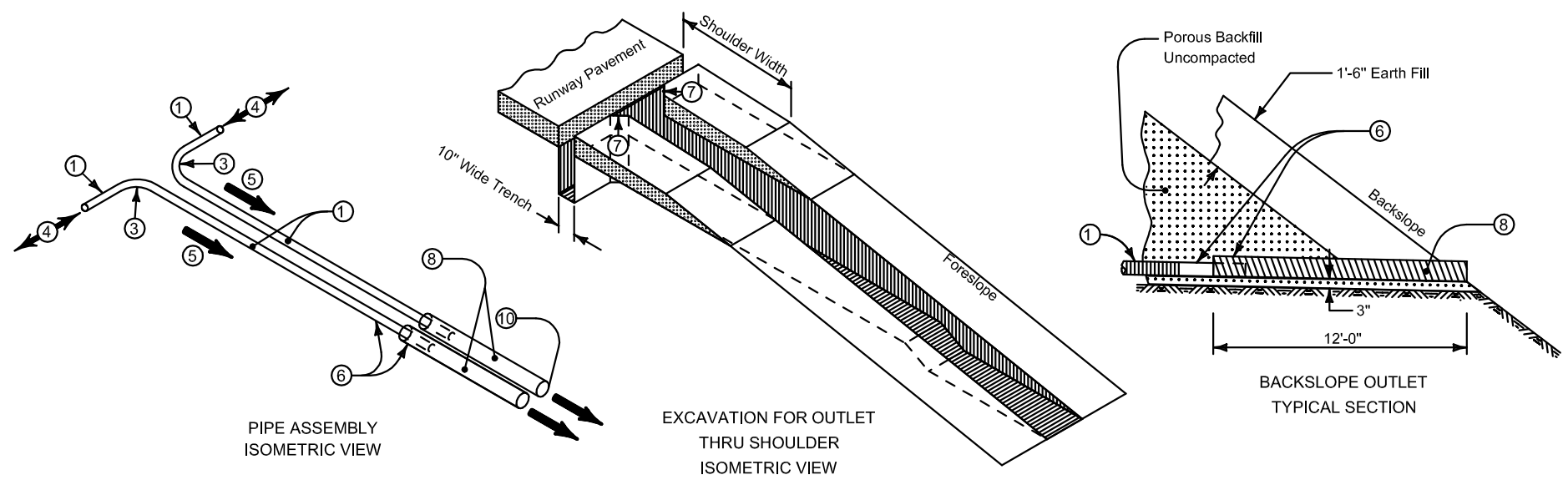


RODENT GUARDS¹⁰



Transverse and backslope underdrains require only single outlets. Install double outlet pipes on all longitudinal subdrain systems, except at the beginning and end of the system. At these locations, install a single outlet pipe.

- 1 Perforated Underdrain.
- 2 On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.
- 3 90° bends, 'T', and 'X' connections will be allowed.
- 4 Direction of flow.
- 5 6 inch minimum drop in elevation between longitudinal underdrain and outlet.
- 6 Corrugated metal pipe outlet 2 inches larger than underdrain pipe with an appropriate coupler or PVC pipe of the same diameter as the underdrain pipe. If metal pipe is used, the pipes should be coupled in one of the following ways: (1) Use an inside fit reducer coupler (insert coupler a minimum of 12 inches into CMP); or (2) Insert 1 inch of the 4 inch underdrain into the 6 inch metal outlet pipe, then fully seal the entire opening with grout.
- 7 Bevel the trench to provide a minimum of 3 inches of porous backfill surrounding all portions of underdrain pipe.
- 8 Corrugated metal pipe outlet 2 inches larger than existing underdrain pipe, or PVC pipe of the same diameter as the existing subdrain pipe.
- 9 Place class 'A' crushed stone or Special Backfill over outlet and carefully compact to avoid damaging outlet pipe.



REVISION	
New	04-21-15

STANDARD ROAD PLAN

DR-304

SHEET 1 of 1

REVISIONS: New, Replaces RF-19E, Removed rodent guards.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

**OUTLETS
FOR LONGITUDINAL, TRANSVERSE
AND BACKSLOPE UNDERDRAINS**

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Date: 5-21-2015
Project No. 214009

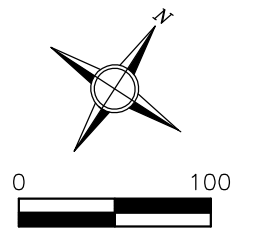
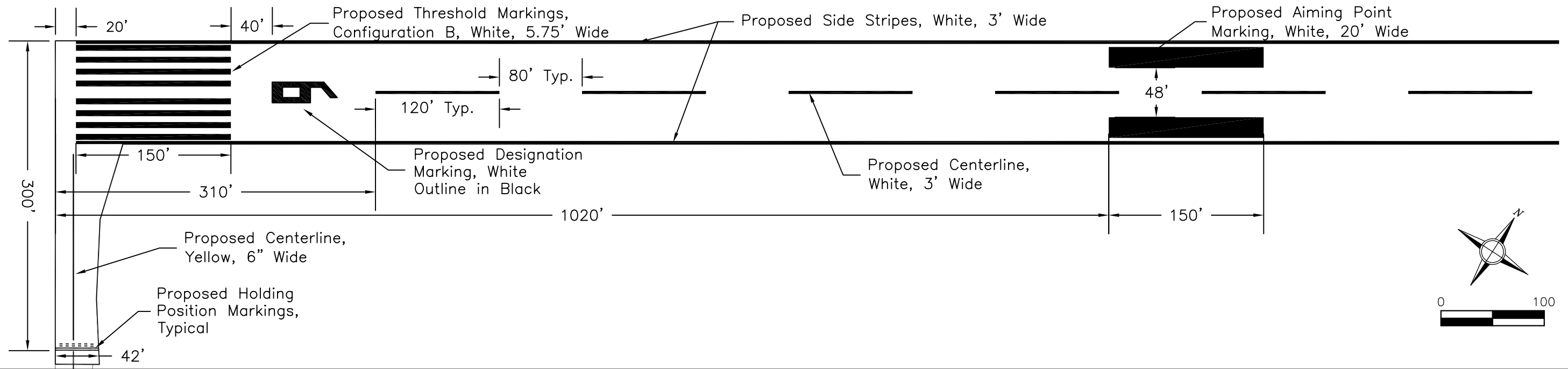
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Drainage Details

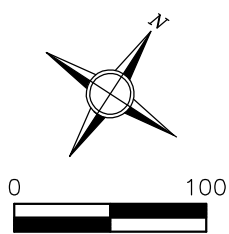
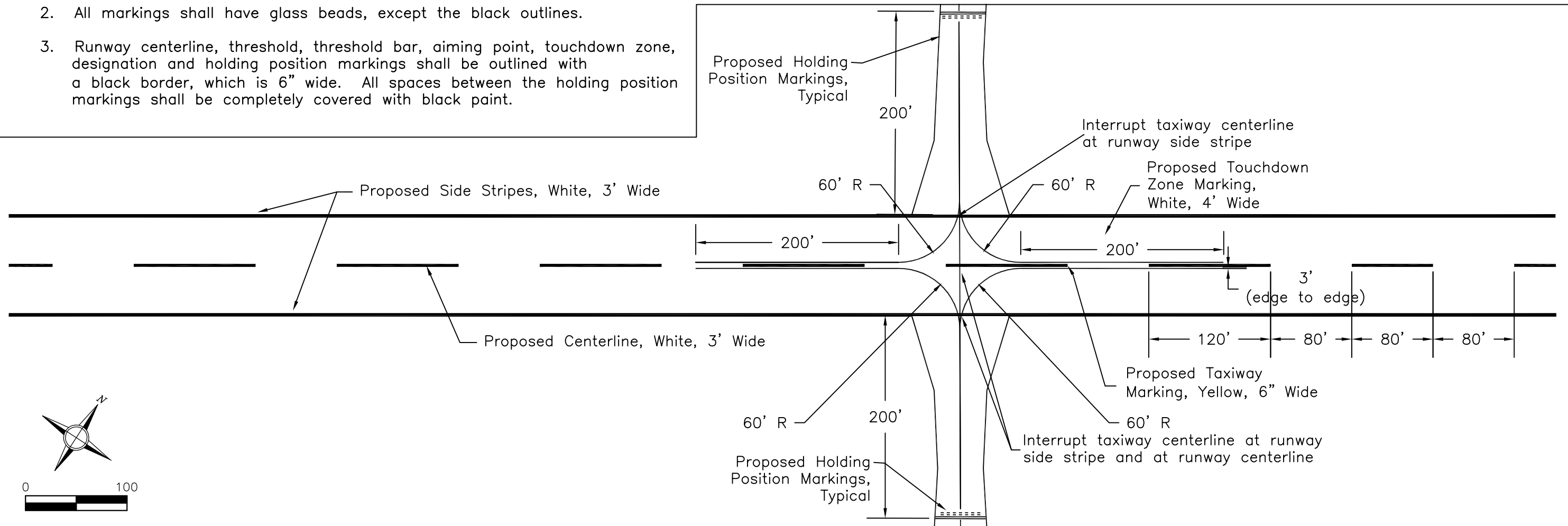
SHEET NO.
M.03
OF
M.03

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Notes:

- See Sheet N.04 for spacing of touchdown zone markings, holding position configuration, spacing between runway and taxiway centerline, and designation marking details.
- All markings shall have glass beads, except the black outlines.
- Runway centerline, threshold, threshold bar, aiming point, touchdown zone, designation and holding position markings shall be outlined with a black border, which is 6" wide. All spaces between the holding position markings shall be completely covered with black paint.



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

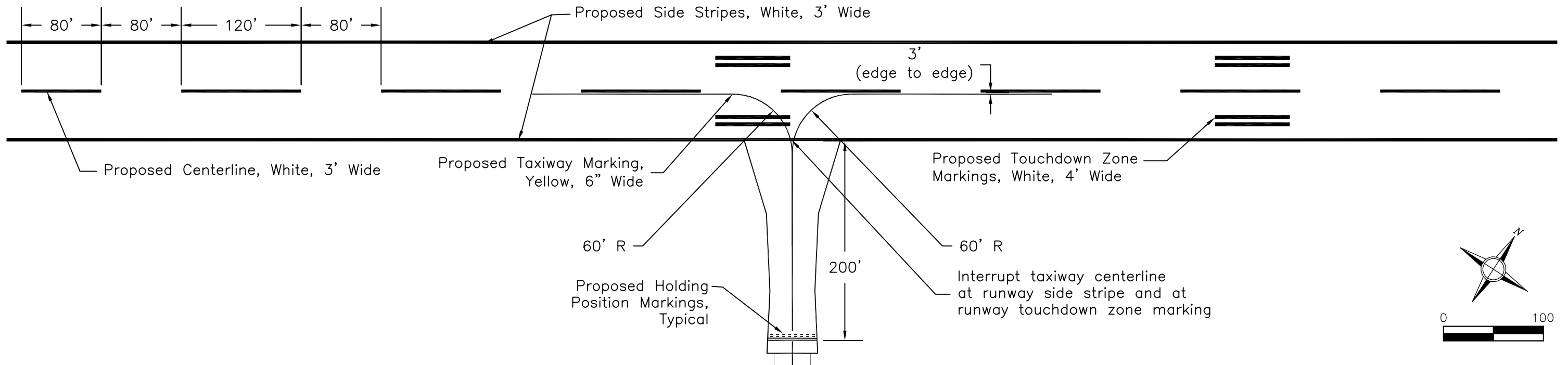
Pavement Markings

SHEET NO.
N.01
OF
N.04

NO.	REVISION DESCRIPTION	APPROVED	DATE

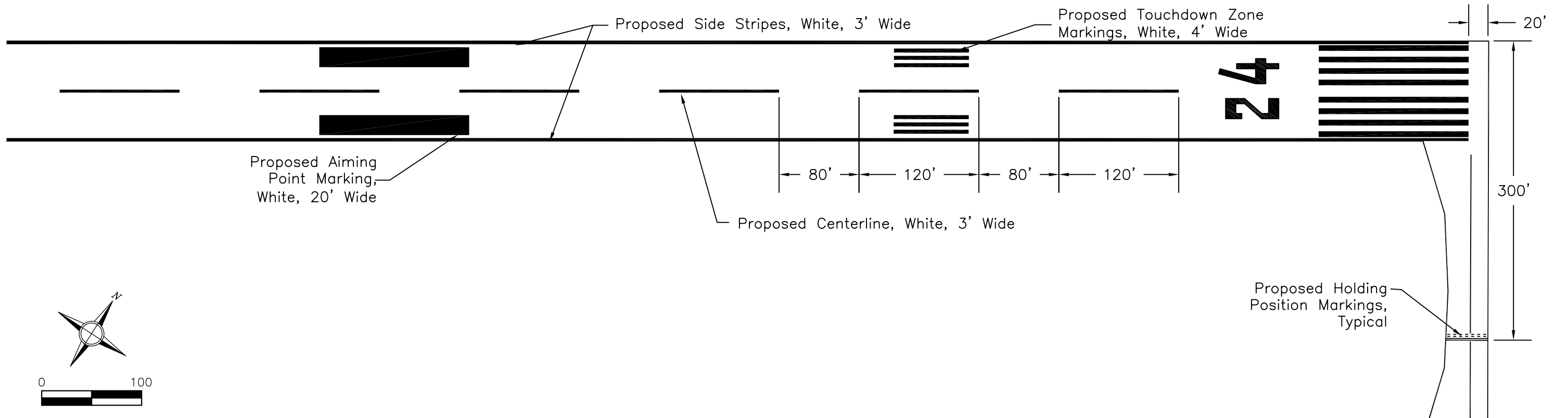
Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

MJP3391: \\ACAD\214009\Sheets\214009_N.dwg 5-26-15 10:15:58 AM



Notes:

- See Sheet N.04 for spacing of touchdown zone markings, holding position configuration, spacing between runway and taxiway centerline, and designation marking details.
- All markings shall have glass beads, except the black outlines.
- Runway centerline, threshold, threshold bar, aiming point, touchdown zone, designation and holding position markings shall be outlined with a black border, which is 6" wide. All spaces between the holding position markings shall be completely covered with black paint.



NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

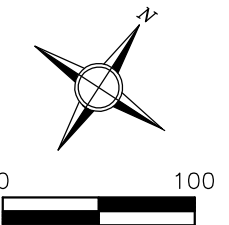
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement Markings

SHEET NO.
N.02
OF
N.04

1. See Sheet N.04 for spacing of touchdown zone markings, holding position configuration, spacing between runway and taxiway centerline, and designation marking details.
2. All markings shall have glass beads, except the black outlines.
3. Runway centerline, threshold, threshold bar, aiming point, touchdown zone, designation and holding position markings shall be outlined with a black border, which is 6" wide. All spaces between the holding position markings shall be completely covered with black paint.



			///
			///
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			///
NO.	REVISION DESCRIPTION	APPROVED	DATE

Client:	City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761 Phone: (563) 262-4141 Fax: (563) 262-4142
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Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

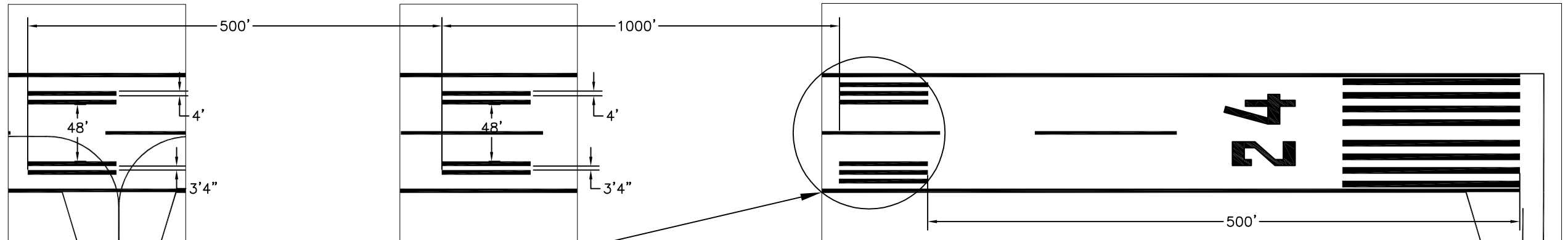
Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement Markings

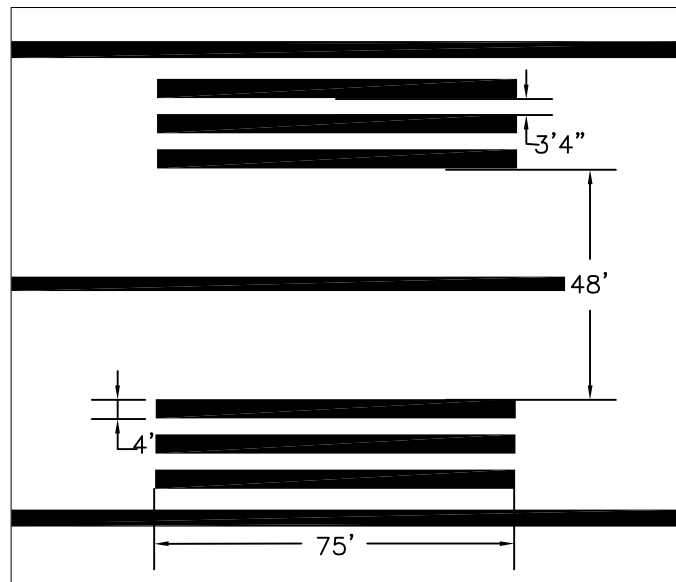
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N.03
F
N.04

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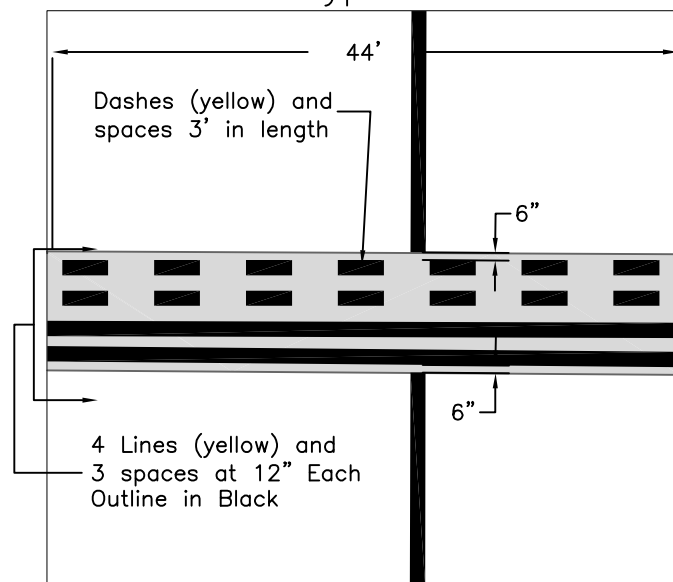
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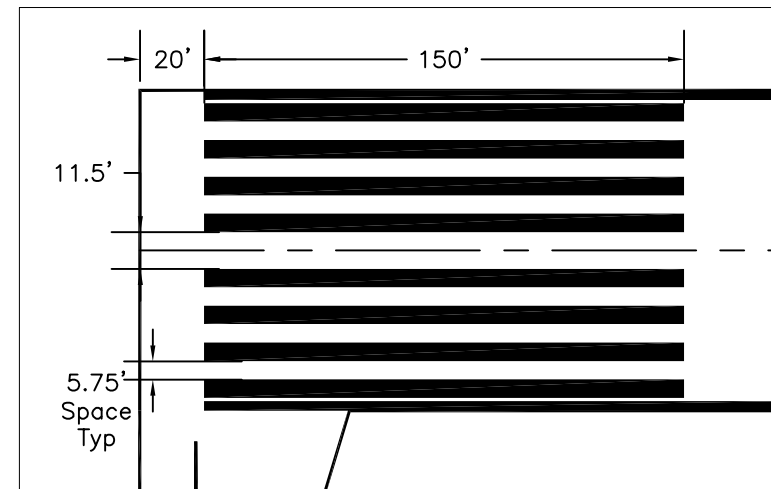
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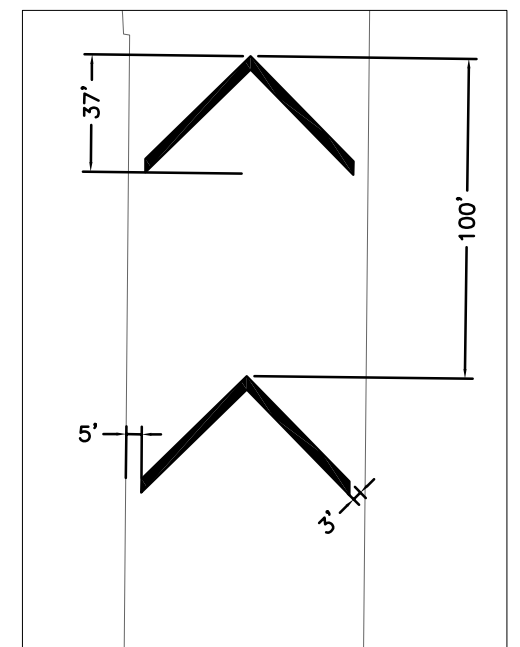
Holding Position Markings Typical



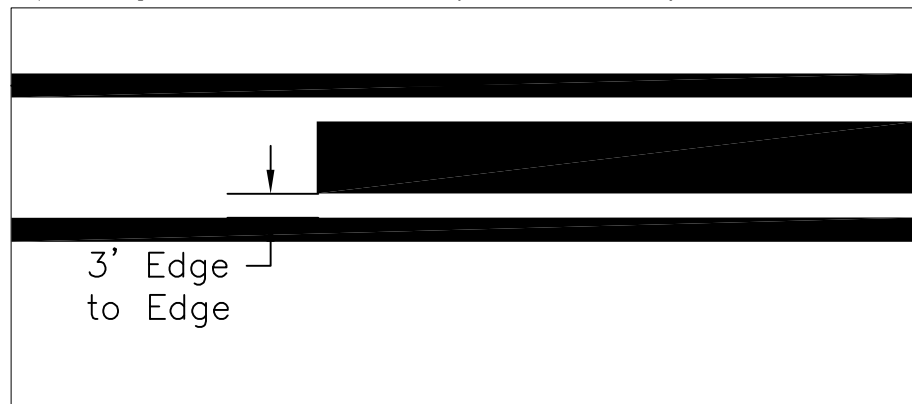
Threshold Markings Configuration "B"



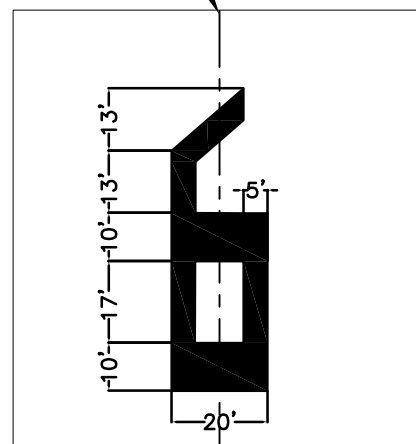
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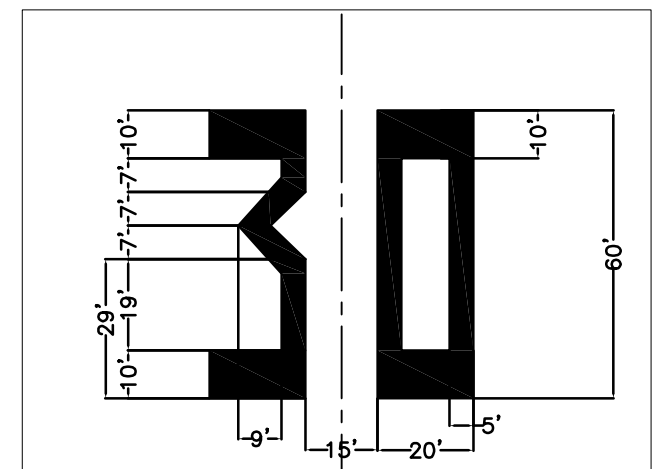
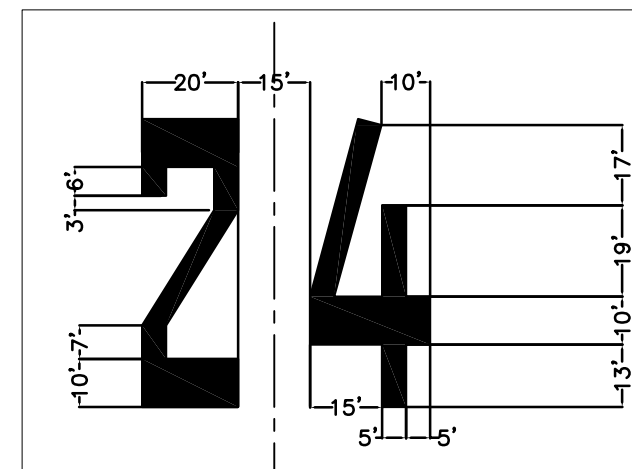
Spacing between Runway & Taxiway Centerline



Runway Centerline for Reference Only, Typical



Runway Designation Markings



ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

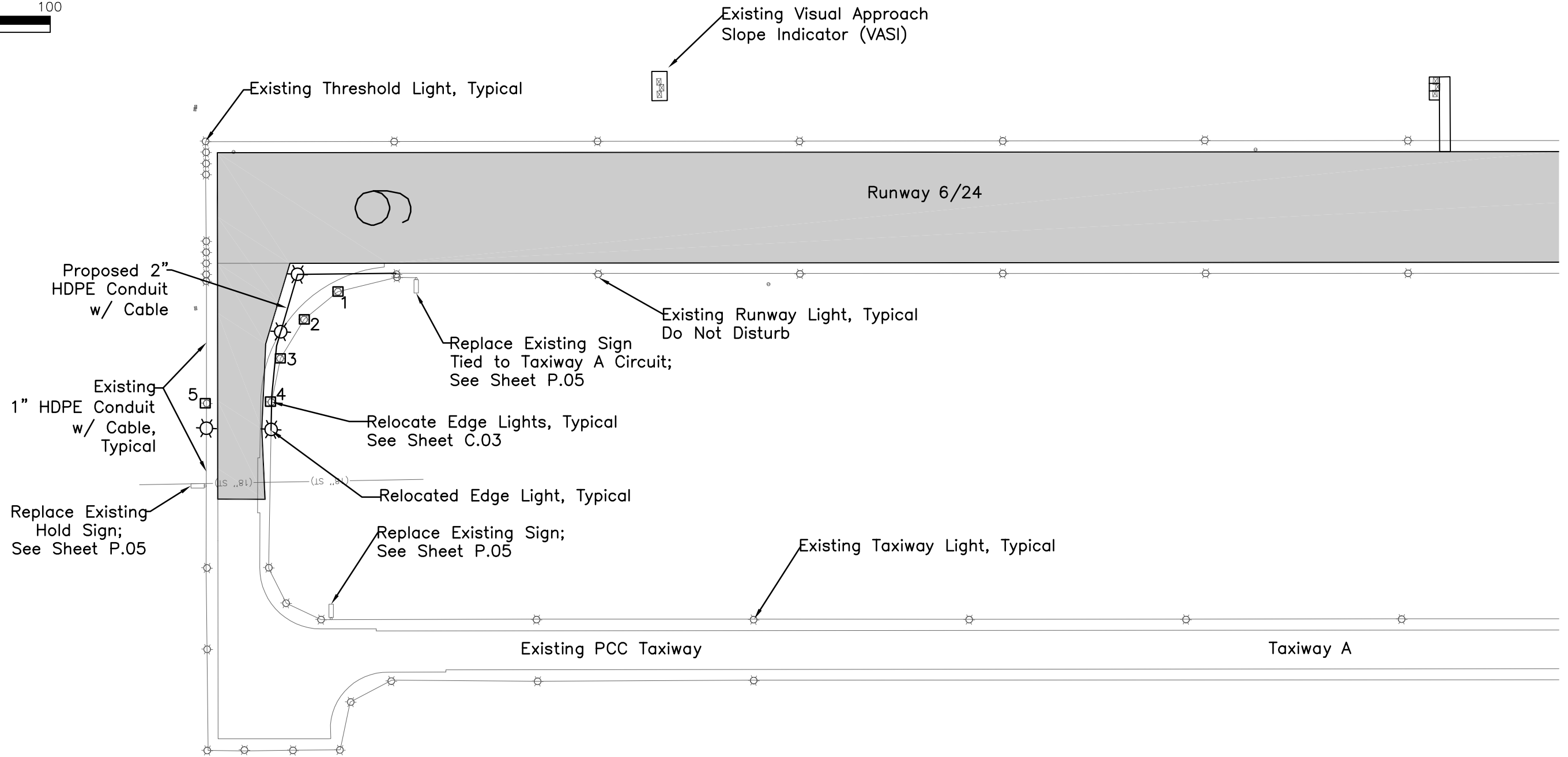
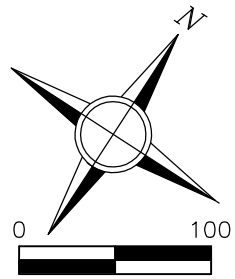
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Pavement Markings

SHEET NO.
N.04
OF
N.04

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Note:
Taxiway lights are powered off
the taxiway circuit.

NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

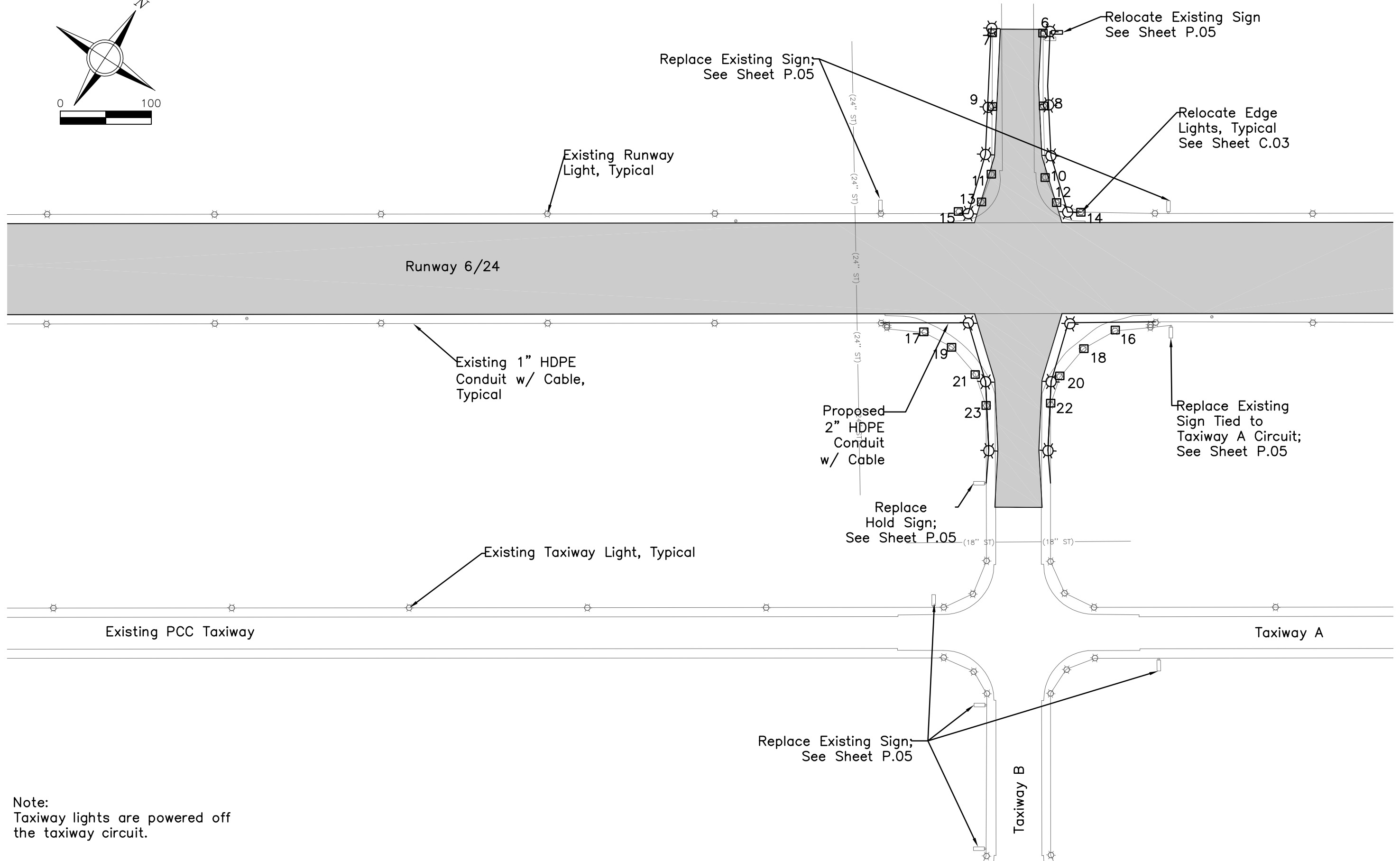
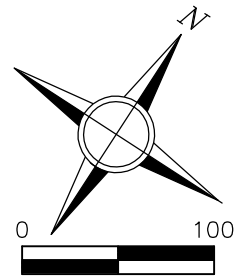
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Edge Lighting
and
Guidance Signs Plan

SHEET NO.
P.01
OF
P.06

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Note:
Taxiway lights are powered off
the taxiway circuit.



Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

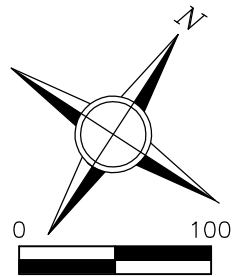
Edge Lighting
and
Guidance Signs Plan

SHEET NO.
P.02
OF
P.06

NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

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Runway 12/30

Existing Runway Light, Typical

Runway 6/24

Replace Existing
Sign Tied to
Taxiway A Circuit;
See Sheet P.05

Proposed
2" HDPE
Conduit w/
Cable

Replace and Relocate
Hold Sign;
See Sheet P.05

Replace Existing
Hold Sign;
See Sheet P.05

Relocate Edge
Lights, Typical
See Sheet C.03

Taxiway A1

Existing PCC Taxiway

Taxiway A

Note:
Taxiway lights are powered off
the taxiway circuit.

Client: City of Muscatine
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Muscatine, Iowa 52761
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Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

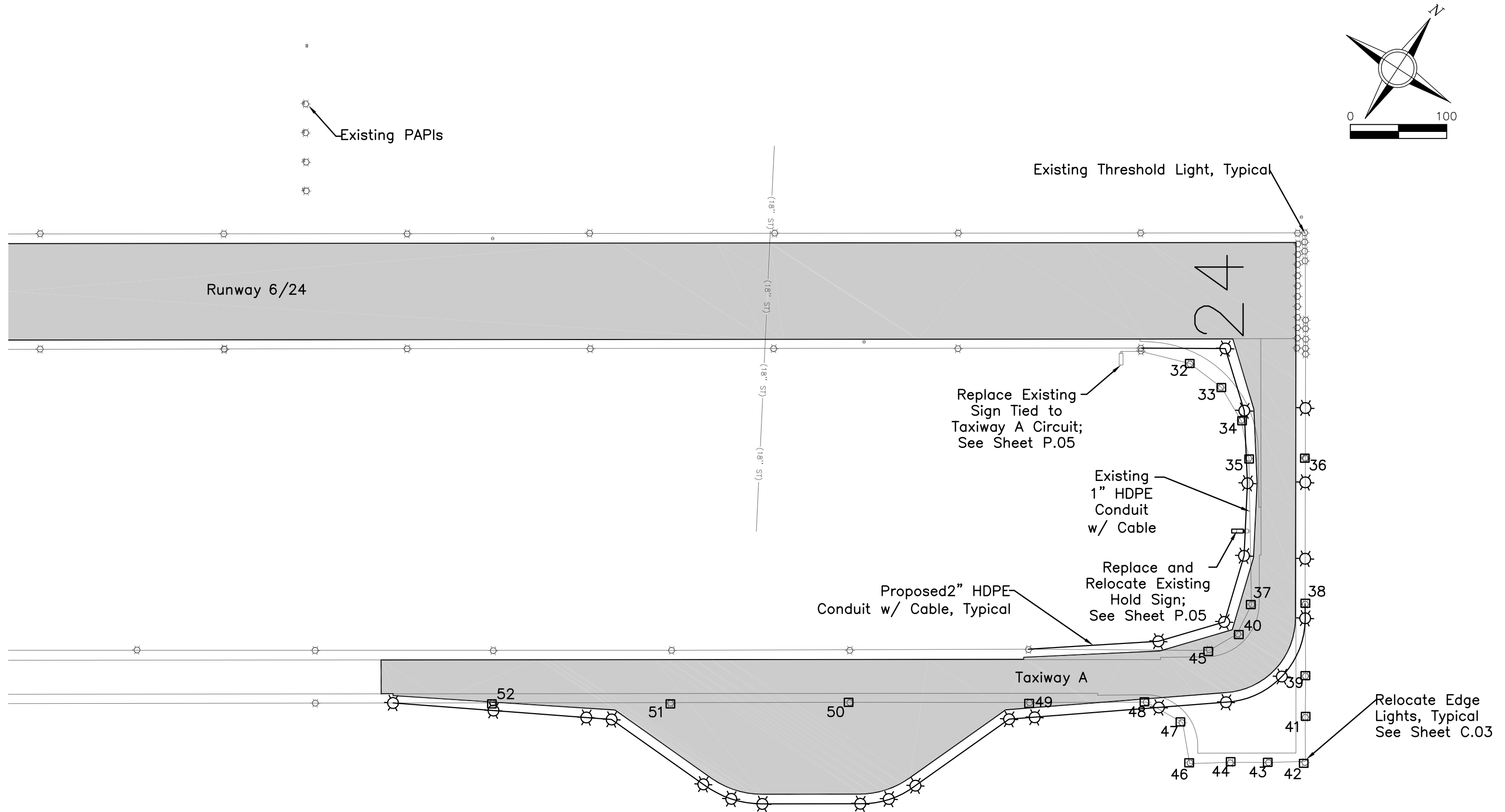
Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Edge Lighting
and
Guidance Signs Plan

SHEET NO.
P.03
OF
P.06

NO.	REVISION DESCRIPTION	APPROVED	DATE

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Note:
Taxiway lights are powered off
the taxiway circuit.

NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

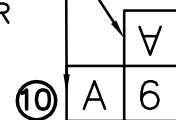
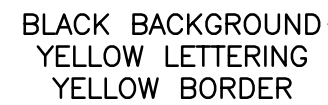
Drawn By: MJP
Date: 5-21-2015
Project No. 214009

Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Edge Lighting
and
Guidance Signs Plan

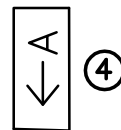
SHEET NO.
P.04
OF
P.06



RED BACKGROUND
WHITE LETTERING
BLACK OUTLINE



Runway 6/24



YELLOW BACKGROUND
BLACK LETTERING

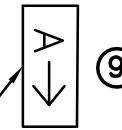


Runway



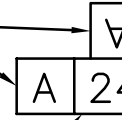
YELLOW BACKGROUND
BLACK LETTERING

Runway 6/24

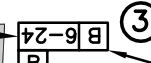
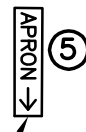


BLACK BACKGROUND
YELLOW LETTERING
YELLOW BORDER

RED BACKGROUND
WHITE LETTERING
BLACK OUTLINE



RED BACKGROUND
WHITE LETTERING
BLACK OUTLINE

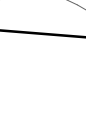


—BLACK BACKGROUND
YELLOW LETTERING
YELLOW BORDER

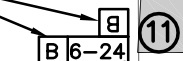


Runway 6/24

YELLOW BACKGROUND
BLACK LETTERING



BLACK BACKGROUND
YELLOW LETTERING
YELLOW BORDER



- RED BACKGROUND
- WHITE LETTERING
- BLACK OUTLINE



— YELLOW BACKGROUND
BLACK LETTERING



BLACK BACKGROUND
YELLOW LETTERING
YELLOW BORDER



— RED BACKGROUND
WHITE LETTERING
BLACK OUTLINE

Existing PCC Taxiway

Taxiway A



See Sheet C.02
Runway and Taxiway Sign Tables

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

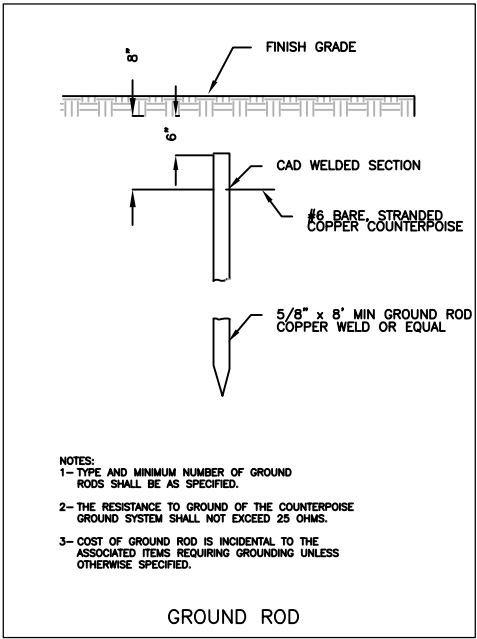
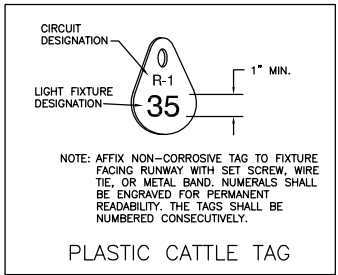
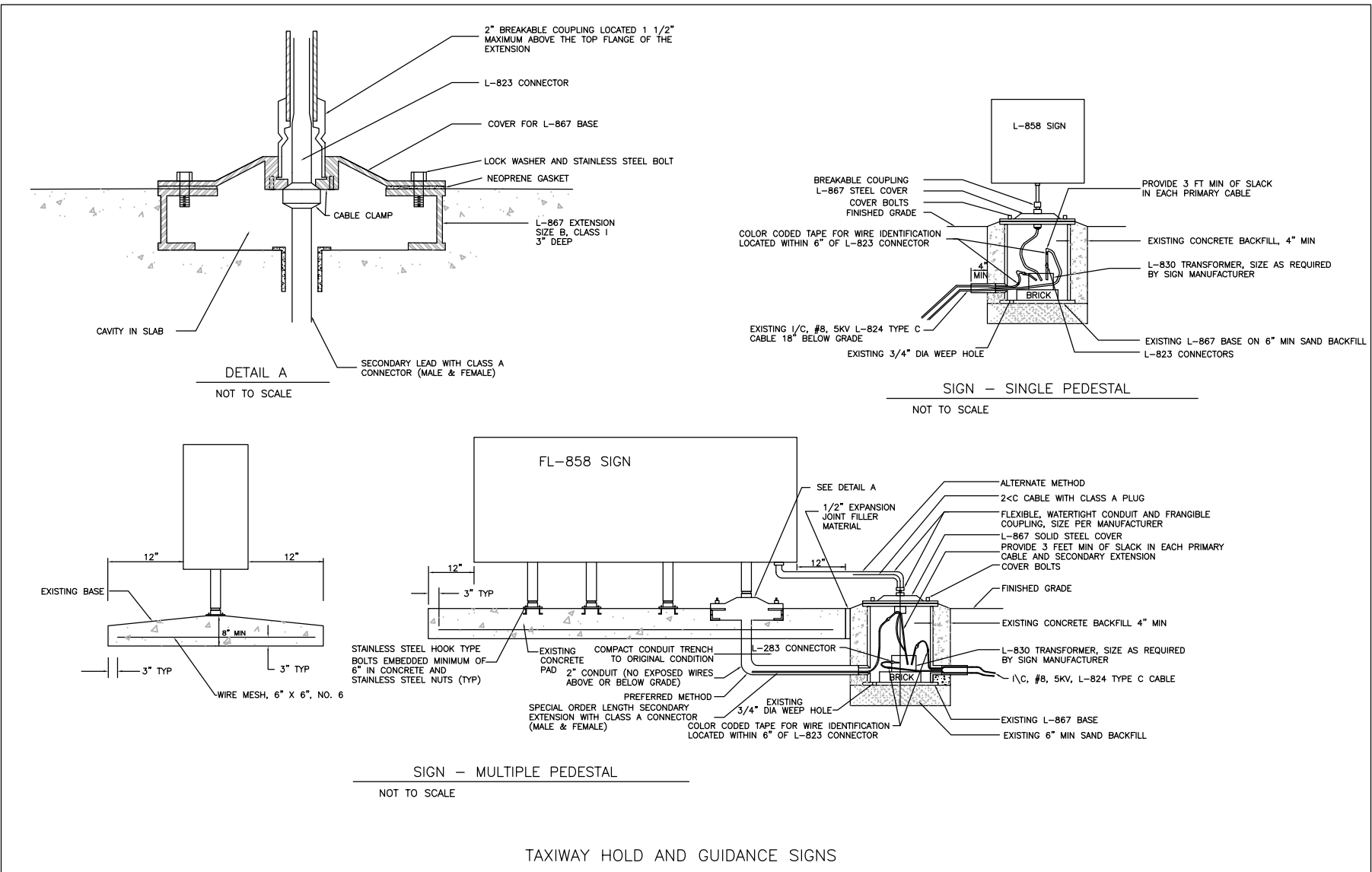
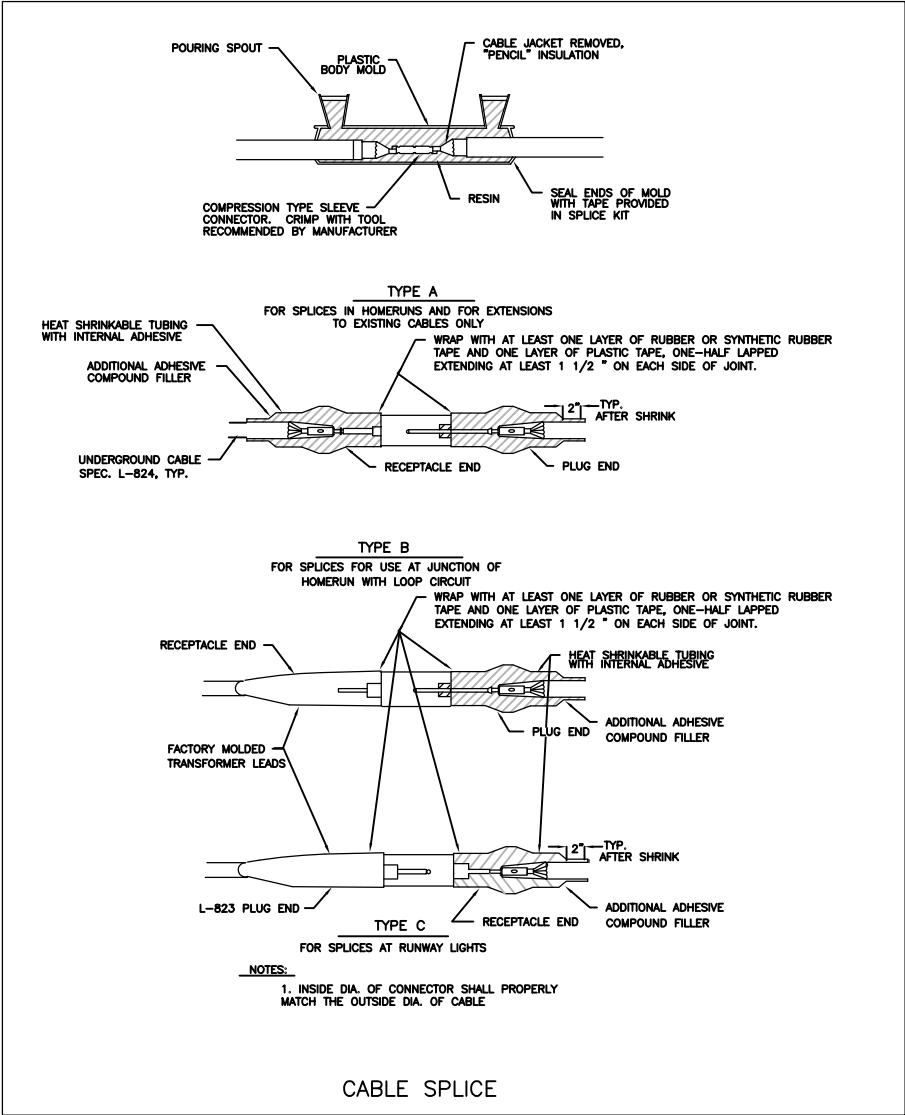
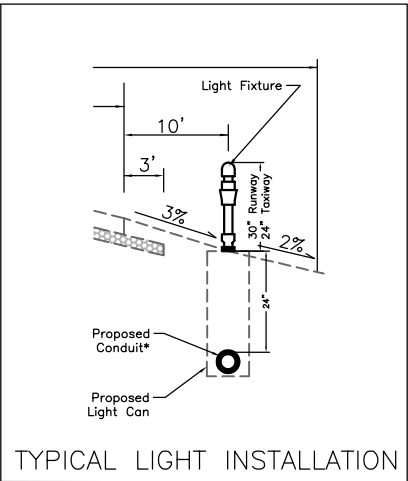
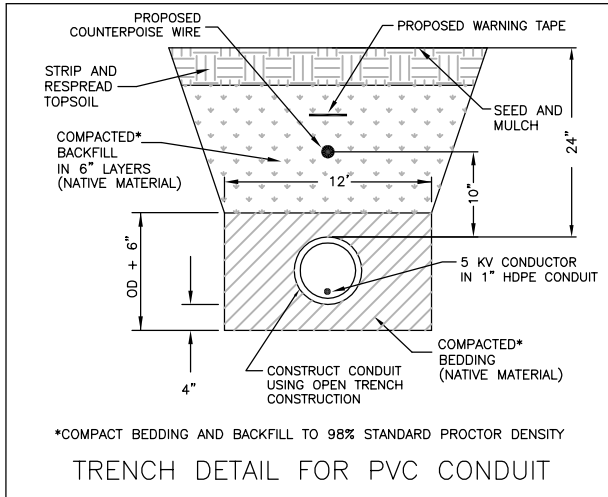
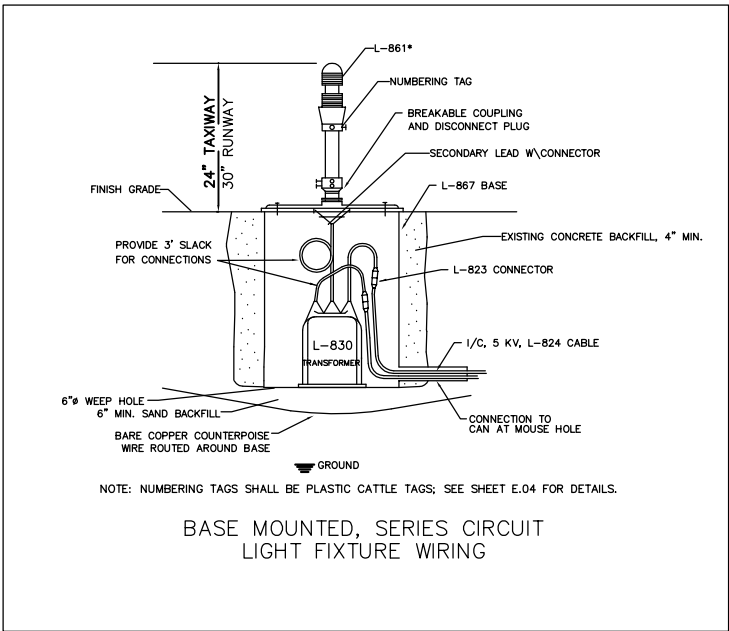
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Edge Lighting and Guidance Signs Plan

SHEET NO.	P.05
OF	P.06

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009

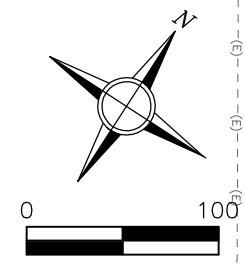
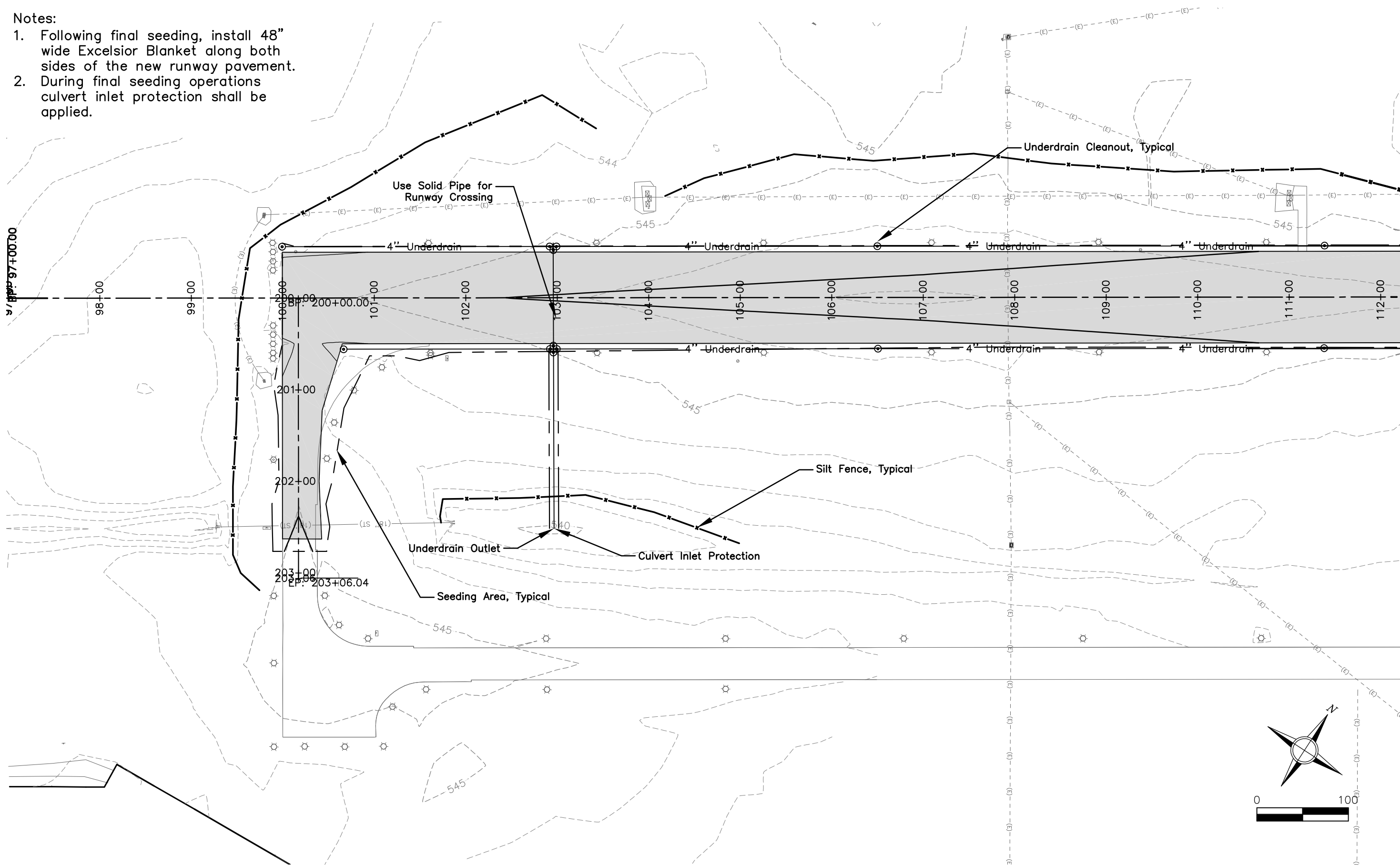
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Edge Lighting
and
Guidance Signs Details

SHEET NO.
P.06
OF
P.06

- Notes:
- 1. Following final seeding, install 48" wide Excelsior Blanket along both sides of the new runway pavement.
 - 2. During final seeding operations culvert inlet protection shall be applied.



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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



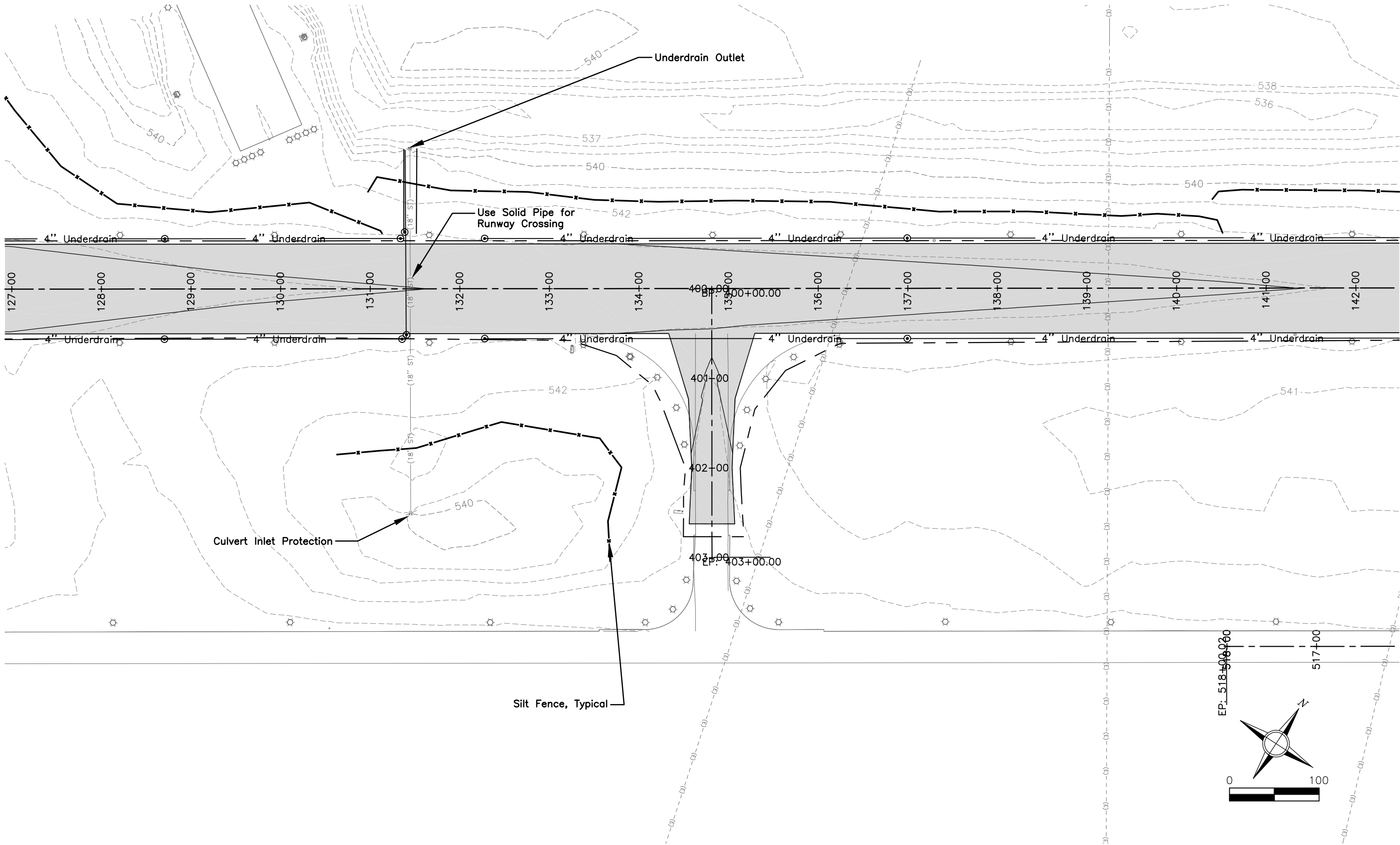
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Grading,
Erosion Control, &
Pollution Prevention Plan

SHEET NO.
Q.01
OF
Q.05

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NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

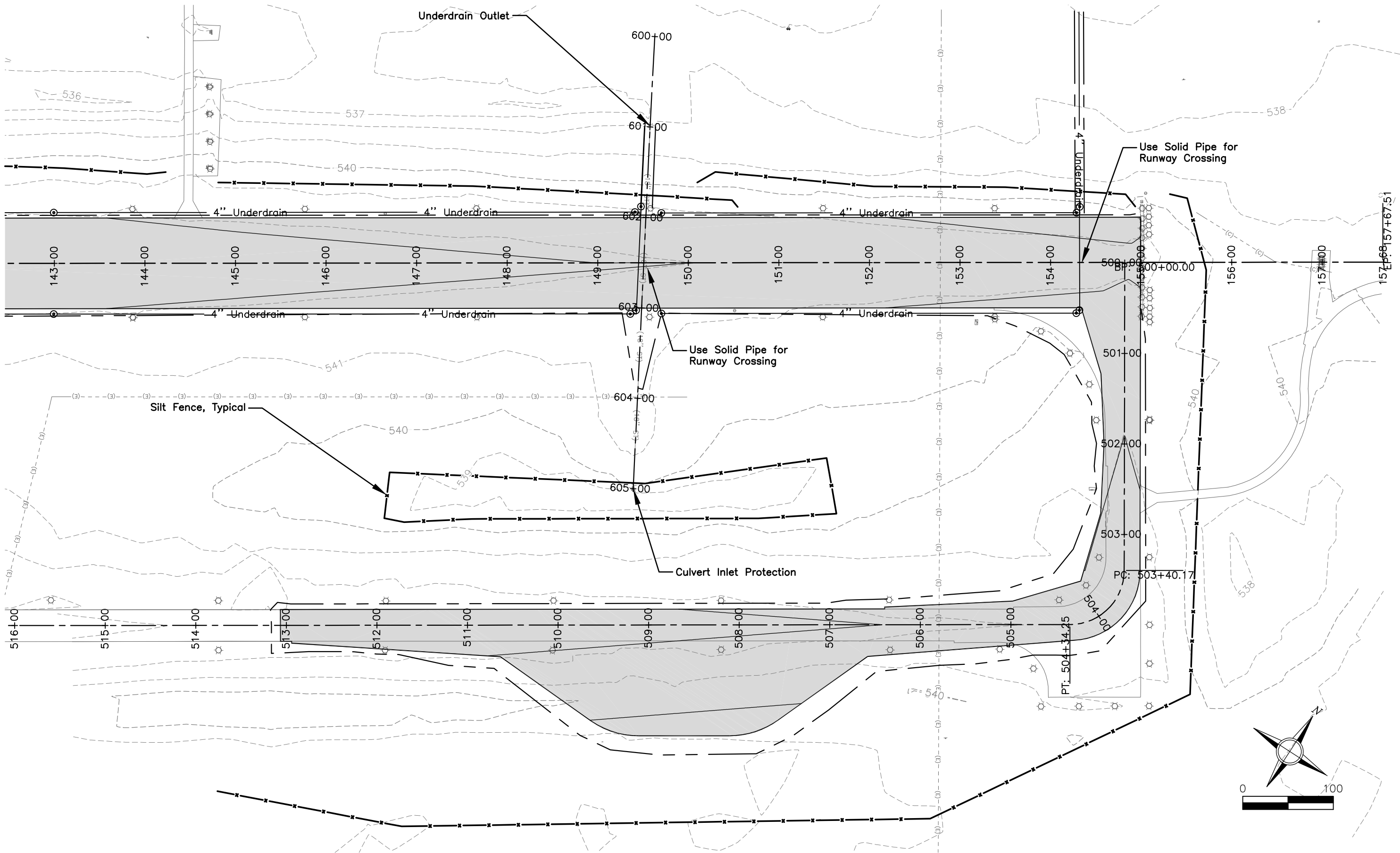
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Grading,
Erosion Control, &
Pollution Prevention Plan

SHEET NO.
Q.03
OF
Q.05

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

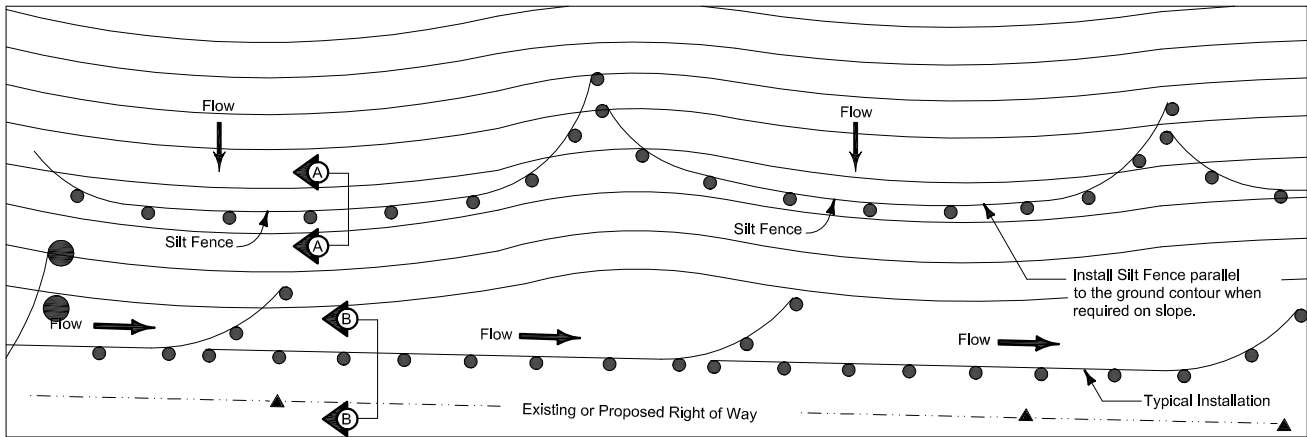
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Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Grading,
Erosion Control, &
Pollution Prevention Plan

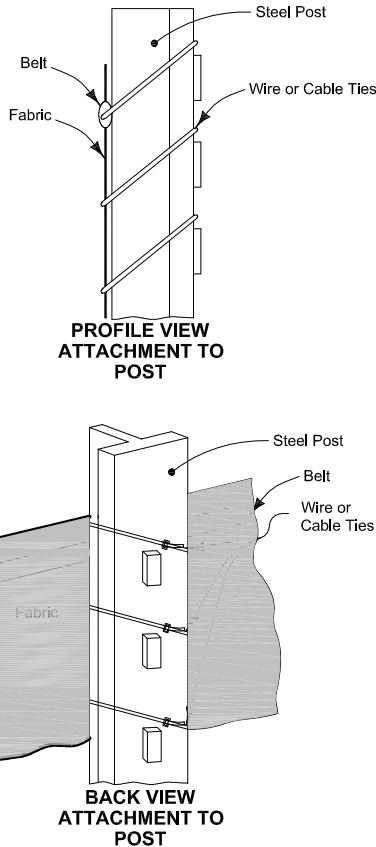
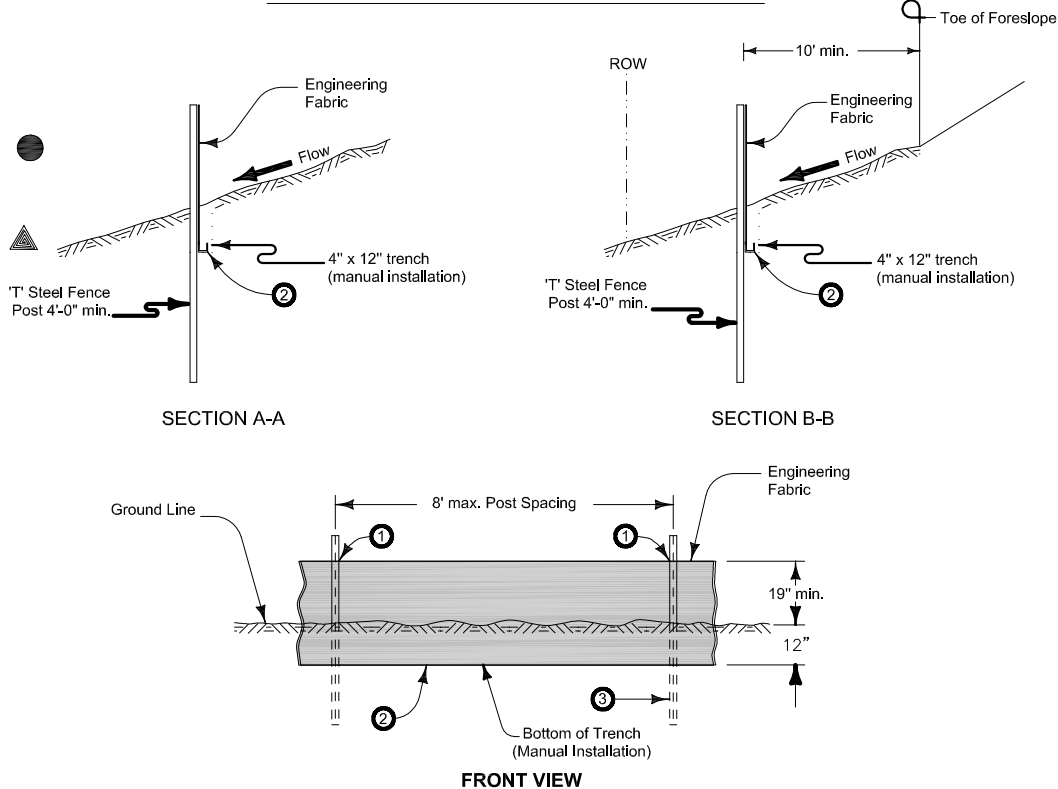
SHEET NO.
Q.04
OF
Q.05

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PLAN FOR SILT FENCE

SILT FENCE - MACHINE AND MANUAL INSTALLATION



Contour Lines

Possible Contract Items:
Silt Fence
Silt Fence for Ditch Checks

Possible Tabulations:
100-17
100-18

 IOWA DOT	REVISION	
	1	04-21-15
	EC-201	
STANDARD ROAD PLAN		
SHEET 1 of 3		
REVISIONS: Clarified top of silt fence is to be minimum of 19 inches above ground line. Added notes to identify the bottom of the trench (manual installation).		
		
APPROVED BY DESIGN METHODS ENGINEER		
SILT FENCE		

Install all silt fence using a silt fence machine. Use manual (trench) installation if physical conditions prohibit machine installation.

For machine installation, compact by driving over each side of silt fence at least two times with device exerting 60 p.s.i. or greater.

For manual installation, compact with a mechanical or pneumatic tamper.

Place silt fence continuously up to a maximum length of 200 feet. For every segment of silt fence that is placed, flare up the slope the last 20 feet of the segment to contain runoff as shown.

- Secure top of engineering fabric to steel posts using cable ties (50 lb.) or wire. See back view attachment to post.
- For manual installation only, fold engineering fabric along bottom of trench.
- Embed all posts 28 inches below the ground line.

POLLUTION PREVENTION PLAN (PPP)

All contractors/subcontractors shall conduct their operations in a manner that minimizes erosion and prevents sediments from leaving the project site. The prime contractor shall be responsible for compliance and implementation of the Pollution Prevention Plan (PPP) for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

1. SITE DESCRIPTION

This PPP is for the construction of pavement at the Muscatine Municipal Airport in Muscatine, IA.

Approximately 16 acres will be disturbed.

This PPP is located in an area consisting primarily of fine to coarse sand with varying amounts of clay, silt, and gravel; silty clay, lean clay, lean to fat clay, and fat clays with varying amounts of sand and organics. The estimated average Rational Method Coefficient (C) for this PPP after completion will be 0.48 for the five year Frequency Storm.

Refer to the plans and cross sections for the locations of typical slopes, ditch grades, and major structural and non-structural controls. A copy of this plan will be on file at the project engineer's office. Runoff from this work will flow into the Muscatine Slough to the Mississippi River.

POTENTIAL SOURCES OF POLLUTION

Site sources of pollution generated as a result of this work relate to silts and sediment which may be transported as a result of a storm event. However, this PPP provides conveyance for other (non-project related) operations. These other operations have storm water runoff the regulation of which is beyond the control of this PPP. Potentially this runoff can contain various pollutants related to site-specific land uses. Examples are:

Rural Agricultural Activities:

Runoff from agricultural land use can potentially contain chemicals including herbicides, pesticides, fungicides, and fertilizers.

Commercial and Industrial Activities:

Runoff from commercial industrial, and commercial land use may contain constituents associated with the specific operation. Such operations are subject to potential leaks and spills which could be commingled with run-off from the facility. Pollutants associated with commercial and industrial activities are not readily available since they are typically proprietary.

2. CONTROLS

Prior to beginning grading, excavation, or clearing and grubbing operations, silt fence shall be placed along the perimeter of the areas to be disturbed at locations where runoff can move offsite. Vegetation in areas not needed for construction shall be preserved. As areas reach their final grade, additional silt fences, silt basins, intercepting ditches, sod flumes, and letdowns, shall be installed as specified in the plans and/or as required by the project engineer. This will include using silt fence as ditch checks and to protect intakes. Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity is not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seed or mulching within 14 days. No more than 750,000 square feet of exposed erodible area is allowed in any one grading spread without permission of the project engineer. Other stabilizing methods shall be used outside the seeding period.

This work shall be done in accordance with Section T-901 of the Standard Specifications in the project manual.

As the work progresses, additional erosion control items such as rock or sod flumes, rock ditch checks, rock outlet protection, subsurface drains, letdown structures, soil stabilization mats, and other appropriate measures shall be installed by the paving or erosion control contractor as determined by the engineer after field investigation. The construction will be completed with establishment of permanent perennial vegetation of all disturbed areas by the erosion control contractor.

3. OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

APPROVED STATE OR LOCAL PLANS:

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

4. MAINTENANCE

The contractor is required to maintain all temporary erosion control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. Cleaning of silt control devices shall begin when the features have lost 50% of their capacity.

5. INSPECTIONS

Inspections shall be made jointly by the contractor and the contracting authority every seven calendar days and after each rain event that is 1/2" or greater. The contractor shall immediately begin corrective action on all deficiencies found. The findings of this inspection shall be recorded in the project diary. This PPP may be revised based on the findings of the inspection. The contractor shall implement all revisions. All corrective actions shall be completed within 3 calendar days of the inspection.

6. NON-STORM DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains), slope drains, and bridge end drains. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone or erosion stone.

ANDERSON BOGERT

Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

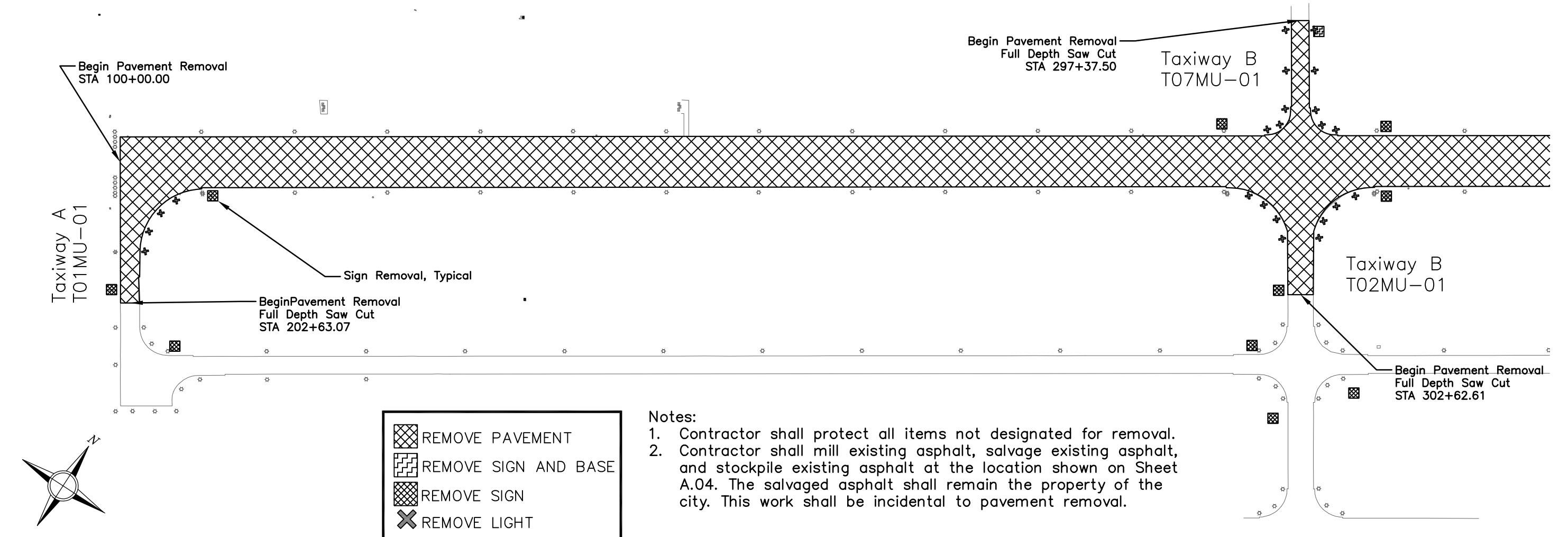
Grading,
Erosion Control, &
Pollution Prevention Plan

SHEET NO.
Q.05
OF
Q.05

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142

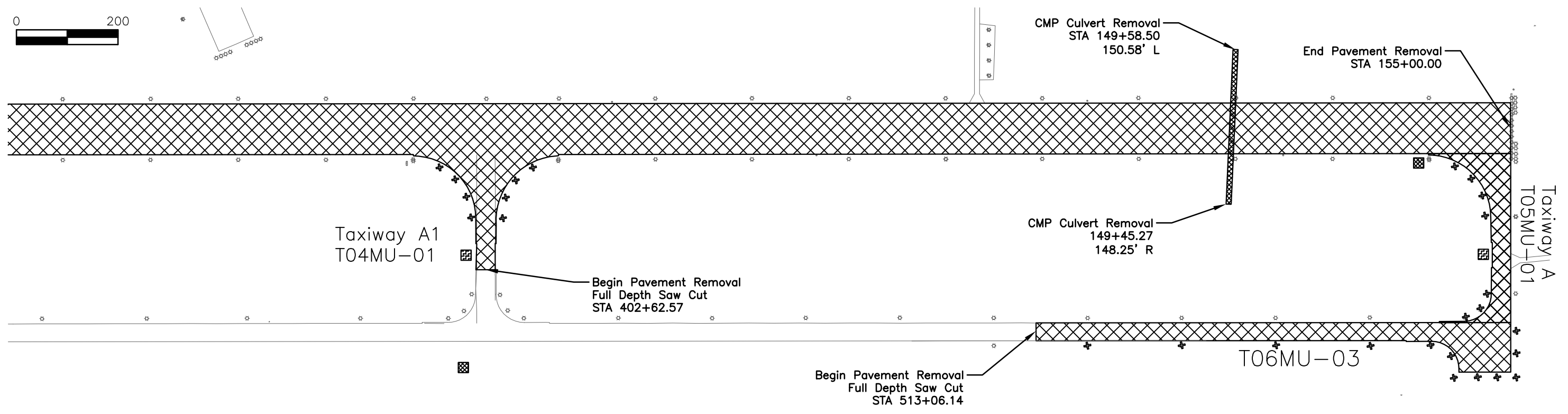
NO.	REVISION	DESCRIPTION	APPROVED	DATE

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	REMOVE PAVEMENT
	REMOVE SIGN AND BASE
	REMOVE SIGN
	REMOVE LIGHT

- Notes:
1. Contractor shall protect all items not designated for removal.
 2. Contractor shall mill existing asphalt, salvage existing asphalt, and stockpile existing asphalt at the location shown on Sheet A.04. The salvaged asphalt shall remain the property of the city. This work shall be incidental to pavement removal.



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Date: 5-21-2015
Project No. 214009

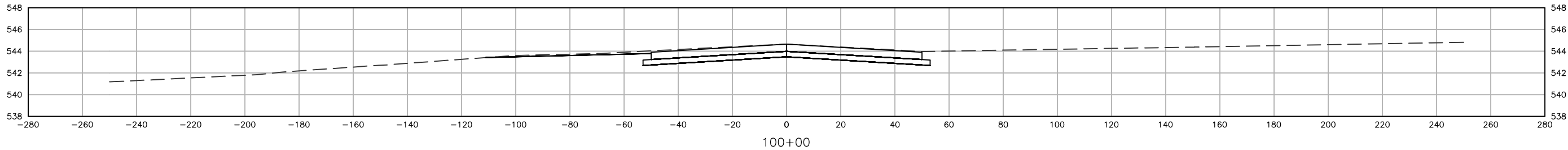
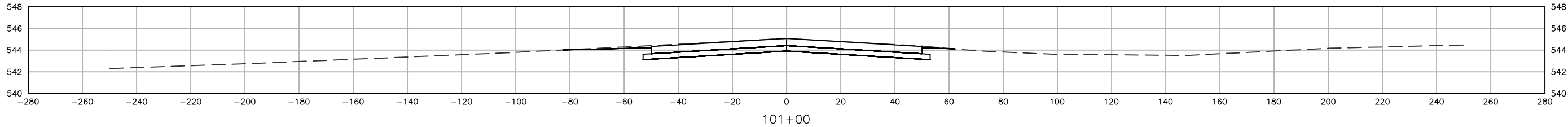
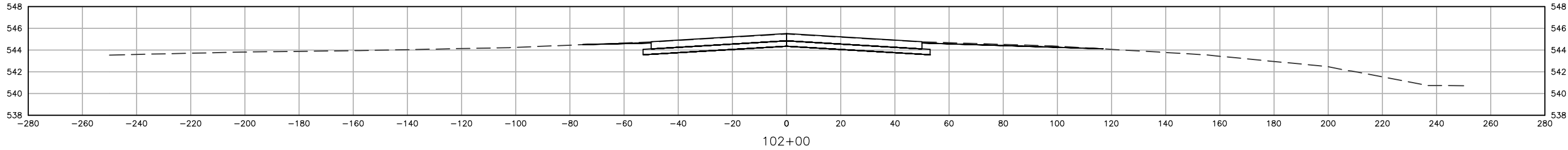
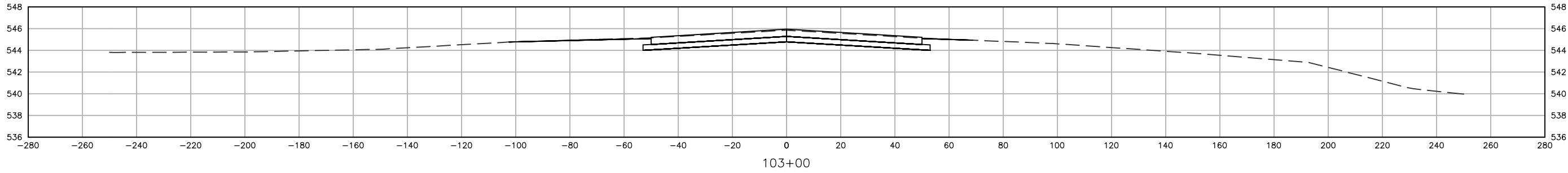
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Removal Plan

SHEET NO.
R.01
OF
R.01

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Muscatine, Iowa 52761
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Date: 5-21-2015
Project No. 214009

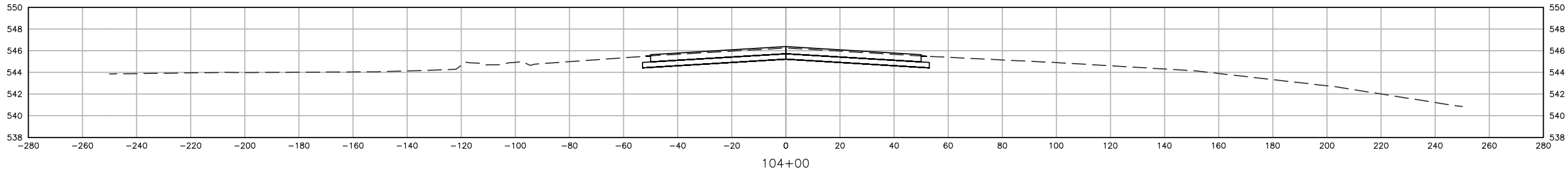
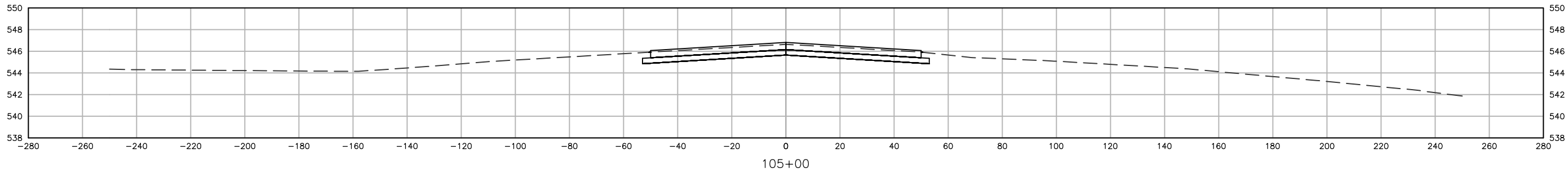
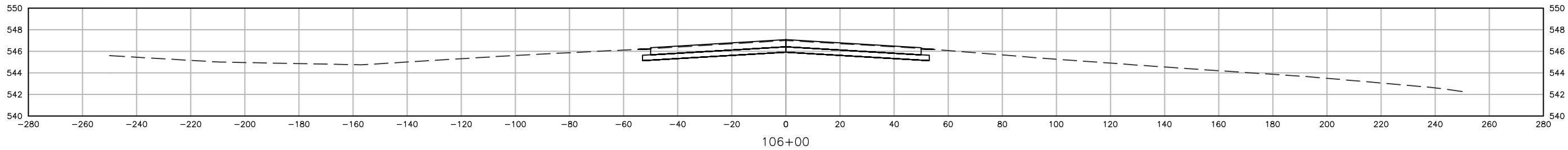
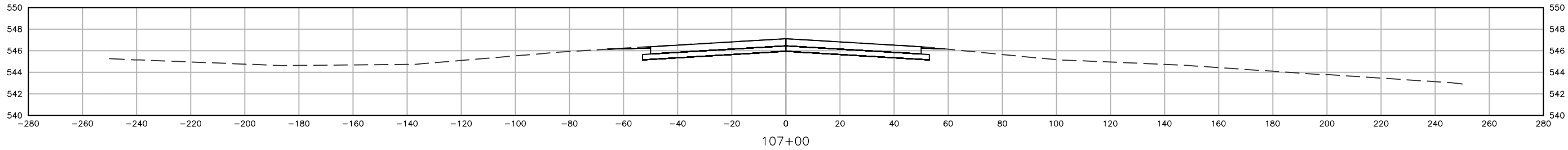
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
X.01
OF
X.14

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Client: City of Muscatine
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Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

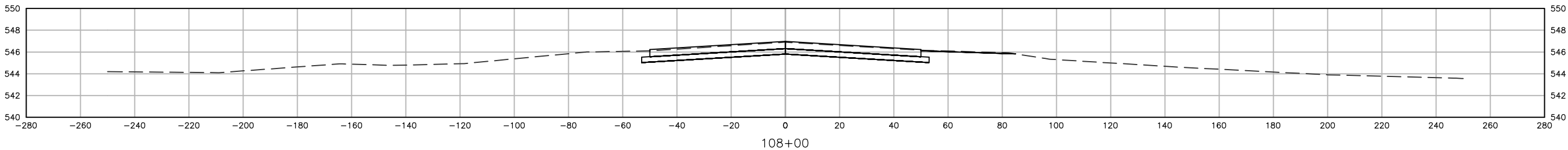
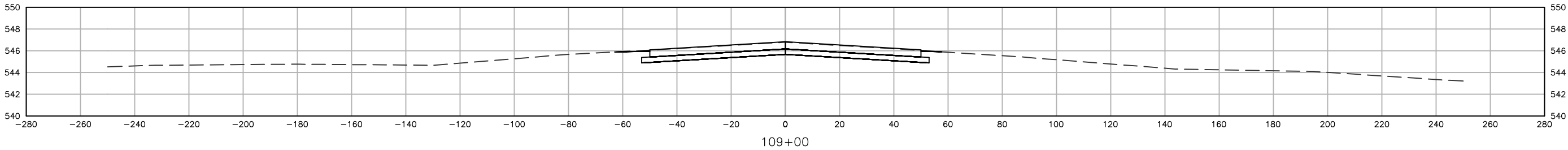
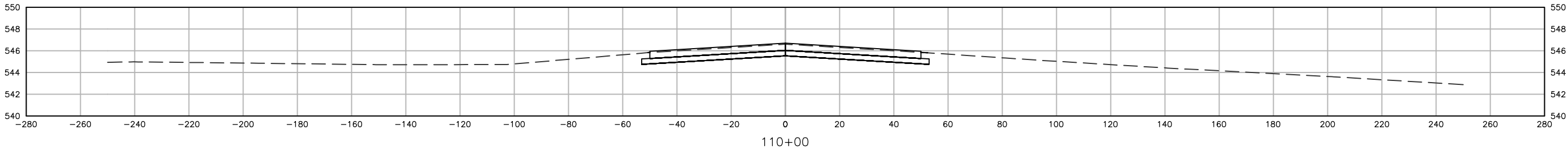
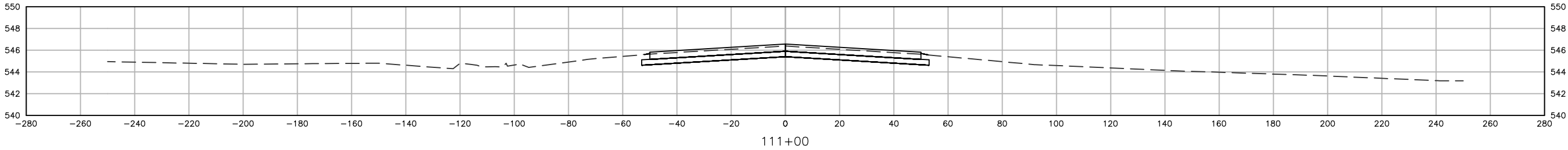
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Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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OF
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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
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Muscatine, Iowa 52761
Phone: (563) 262-4141
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Date: 5-21-2015
Project No. 214009

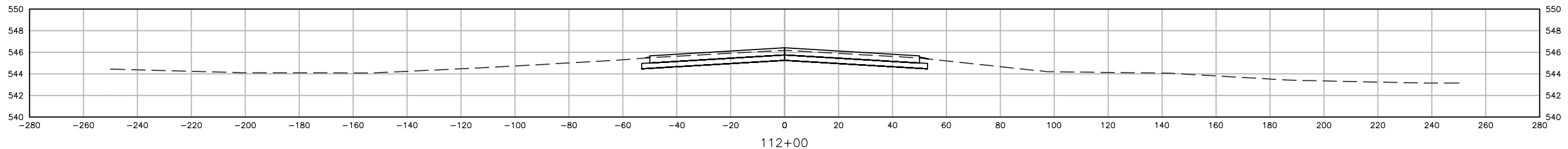
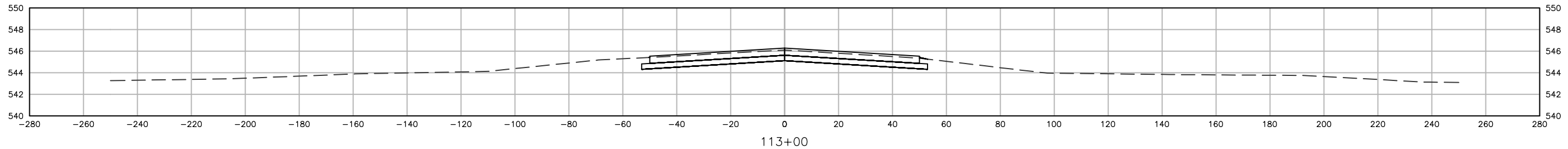
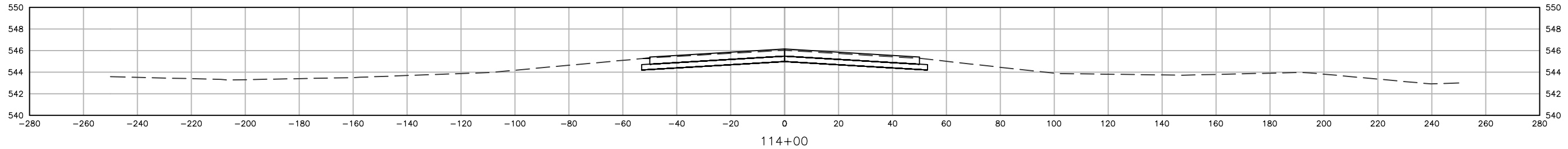
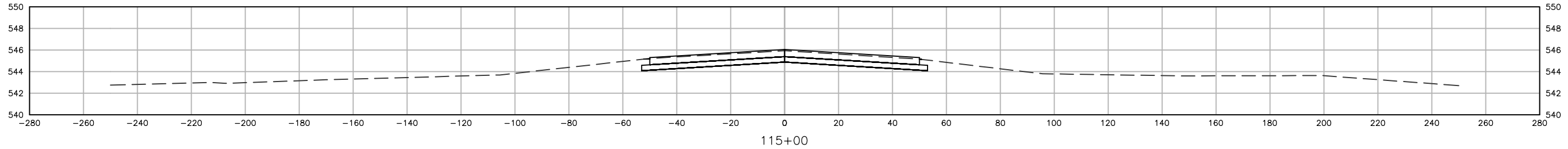
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

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NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
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Muscatine, Iowa 52761
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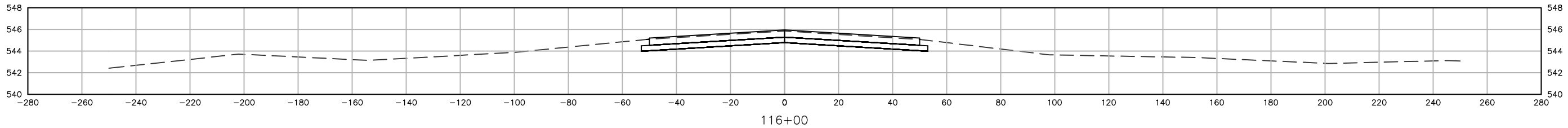
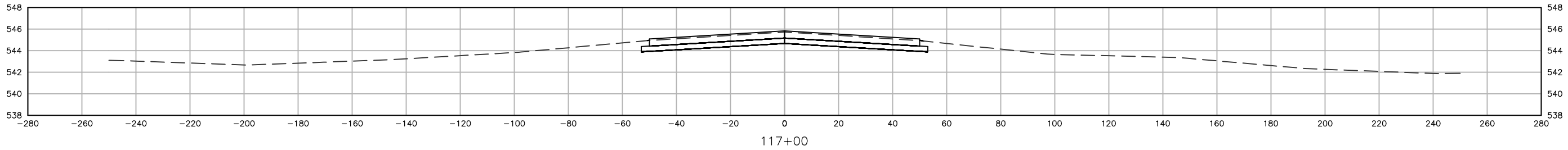
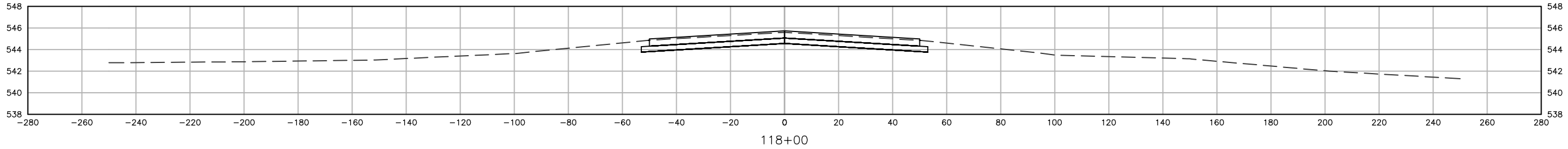
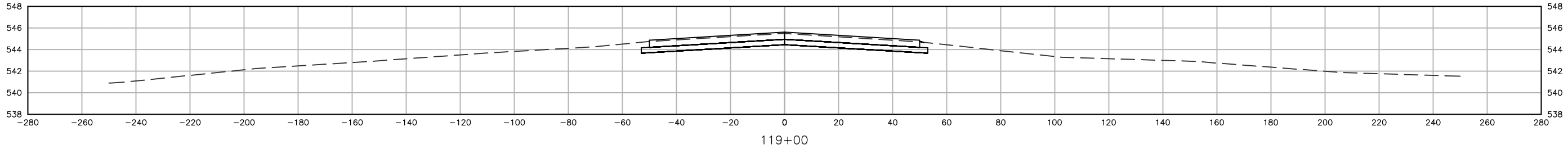
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Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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Client: City of Muscatine
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Date: 5-21-2015
Project No. 214009

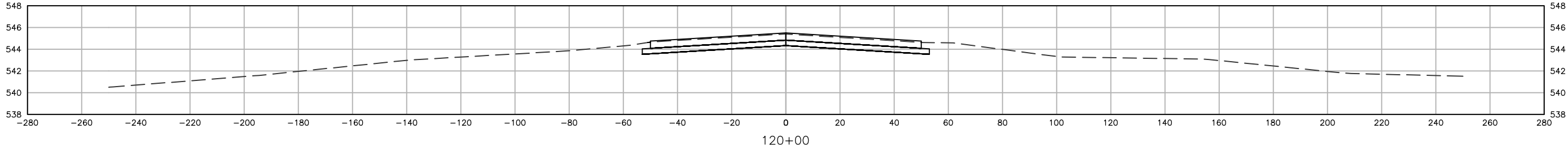
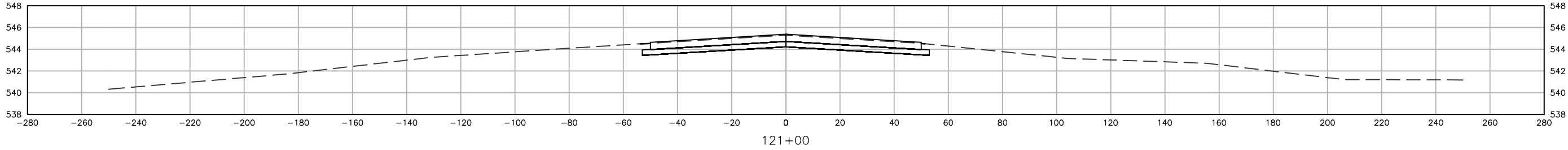
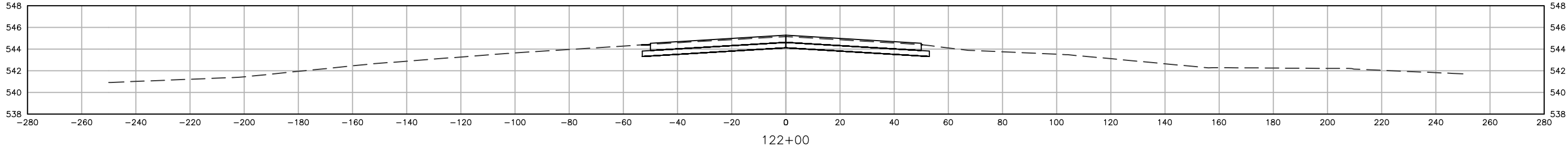
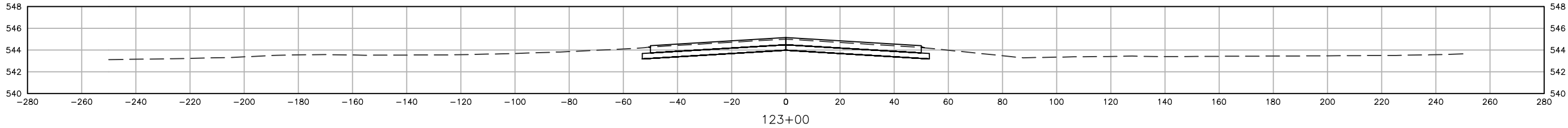
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

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Client: City of Muscatine
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Date: 5-21-2015
Project No. 214009

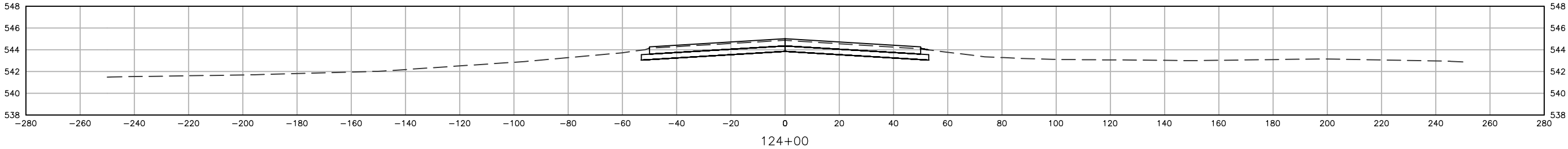
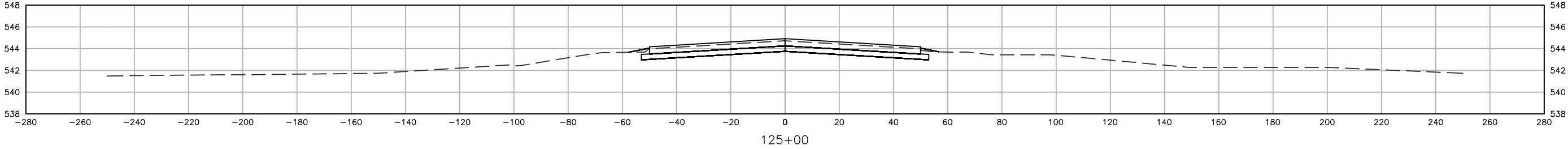
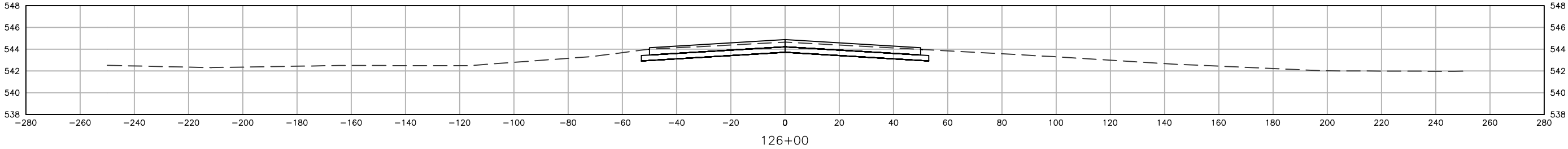
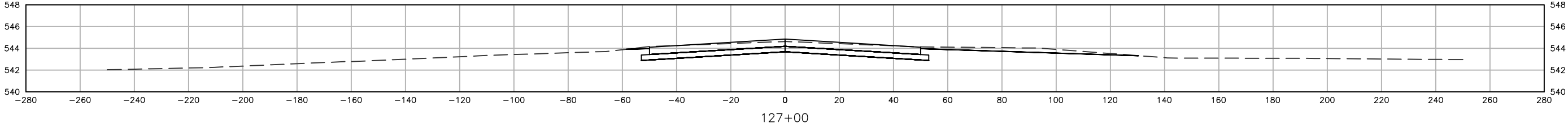
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

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OF
X.14

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NO.	REVISION DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



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Date: 5-21-2015
Project No. 214009

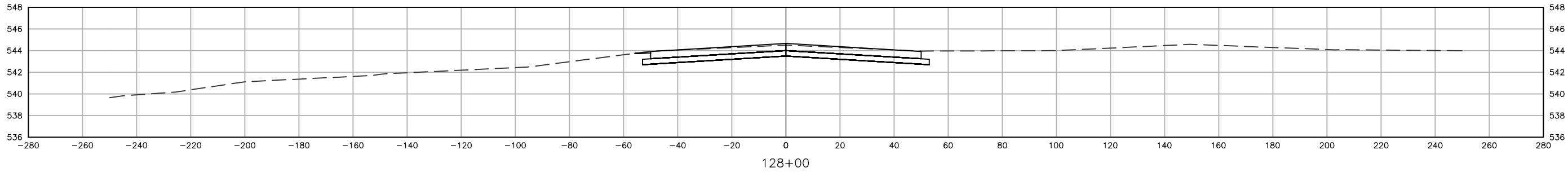
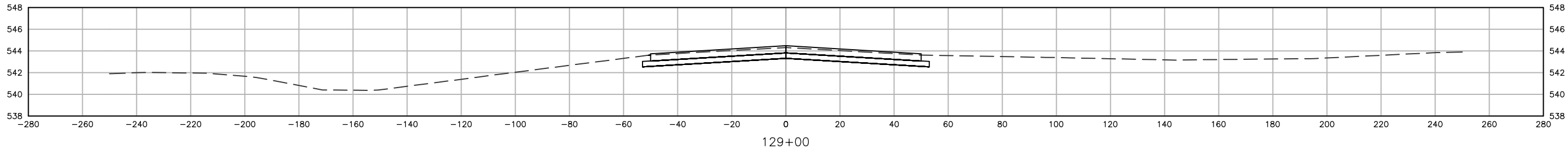
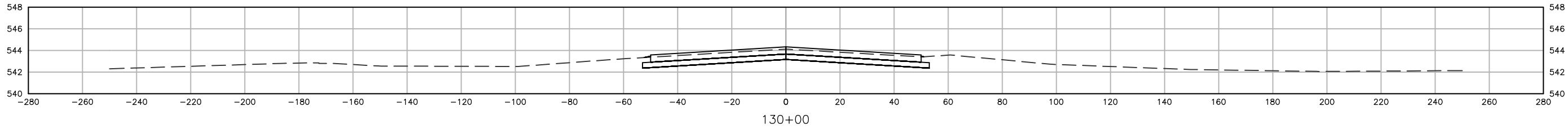
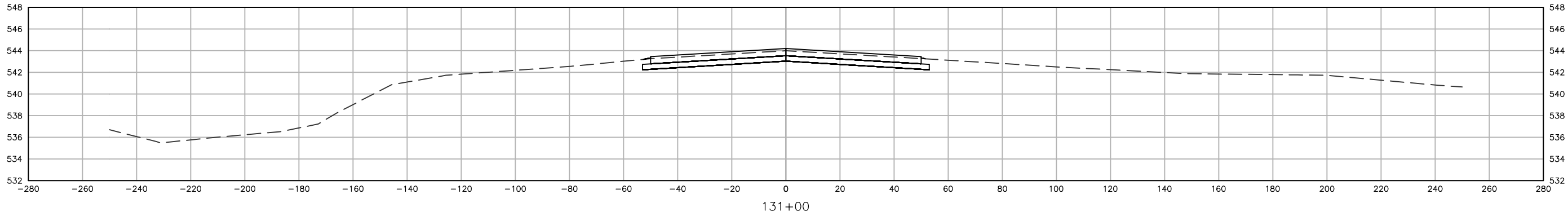
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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OF
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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

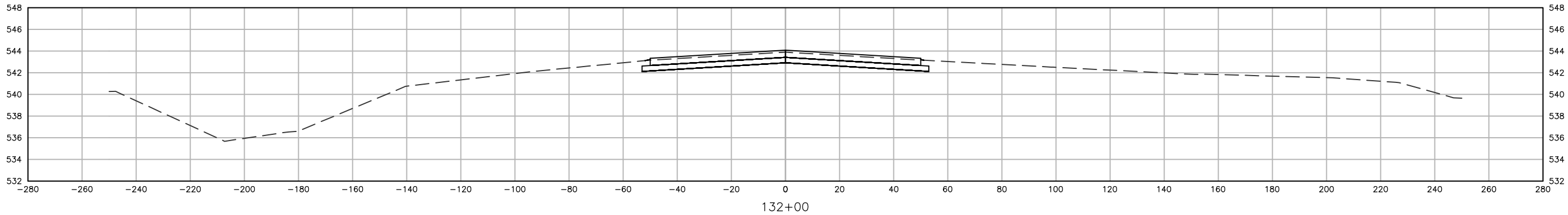
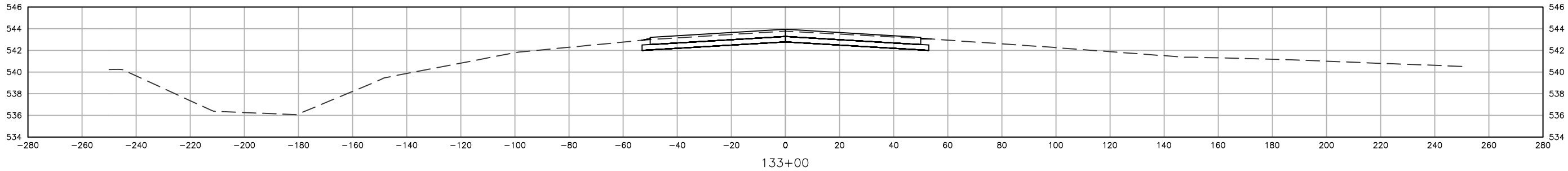
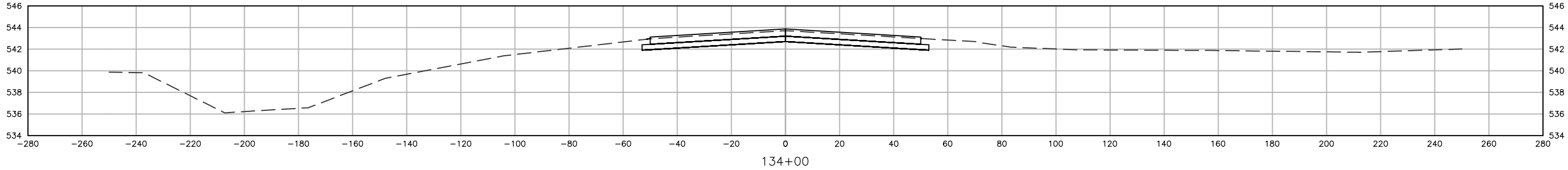
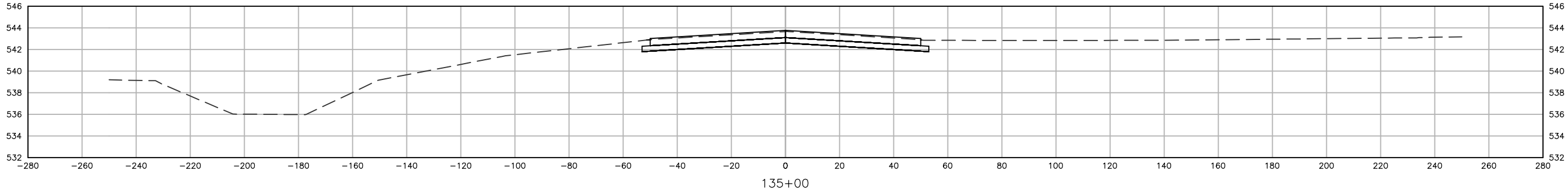
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

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OF
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Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
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Project No. 214009

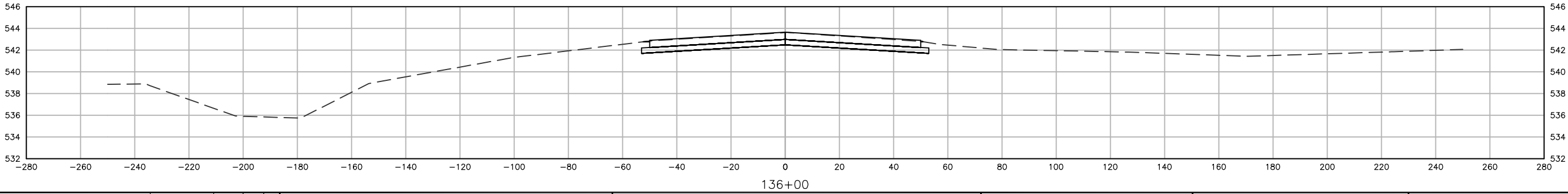
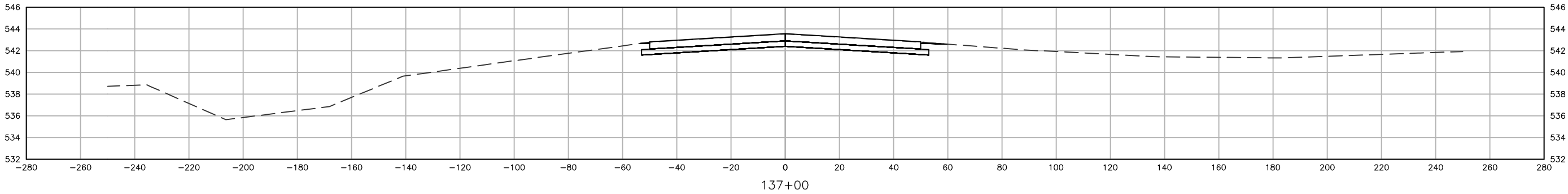
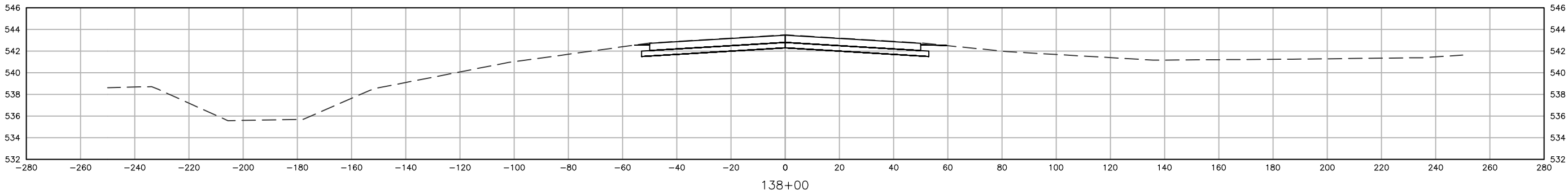
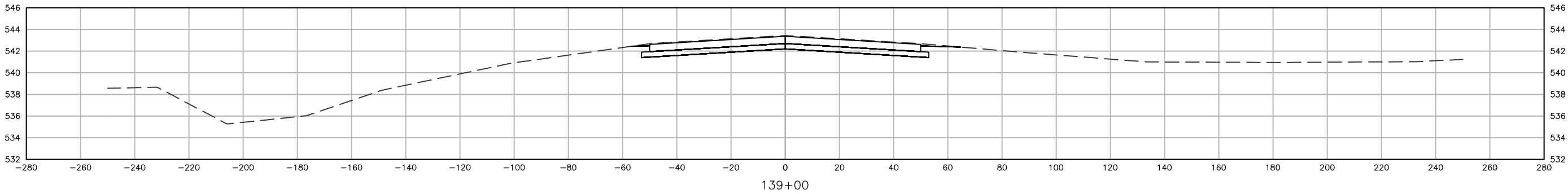
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Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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X.14

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Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



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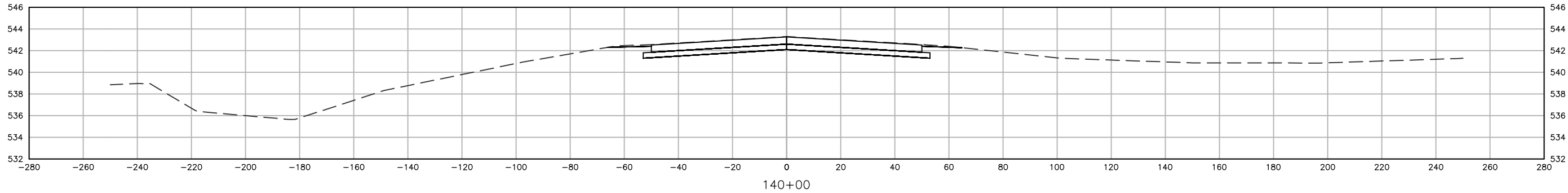
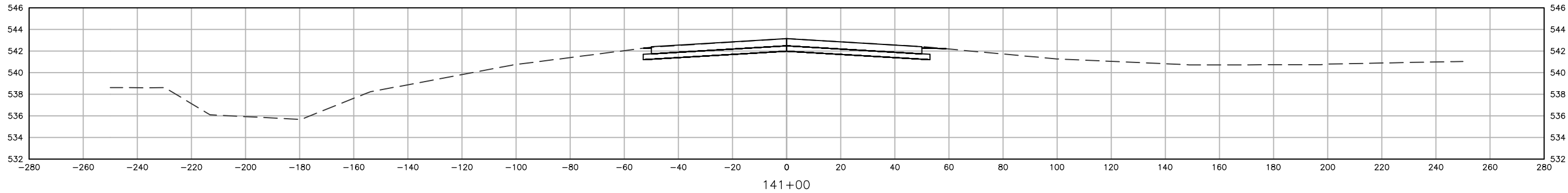
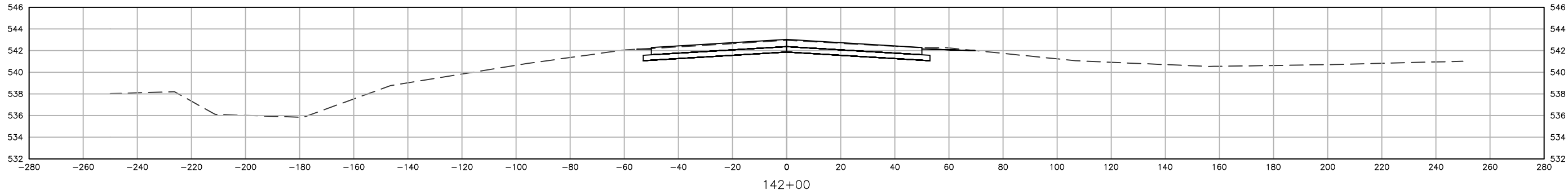
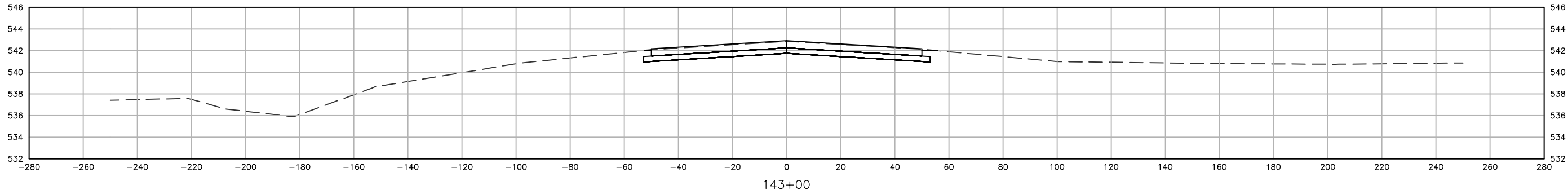
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
X.10
OF
X.14

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

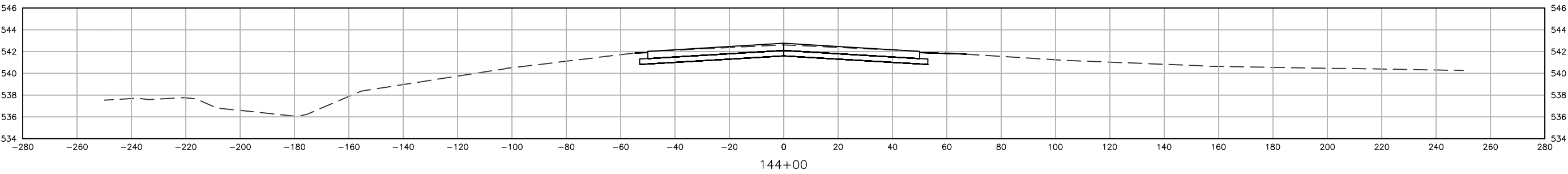
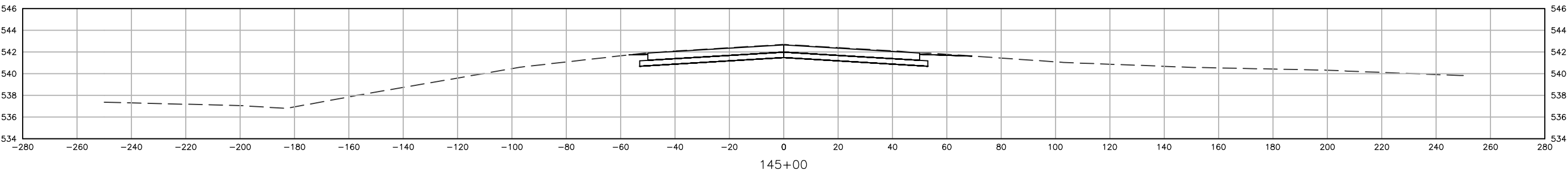
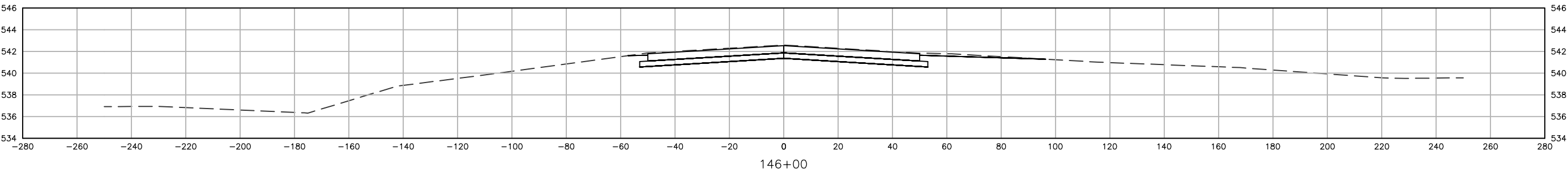
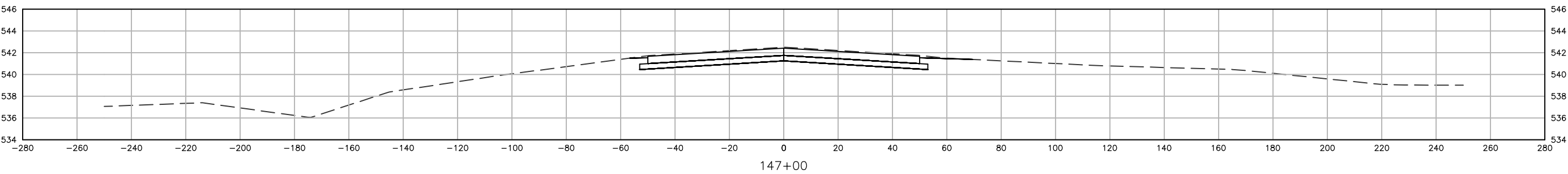
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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OF
X.14

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
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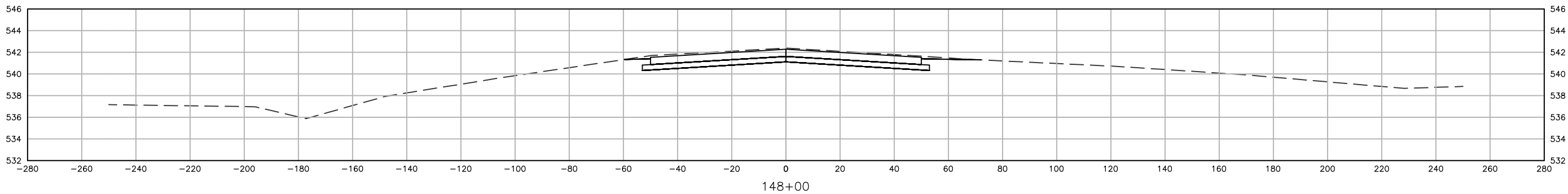
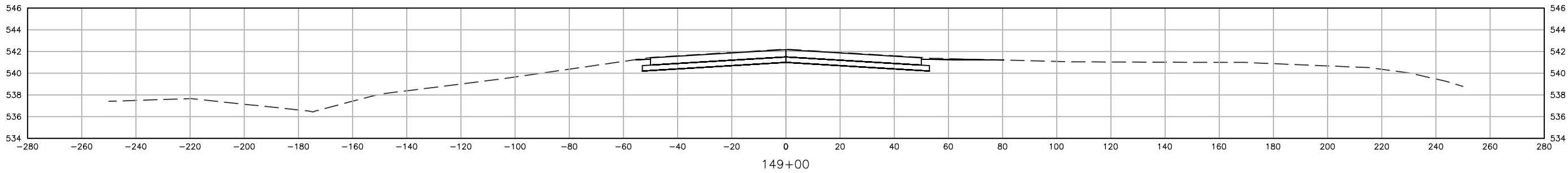
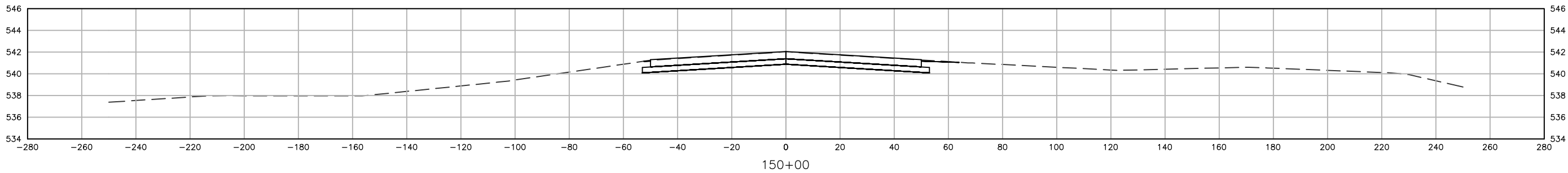
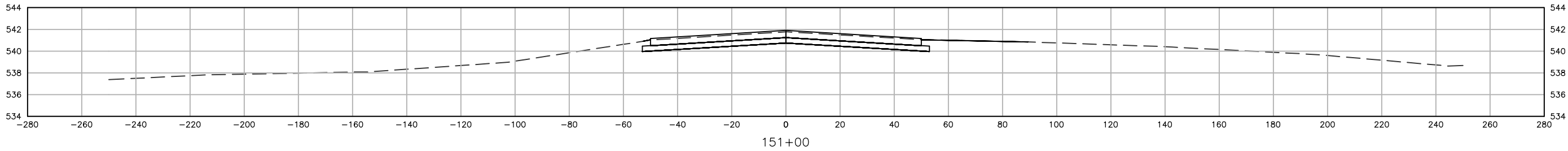
Drawn By: MJP
Date: 5-21-2015
Project No. 214009
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
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OF
X.14

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Client: City of Muscatine
215 Sycamore Street
Muscatine, Iowa 52761
Phone: (563) 262-4141
Fax: (563) 262-4142



Drawn By: MJP
Date: 5-21-2015
Project No. 214009

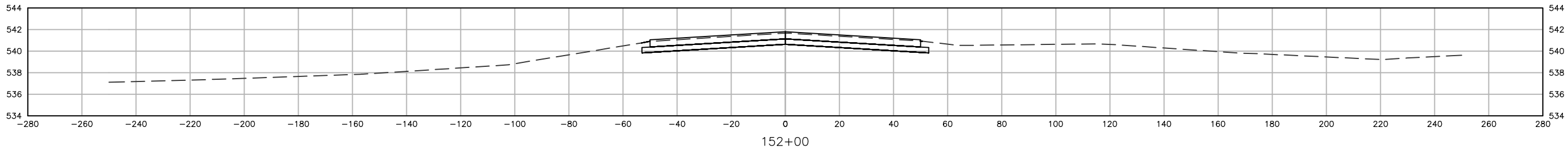
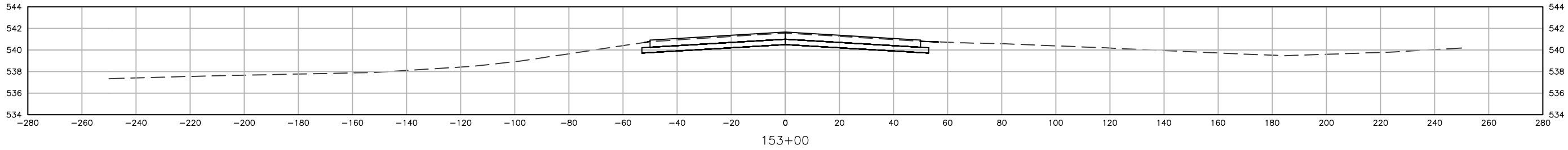
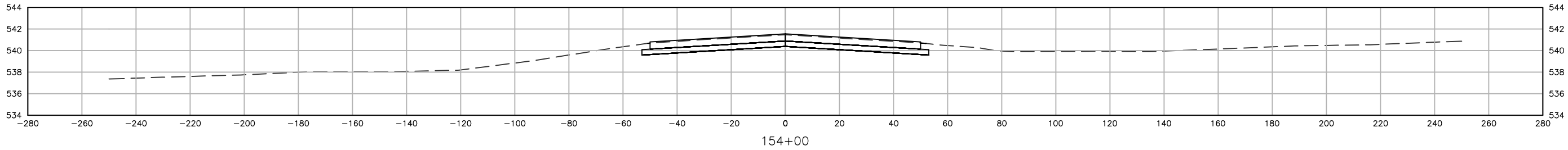
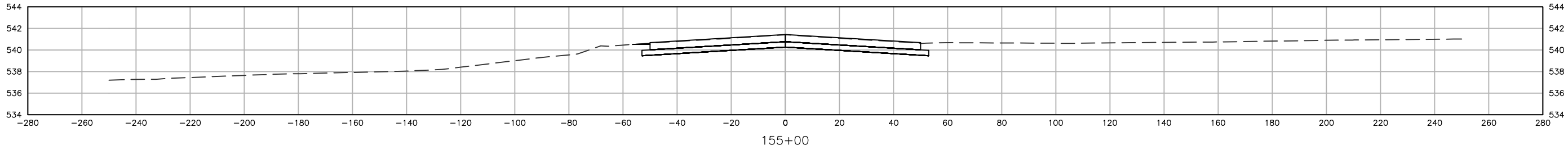
Approved By: JCD
Scale: See Bar Scale

Muscatine Municipal Airport
Reconstruct Runway 6/24
and Associated Taxiways

Runway
Cross Section

SHEET NO.
X.13
OF
X.14

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NO.	REVISION	DESCRIPTION	APPROVED	DATE

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