2A

MV059

TOTAL SHEETS: 32

CONSTRUCTION PLANS

FOR

MT. VERNON AIRPORT

MT. VERNON, JEFFERSON COUNTY, ILLINOIS

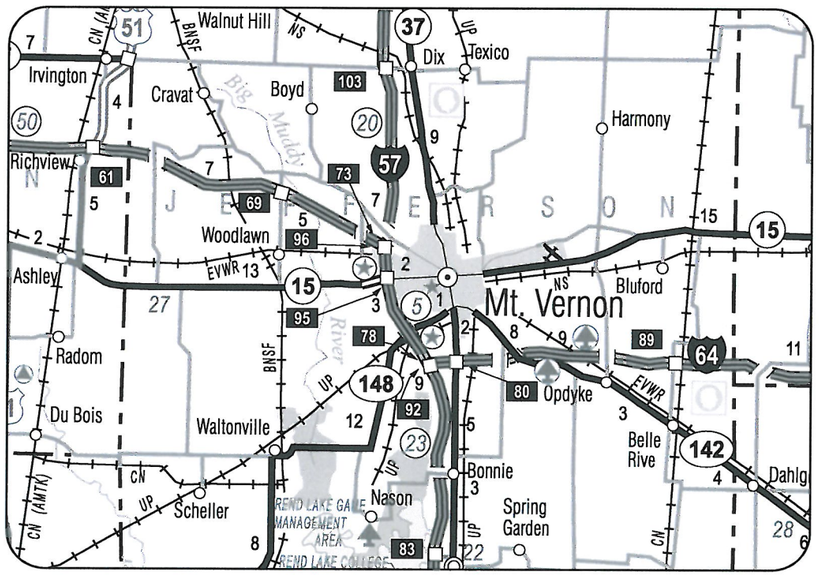
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

SCOPE OF WORK

THIS PROJECT INCLUDES CONSTRUCTION OF 6" P.C.C. RAMP & ACCESS TAXIWAY. ASSOCIATED WORK INCLUDES ALL NECESSARY EARTHWORK, DRAINAGE, ELECTRICAL, AGGREGATE FILL, PCC PAVEMENT, MARKING, TOPSOILING, SEEDING AND MULCHING. THE CONSTRUCTION OF A SITE ACCESS HAUL ROAD WILL ALSO BE INCLUDED IN THIS PROJECT.

ILL. PROJ.:	MVN-4197
SBG PROJ.:	3-17-0074-B27
LATITUDE:	38° 19' 24"
LONGITUDE:	88° 51' 30"
ELEVATION:	480.0' M.S.L.
DATE:	MARCH 1, 2013

LOCATION OF COUNTY



LOCATION

MT. VERNON AIRPORT AUTHORITY

Approved Greg Martin CHAIRMAN

Date 2-21-13

Approved [signature] VICE CHAIR

Date 2-21-13

LICENSED PROFESSIONAL ENGINEER
LINDSAY DENET HAUSMAN
062-059464
STATE OF ILLINOIS

HANSON

Hanson Professional Services Inc.

AIRPORT ENGINEER

Submitted by: Lindsay Hausman ENG'R

Date Submitted 2/22/13

Lics. Exp. Date 11/30/13

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

DATE	REVISION

Hanson Project No. 12A00444D
Filename 01-G-001-CVR.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/13/12
DRAWN	LDH	12/13/12
REVIEWED	BSS	2/21/13

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

COVER SHEET

1

1 of 32 sheets

FEB 22, 2013 8:13 AM HAUSMW00682

MV059

INDEX TO SHEETS

SUMMARY OF QUANTITIES – BASE BID

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	275.0	
AR108960	REMOVE CABLE	L.F.	66.0	
AR110504	4-WAY CONCRETE ENCASED DUCT	L.F.	41.0	
AR125100	ELEVATED RETROREFLECTIVE MARKER	EACH	13.0	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	1.0	
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1.0	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	3,680.0	
AR156510	SILT FENCE	L.F.	1,146.0	
AR156520	INLET PROTECTION	EACH	5.0	
AR162510	CLASS E FENCE 10'	L.F.	154.0	
AR162900	REMOVE CLASS E FENCE	L.F.	200.0	
AR209604	CRUSHED AGGREGATE BASE COURSE – 4"	S.Y.	2,280.0	
AR401650	BITUMINOUS PAVEMENT MILLING	S.Y.	12,109.0	
AR401660	SAW & SEAL BITUMINOUS JOINTS	L.F.	54.0	
AR401665	BITUMINOUS PAVEMENT SAWING	L.F.	712.0	
AR501506	6" PCC PAVEMENT	S.Y.	2,205.0	
AR501530	PCC TEST BATCH	EACH	1.0	
AR501900	REMOVE PCC PAVEMENT	S.Y.	1,254.0	
AR620520	PAVEMENT MARKING – WATERBORNE	S.F.	1,160.0	
AR620525	PAVEMENT MARKING – BLACK BORDER	S.F.	169.0	
AR701512	12" RCP, CLASS IV	L.F.	106.0	
AR705506	6" PERFORATED UNDERDRAIN	L.F.	349.0	
AR705640	UNDERDRAIN CLEANOUT	EACH	4.0	
AR751411	INLET – TYPE A	EACH	1.0	
AR751927	REPLACE FRAME & GRATE	EACH	1.0	
AR752412	PRECAST REINFORCED CONC. FES 12"	EACH	4.0	
AR800423	BIT. MILLINGS, 24"	S.Y.	2,057.0	
AR800589	BIT. MILLINGS SUBBASE, 6"	S.Y.	2,280.0	
AR901510	SEEDING	ACRE	6.4	
AR905510	TOPSOILING (FROM ON SITE)	C.Y.	2,464.0	
AR905520	TOPSOILING (FROM OFF SITE)	C.Y.	1,108.0	
AR908510	MULCHING	ACRE	6.4	

SUMMARY OF QUANTITIES – ADDITIVE ALTERNATE NO. 1

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AS501900	REMOVE PCC PAVEMENT	S.Y.	1,557.0	
AS901510	SEEDING	ACRE	0.5	
AS905520	TOPSOILING (FROM OFF SITE)	C.Y.	276.0	
AS908510	MULCHING	ACRE	0.5	

REVISION
DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 02-G-002-FLP.dwg
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/13/12
DRAWN	LDH	12/13/12
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

SHEET INDEX AND SUMMARY OF QUANTITIES

2

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pw:\\spi-svr306.hanson.dom:Hanson Projects\Documents\12Jobs\12A0044\12A00440\CAD\Airport\Sheet\G-002-FLP

MV059

SCOPE OF WORK

THE PROJECT SCOPE CONSISTS OF REMOVING EXISTING PAVEMENTS AND CONSTRUCTING A TAXIWAY AND APRON FOR AN EXISTING HANGAR. THIS WORK INCLUDES EXCAVATION, DRAINAGE, ELECTRICAL ITEMS, AGGREGATE PLACEMENT, PCC PAVEMENTS, MARKING, TOPSOILING, SEEDING AND MULCHING. THE PROJECT SHALL ALSO INCLUDE THE CONSTRUCTION OF A HAUL ROUTE.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 20 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A DUMP TRUCK.

EQUIPMENT PARKING AND STORAGE AREA

THE CONTRACTOR WILL USE THE DESIGNATED EQUIPMENT PARKING AND STORAGE AREAS AS SHOWN. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED EQUIPMENT PARKING AND STORAGE AREAS THROUGHOUT THE COURSE OF THE PROJECT. ANY AREAS DAMAGED OUTSIDE OF THESE AREAS WILL BE REPAIRED BY THE CONTRACTOR AND AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR WILL RESTORE THE EQUIPMENT PARKING AND STORAGE AREAS TO THEIR ORIGINAL STATE. RESTORATION OF THE EQUIPMENT PARKING AND STORAGE AREAS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PROPOSED SAFETY PLAN

GENERAL – THE MT. VERNON AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT NECESSITATE CLOSING ANY RUNWAYS OR APRONS.

TAXIWAY A AND A1 WILL NEED TO BE CLOSED DURING STAGE 1B OF THE PROJECT. STAGE 1B SHALL INCLUDE ALL WORK WITHIN THE TAXIWAY OBJECT FREE AREA, OR WITHIN 93' OF THE TAXIWAY A CENTERLINE.

IDENTIFICATION – WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE FOOT (3') SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

RADIO CONTROL – THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (123.00 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE MT. VERNON AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

CONSTRUCTION STAGING

THE CONTRACTOR SHALL COMPLETE THE WORK IN 2 STAGES. STAGE 1A SHALL BE ALL WORK OUTSIDE THE TAXIWAY A OBJECT FREE AREA (93' FROM THE TAXIWAY CENTERLINE FOR CATEGORY C-III). STAGE 1B WILL BE ALL WORK WITHIN THAT TAXIWAY A OBJECT FREE AREA. DURING THIS STAGE THE TAXIWAY SHALL BE CLOSED. WORK DURING THIS STAGE SHALL BE COMPLETED EXPEDITIOUSLY AS TO MINIMIZE IMPACT TO THE AIRPORT TENANTS AND USERS.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR PERSONAL VEHICLES IN THE AREA DESIGNATED FOR THEM. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO TRANSPORT HIS PERSONNEL FROM THIS PARKING AREA TO THE AREA WHERE HE IS WORKING. THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR OR HIS EQUIPMENT BE WITHIN 250 FT OF THE CENTERLINE OF AN ACTIVE RUNWAY.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT MANAGER. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR RED STEADY-BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

TEMPORARY CLOSED TAXIWAY MARKING

TEMPORARY CLOSED TAXIWAY MARKING SHALL BE IN ACCORDANCE WITH FAA AC 150/5340-1K AND SHALL BE YELLOW WATERBORNE PAINT. REMOVAL OF MARKING AT THE END OF STAGE 1B SHALL BE PERFORMED BY WATER BLASTING. COST INCIDENTAL TO THE CONTRACT.

UTILITY NOTE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

J.U.L.I.E. INFORMATION

COUNTY_____JEFFERSON
CITY_____MT. VERNON
TOWNSHIP_____MT. VERNON
SECTION NO.__22, 23, 26 & 27
ADDRESS_____MT. VERNON AIRPORT AUTHORITY
R.R. #4
MT. VERNON, ILLINOIS 62864

150-ENGINEER'S FIELD OFFICE NOTES

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE".

THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE DETERMINED AT THE PRE-CONSTRUCTION MEETING.

THE ENGINEERING FIRM WILL MAKE PAYMENT FOR ALL LONG DISTANCE TELEPHONE CALLS IN EXCESS OF ONE HUNDRED DOLLARS ($100.00) PER MONTH.

THE CONTRACTOR WILL FURNISH A CELL PHONE TO THE RESIDENT ENGINEER FOR HIS EXCLUSIVE USE FOR THE DURATION OF THIS PROJECT. THE RESIDENT ENGINEER WILL USE THIS PHONE FOR PROJECT BUSINESS ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CHARGES ASSOCIATED WITH THIS CELL PHONE.

CERTIFIED PAYROLLS

THE RESIDENT ENGINEER **CANNOT** FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL **CERTIFIED PAYROLLS** FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATION

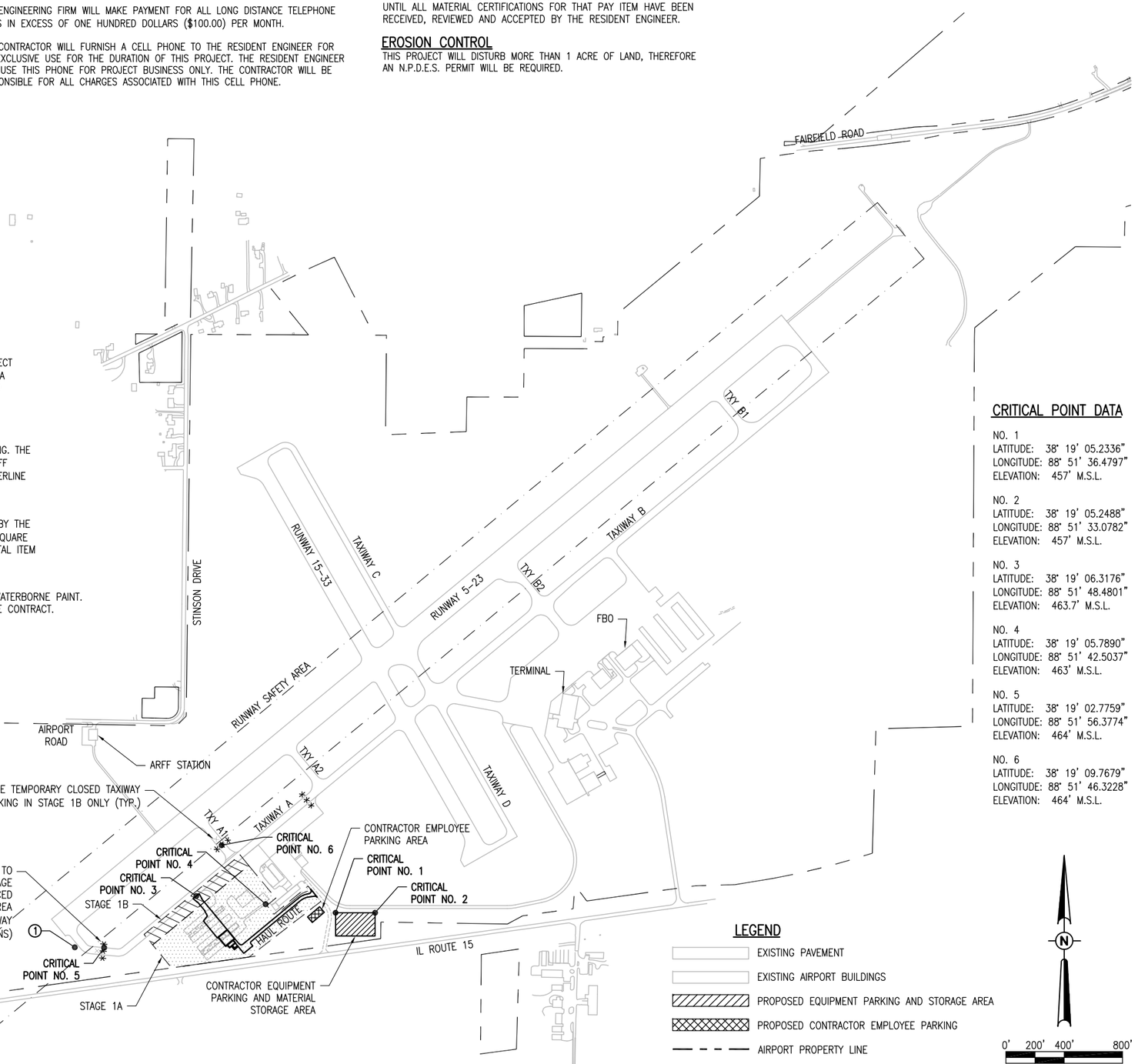
COMPLETED WORK **CANNOT** BE PLACED ON A CONSTRUCTION REPORT UNTIL ALL MATERIAL CERTIFICATIONS FOR THAT PAY ITEM HAVE BEEN RECEIVED, REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.

EROSION CONTROL

THIS PROJECT WILL DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE AN N.P.D.E.S. PERMIT WILL BE REQUIRED.

BENCHMARK DATA

NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
①	BRASS DISK STAMPED 'AP 1967 STA B'	601521.86	831317.71	463.57



CRITICAL POINT DATA

NO. 1
LATITUDE: 38° 19' 05.2336"
LONGITUDE: 88° 51' 36.4797"
ELEVATION: 457' M.S.L.

NO. 2
LATITUDE: 38° 19' 05.2488"
LONGITUDE: 88° 51' 33.0782"
ELEVATION: 457' M.S.L.

NO. 3
LATITUDE: 38° 19' 06.3176"
LONGITUDE: 88° 51' 48.4801"
ELEVATION: 463.7' M.S.L.

NO. 4
LATITUDE: 38° 19' 05.7890"
LONGITUDE: 88° 51' 42.5037"
ELEVATION: 463' M.S.L.

NO. 5
LATITUDE: 38° 19' 02.7759"
LONGITUDE: 88° 51' 56.3774"
ELEVATION: 464' M.S.L.

NO. 6
LATITUDE: 38° 19' 09.7679"
LONGITUDE: 88° 51' 46.3228"
ELEVATION: 464' M.S.L.

LEGEND

- EXISTING PAVEMENT
- EXISTING AIRPORT BUILDINGS
- PROPOSED EQUIPMENT PARKING AND STORAGE AREA
- PROPOSED CONTRACTOR EMPLOYEE PARKING
- AIRPORT PROPERTY LINE
- ① BENCHMARK

N

0' 200' 400' 800'
HALF SIZE SCALE: 1"= 800'
FULL SIZE SCALE: 1"= 400'

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197
SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 03-G-003-SFY.DWG
Scale 1:400
Date 3/1/13

LAYOUT	LDH	12/17/12
DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

HANSON

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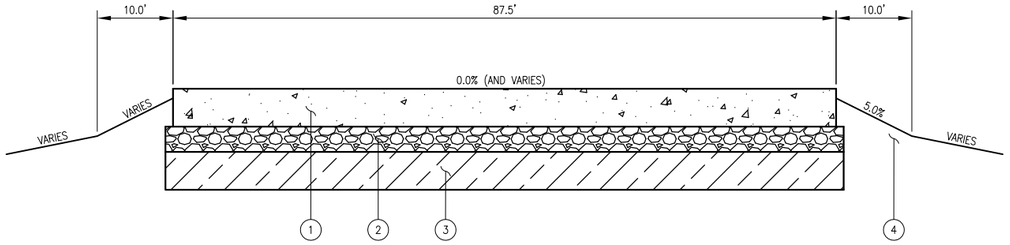
1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

SAFETY PLAN

3
3 of 32 sheets

FEB 21, 2013 10:50 AM HAUSM00682



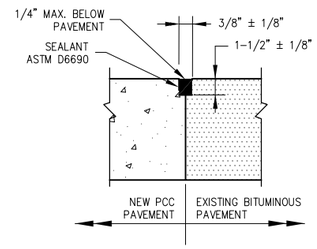
NOTES:

1. 4" TOPSOIL TO BE PLACED WHERE APPLICABLE.
2. FOR ADDITIONAL INFORMATION SEE CROSS SECTIONS, GRADING PLAN AND LANDSCAPING PLAN.

TAXIWAY AND APRON TYPICAL SECTION

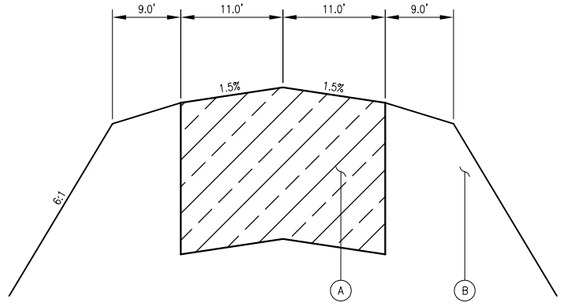
PAVEMENT LEGEND

①	PROPOSED 6 INCH PCC, ITEM AR501506.
②	PROPOSED 4 INCH CRUSHED AGGREGATE BASE COURSE, ITEM AR209604.
③	PROPOSED 6 INCH MILLINGS SUBBASE, ITEM AR800589.
④	PROPOSED TOPSOIL, ITEM AR905510 AND AR905520. SEEDING AND MULCHING AREAS, ITEMS AR901510 AND AR908510.



NOTE:
ALL BITUMINOUS/PCC JOINT SEALING TO BE PAID UNDER SAW AND SEAL BITUMINOUS JOINTS, ITEM AR401660.

BITUMINOUS/PCC SEAL



NOTES:

1. 4" TOPSOIL TO BE PLACED WHERE APPLICABLE.
2. FOR ADDITIONAL INFORMATION SEE CROSS SECTIONS, GRADING PLAN AND LANDSCAPING PLAN.

HAUL ROUTE TYPICAL SECTION

PAVEMENT LEGEND

Ⓐ	PROPOSED 24.0 INCH MILLINGS SUBBASE, ITEM AR800423.
Ⓑ	PROPOSED TOPSOIL, ITEM AR905510 AND AR905520. SEEDING AND MULCHING AREAS, ITEMS AR901510 AND AR908510.

FEB 21, 2013 10:51 AM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 04-G-004-TYP.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/17/12
DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

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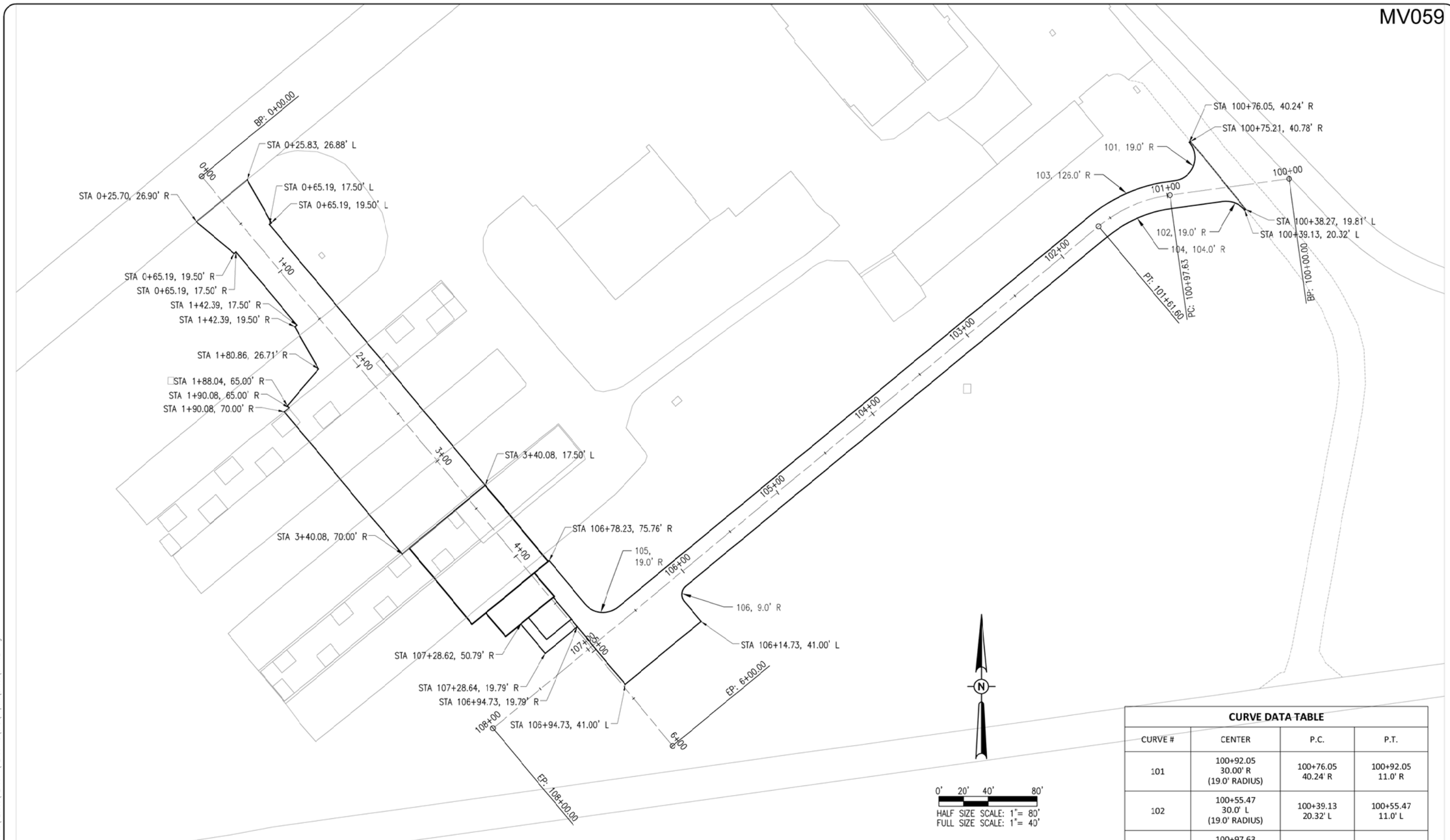
1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

TYPICAL SECTIONS AND PAVEMENT DETAILS

MV059



ALIGNMENT DATA TABLE

Runway/Taxiway	Description	Station	Project Coordinates	
			Northing	Easting
ALIGNMENT 00	BEGINNING OF ALIGNMENT	0+00.00	601892.8214	832133.2148
	END OF ALIGNMENT	6+00.00	601430.5603	832515.7258
ALIGNMENT 100 - Haul Road	BEGINNING OF ALIGNMENT	100+00.00	601890.8057	833016.0060
	PC	100+97.63	601877.6062	832919.2727
	PT	101+61.60	601852.2207	832861.4560
	END OF ALIGNMENT	108+00.00	601444.9478	832369.8369

CURVE DATA TABLE

CURVE #	CENTER	P.C.	P.T.
101	100+92.05 30.00' R (19.0' RADIUS)	100+76.05 40.24' R	100+92.05 11.0' R
102	100+55.47 30.0' L (19.0' RADIUS)	100+39.13 20.32' L	100+55.47 11.0' L
103	100+97.63 115.0' L (126.0' RADIUS)	100+97.63 11.0' R	101+61.60 11.0' R
104	100+97.63 115.0' L (104.0' RADIUS)	100+97.63 11.0' L	101+61.60 11.0' L
105	106+59.23 30.0' R (19.0' RADIUS)	106+59.23 11.0' R	106+78.23 30.0' R
106	106+05.73 20.0' L (9.0' RADIUS)	106+05.73 11.0' L	106+14.73 20.0' L

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

REVISION	DATE

Hanson Project No. 12A0044D
Filename 05-C-102-Align.dwg
Scale 1" = 40'
Date 3/1/13

LAYOUT	LDH	12/13/12
DRAWN	KMS	12/14/12
REVIEWED	BSS	2/21/13

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Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

ALIGNMENT DATA AND PAVEMENT LAYOUT

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FEB 21, 2013 10:52 AM HAUSM00682
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MV059

PROPOSED INLET PROTECTION AT INLET; SEE DETAIL (TYP., 5 LOCATIONS)

STA 0+47.27, 277.18' R

STA 5+65.99, 374.55' L

PROPOSED SILT FENCE PROTECTION AT FES; SEE DETAIL (TYP., 4 LOCATIONS)

PROPOSED SILT FENCE, SEE DETAIL, (TYP.)

STA 5+66.20, 5.66' R

STA 3+97.27, 277.18' R

N

0' 20' 40' 80'

HALF SIZE SCALE: 1"= 80'
FULL SIZE SCALE: 1"= 40'

REVISION	DATE

MT. VERNON AIRPORT

MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 06-C-101-SWPPP.DWG
Scale 1:40
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	KMS	12/18/12
REVIEWED	BSS	2/21/13

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

STORM WATER POLLUTION PREVENTION PLAN

6

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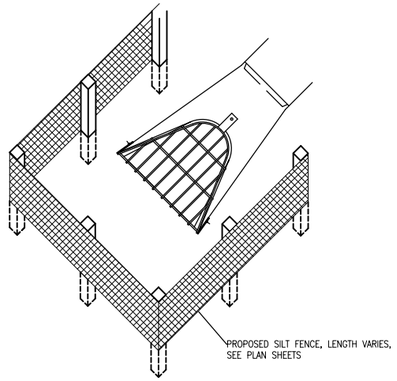
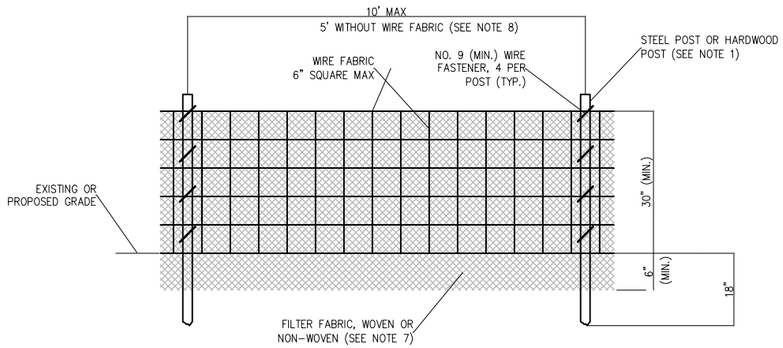
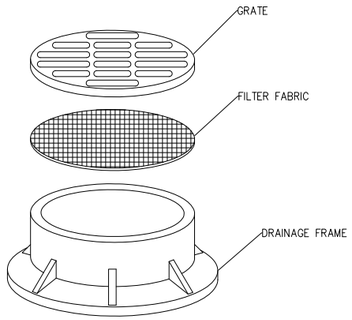
FEB 20, 2013 2:09 PM HAUSM00682



SILT FENCE PLACEMENT
AT FLARED END SECTIONS (FES)



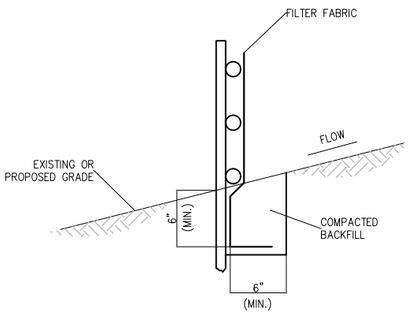
ELEVATION



INLET PROTECTION – DRAINAGE STRUCTURE FILTER WRAP

NOTES:

1. FILTER WRAP TO BE PLACED IN ALL MANHOLES AS SHOWN.
2. FABRIC SHALL BE IN CONFORMANCE WITH MATERIALS SPECIFIED FOR SILT FENCE.
3. FABRIC SHALL OVERLAY FRAME BY 2 INCHES (MINIMUM).
4. CONTRACTOR SHALL CLEAR DEBRIS AND SILT AS REQUIRED FROM FABRIC TO MAINTAIN DRAINAGE THROUGH THE STRUCTURE.
5. FABRIC SHALL REMAIN IN PLACE UNTIL TURFED AREAS HAVE DEVELOPED A MINIMUM OF 80% OF COVERAGE.
6. COST OF FILTER WRAP SHALL BE INCIDENTAL TO INLET PROTECTION.



FABRIC ANCHOR DETAIL

NOTES:

1. FENCE POST SHALL BE EITHER STEEL "T" LINE POST OR HARDWOOD POST WITH A MINIMUM SECTIONAL AREA OF 3.0 SQUARE INCHES.
2. TOP AND BOTTOM WIRE OF WIRE FABRIC SHALL BE MINIMUM GAGE NO. 9. INTERMEDIATE WIRES OF THE WIRE FABRIC SHALL BE MINIMUM GAGE NO. 11.
3. WIRE FABRIC SHALL BE SECURELY FASTENED TO FENCE POSTS WITH NO. 9 GAGE WIRE MINIMUM. FOUR (4) FASTENERS PER POST REQUIRED.
4. FILTER FABRIC SHALL BE SECURELY FASTENED TO WIRE FABRIC AND POSTS WITH TIES OR STAPLES SPACED AT 12" APART AT THE TOP, MIDDLE AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER FABRIC MEET, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED AND ATTACHED TO THE WIRE FABRIC AT A POST.
6. FILTER FABRIC SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
7. WIRE FABRIC MAY BE OMITTED IF A MAXIMUM OF 5 FEET IS USED FOR POST–TO–POST SPACING.
8. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
9. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
10. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. PERIODIC INSPECTION SHALL BE PERFORMED AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.
11. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN BULGES DEVELOP IN THE SILT FENCE.
12. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
13. FENCE POSTS SHALL BE REMOVED WHEN DIRECTED AT PROJECT END.
14. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

STORM WATER POLLUTION PREVENTION NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.

THE MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES IS INCIDENTAL TO THE ASSOCIATED ITEM.

POLLUTION PREVENTION MEASURES

THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHERE EVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.

POLLUTION CONTROL ITEMS SHALL BE PROVIDED AS NOTED ON THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE STORM WATER POLLUTION PREVENTION DETAILS AND AS DIRECTED BY THE ENGINEER. THE LIMITS OF SUCH MEASURES SHALL BE STAKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH LIMITS MAY BE ADJUSTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL SITE CONDITIONS EXPERIENCED DURING CONSTRUCTION. ADDITIONAL COMPENSATION FOR MEASURES EXCEEDING THE PLAN QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.

THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES ARE EXISTING ON SITE LOCATED AT DRAINAGE FACILITIES AND ALONG THE PROPERTY LINE.

FEB 20, 2013 2:10 PM HAUSM00682

REVISION	DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No.	12A00440	
Filename	07-C-502-EROSION.DWG	
Scale	N/A	
Date	3/1/13	
LAYOUT	LDH	12/14/12
DRAWN	KMS	12/18/12
REVIEWED	BSS	2/21/13

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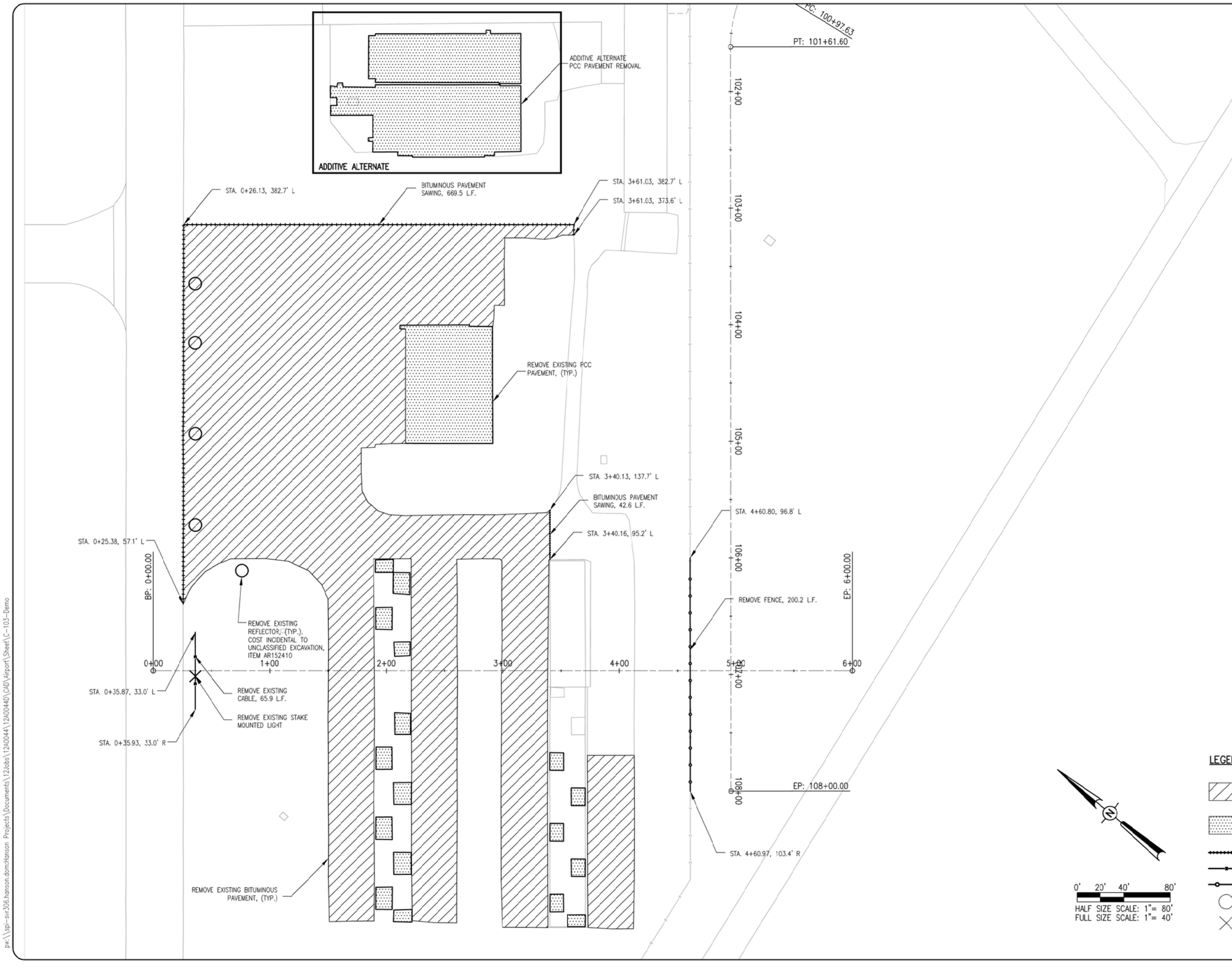
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

STORM WATER POLLUTION DETAILS



MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

DATE	REVISION

Hanson Project No. 12A0044D
Filename 08-C-103-Demo.dwg
Scale 1:40
Date 3/1/13

LAYOUT	LDH	12/13/12
DRAWN	KMS	12/17/12
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

REMOVAL PLAN

8

MV059

BP: 0+00.00

S6
REPLACE FRAME AND GRATE WITH NEENAH R-3475-C OR EQUAL.

S5
INLET
RIM 461.50
INVERT 459.50

U1
UNDERDRAIN CLEANOUT
RIM 463.38
INVERT 460.38

U2
UNDERDRAIN RCP CONNECTION
INVERT U2A 459.72
INVERT U2B 459.59

U3
UNDERDRAIN CLEANOUT
RIM 461.90
INVERT 459.90

PROPOSED PAVEMENT EDGE

82.4' @ 0.80%

76.7' @ 0.40%

SAW AND SEAL BIT/PCC JOINT (TYP.), SEE DETAIL

0+00 1+00 TAXIWAY ℄ 2+00 3+00 4+00 5+00

17.5'

35.0'

87.5'

EXISTING HANGAR

82.5' @ 0.80%

106.7' @ 0.40%

U5
UNDERDRAIN CONNECT TO RCP
INVERT U5A 459.82
INVERT U5B 459.72

U4
UNDERDRAIN CLEANOUT
RIM 463.48
INVERT 460.48

UNDERDRAIN SET 1.5' OFF PAVEMENT EDGE, SEE DETAIL

U6
UNDERDRAIN CLEANOUT
RIM 462.15
INVERT 460.15

PROPOSED FENCE, SEE FENCING PLAN (TYP.)

LEGEND:

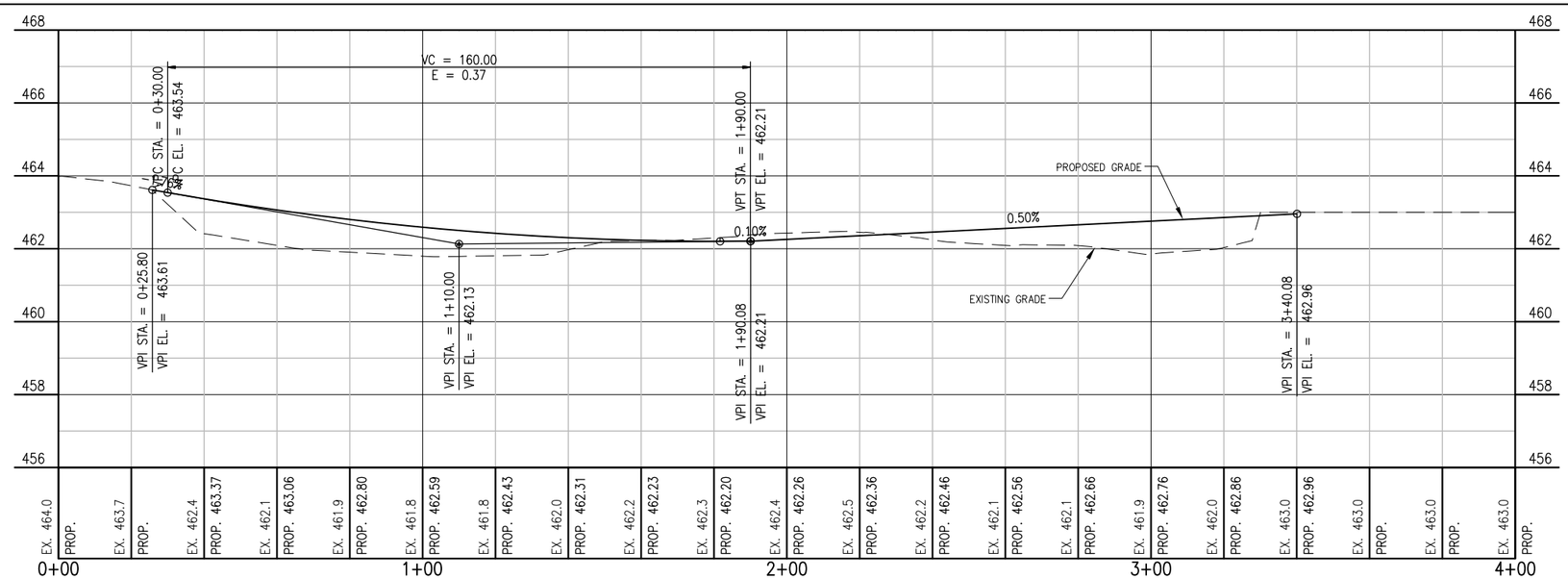
- EXISTING UNDERDRAIN
- PROPOSED UNDERDRAIN
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER INLET
- PROPOSED STORM SEWER INLET
- PROPOSED CLEAN OUT
- PROPOSED FLARED END SECTION

NOTES:

1. FOR ALIGNMENT DATA, SEE ALIGNMENT DATA TABLE, SHEET 5.
2. UTILITIES NOT SHOWN IN PROFILE.

2 0 2 4
VERTICAL SCALE IN FEET
11 X 17 SCALE: 1" = 4'
22 X 34 SCALE: 1" = 2'

20 0 20 40
HORIZONTAL SCALE IN FEET
11 X 17 SCALE: 1" = 40'
22 X 34 SCALE: 1" = 20'



FEB 21, 2013 11:00 AM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No.	12A00440	
Filename	09-C-700-TXY.DWG	
Scale	As Shown	
Date	3/1/13	
LAYOUT	LDH	12/13/12
DRAWN	KMS	12/17/12
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

PLAN AND PROFILE TAXIWAY

9

MV059

BP: 100+00.00

100+00

MEET EXISTING ENTRANCE ROAD

BP: 100+97.63

S2 – FES
INVERT 457.95

PT: 101+61.60

101+00

48.0' – 12" RCP @ 0.83%

S1 – FES
INVERT 458.26

PROPOSED EDGE OF MILLINGS

102+00

HAUL ROAD CENTERLINE

103+00

104+00

105+00

22.0'

11.0'

PROPOSED SWALE, SEE CROSS SECTIONS AND GRADING PLAN.

EXISTING FENCE

EXISTING MAINTENANCE BUILDING

S4 – FES
INVERT 458.56

57.9' – 12" RCP @ 0.76%

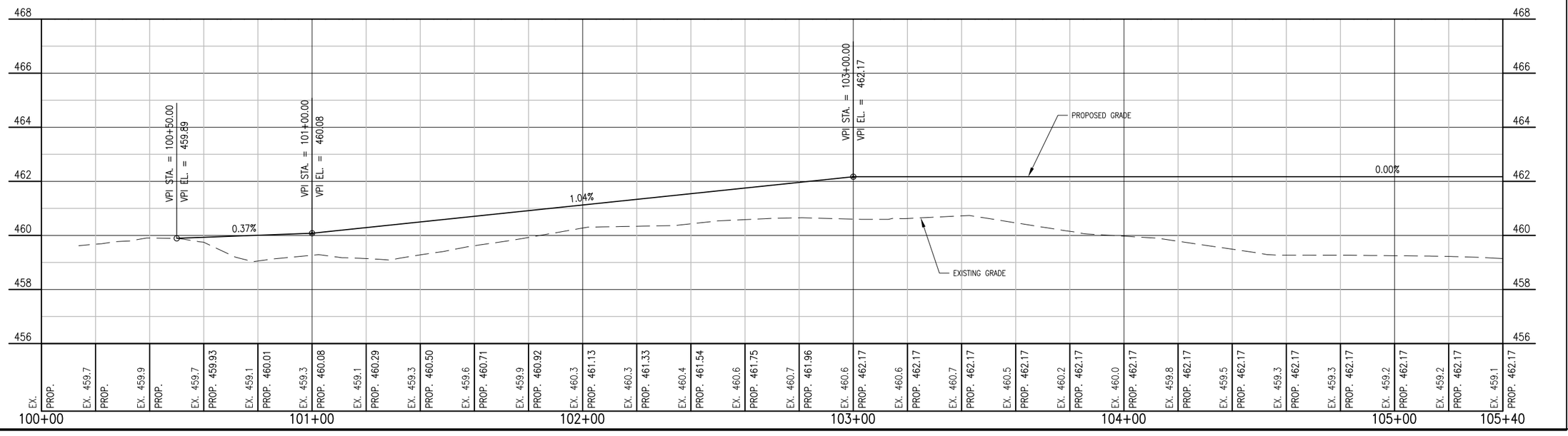
S3 – FES
INVERT 459.00

NOTE:

1. FOR NOTES AND LEGEND, SEE SHEET 9.

2 0 2 4
VERTICAL SCALE IN FEET
11 X 17 SCALE: 1" = 4'
22 X 34 SCALE: 1" = 2'

20 0 20 40
HORIZONTAL SCALE IN FEET
11 X 17 SCALE: 1" = 40'
22 X 34 SCALE: 1" = 20'



REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A0044D
Filename 10-C-701-HAUL.DWG
Scale 1:20
Date 3/1/13

LAYOUT	LDH	1/30/13
DRAWN	LDH	1/30/13
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

PLAN AND PROFILE HAUL ROAD

10
10 of 32 sheets

FEB 20, 2013 2:13 PM HAUSM00682

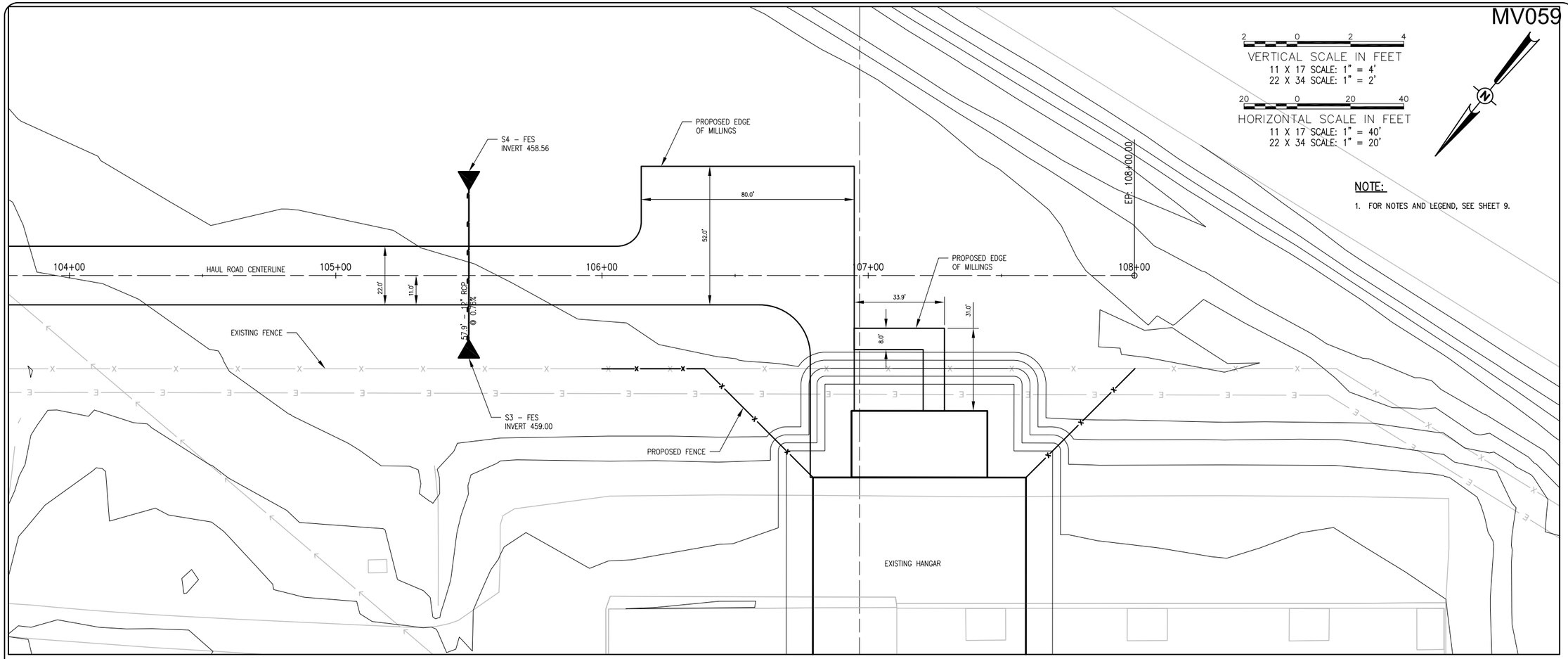
MV059

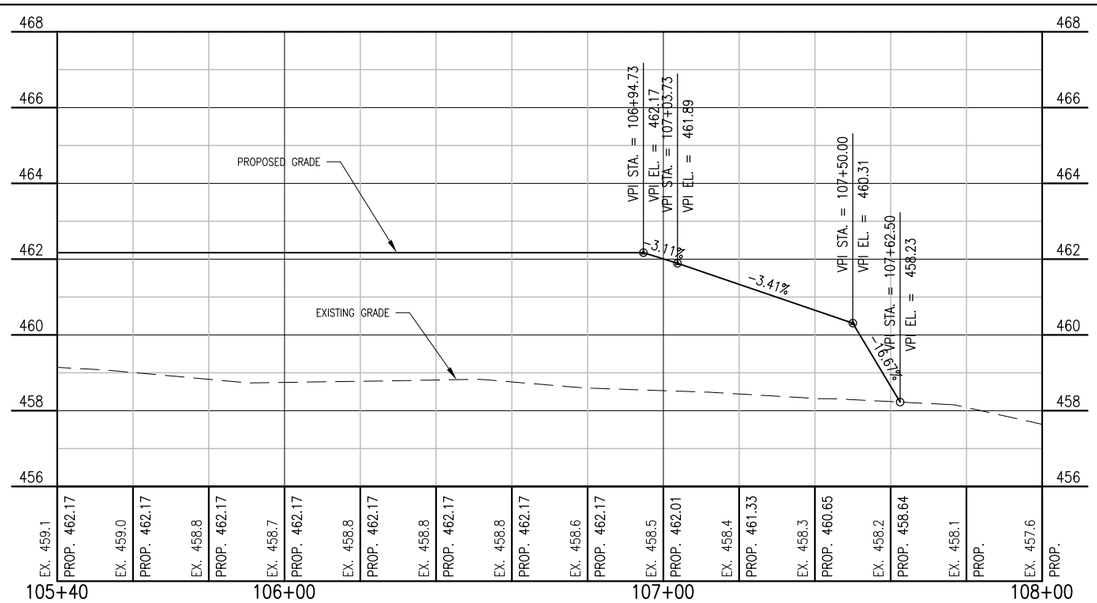
2 0 2 4
VERTICAL SCALE IN FEET
11 X 17 SCALE: 1" = 4'
22 X 34 SCALE: 1" = 2'

20 0 20 40
HORIZONTAL SCALE IN FEET
11 X 17 SCALE: 1" = 40'
22 X 34 SCALE: 1" = 20'

NOTE:

1. FOR NOTES AND LEGEND, SEE SHEET 9.





MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197
SBG PROJ.: 3-17-0074-B27

REVISION	DATE

Hanson Project No. 12A00440
Filename 11-C-702-HAUL.DWG
Scale 1:20
Date 3/1/13

LAYOUT	LDH	1/30/13
DRAWN	LDH	1/30/13
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

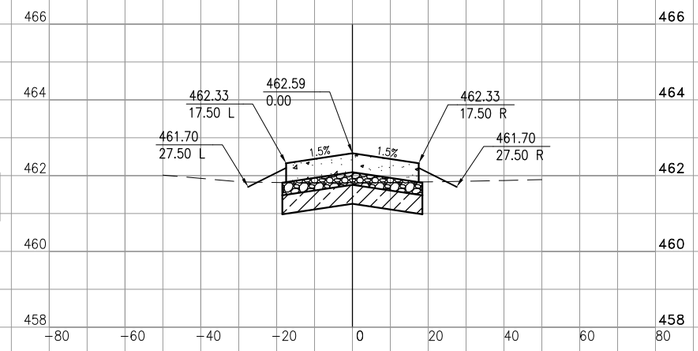
PLAN AND PROFILE HAUL ROAD

11
11 of 32 sheets

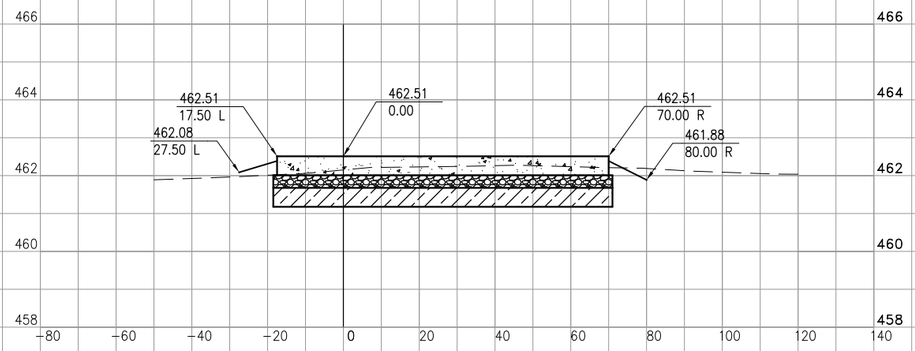
FEB 20, 2013 2:18 PM HAUSM00682

MV059

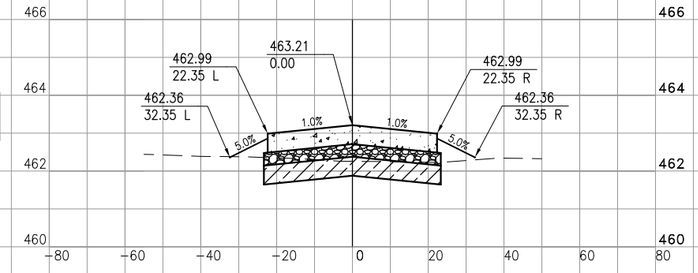
STA. 1+00



STA. 2+50



STA. 0+50



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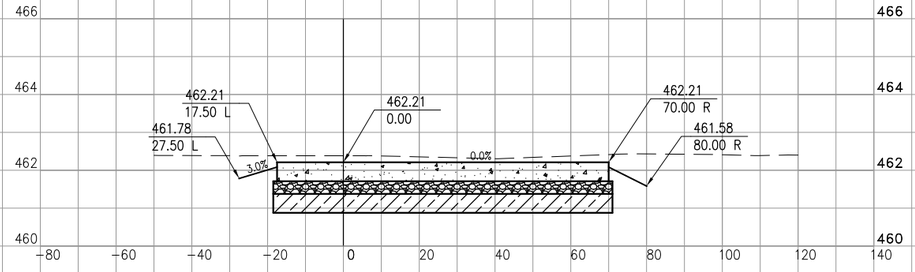

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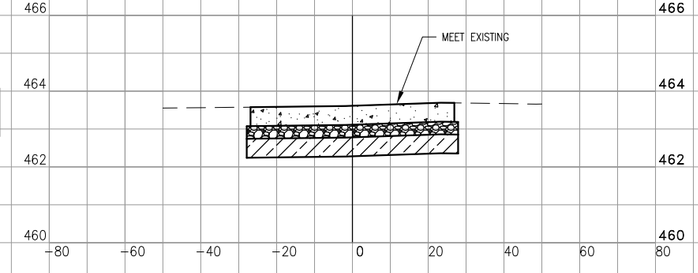

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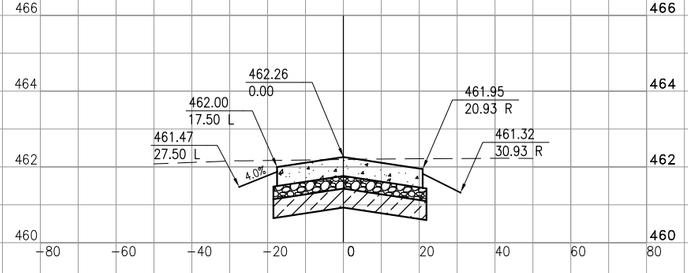

FOR ADDITIONAL GRADING INFORMATION, SEE GRADING PLAN (TYP.)

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A0044D
Filename 12-C-300-TXY01.DWG
Scale H-1:20; V-1:2
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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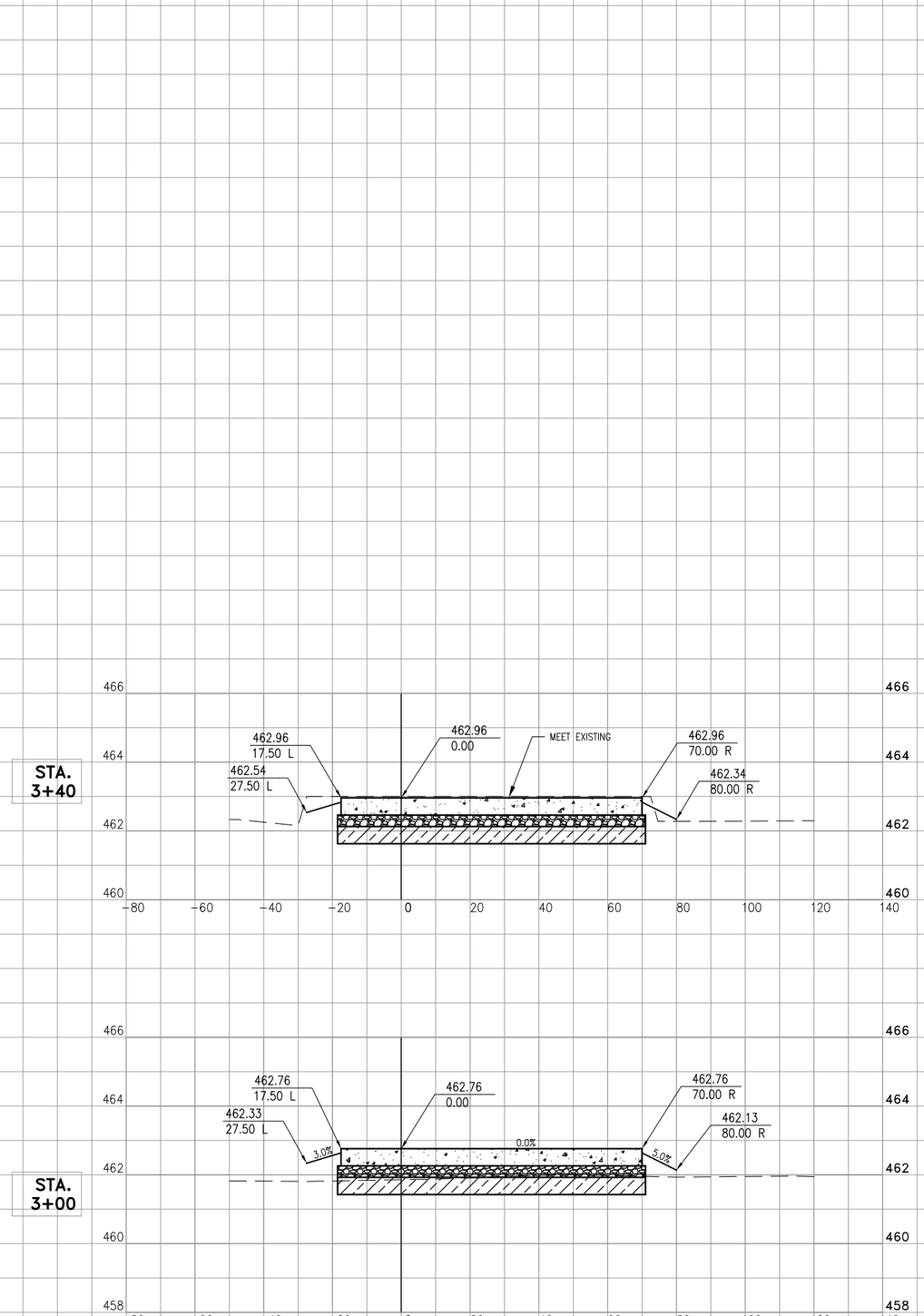
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

TAXIWAY AND APRON CROSS SECTIONS

12
12 of 32 sheets

FEB 20, 2013 2:19 PM HAUSM00682

MV059



FOR ADDITIONAL GRADING INFORMATION, SEE GRADING PLAN (TYP.)

FEB 20, 2013 2:19 PM HAUSM00682

REVISION

DATE

MT. VERNON AIRPORT

MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440

Filename 13-C-301-TXY02.DWG

Scale H-1:20; V-1:2

Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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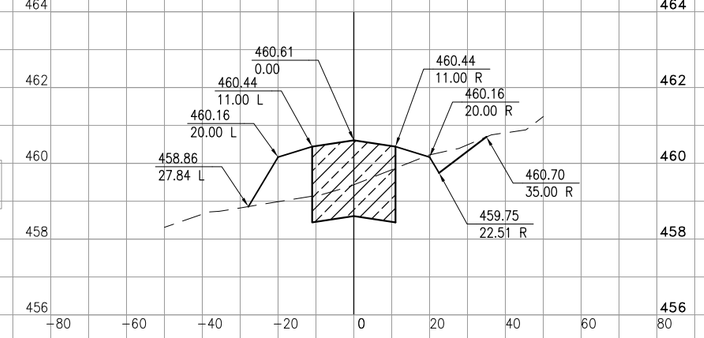
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

TAXIWAY AND APRON CROSS SECTIONS

13

13 of 32 sheets

STA. 101+50



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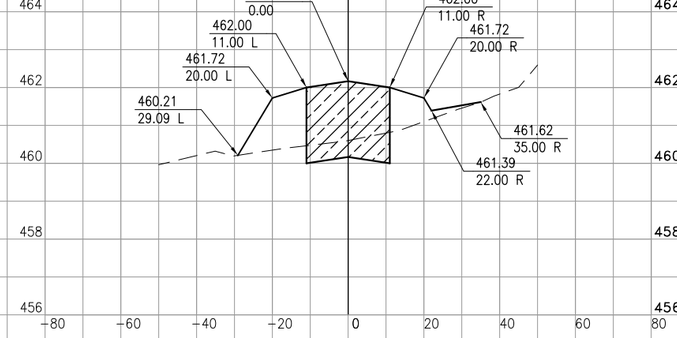

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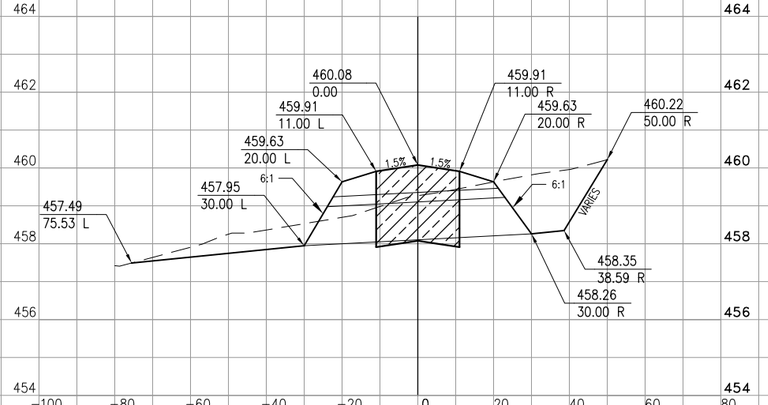

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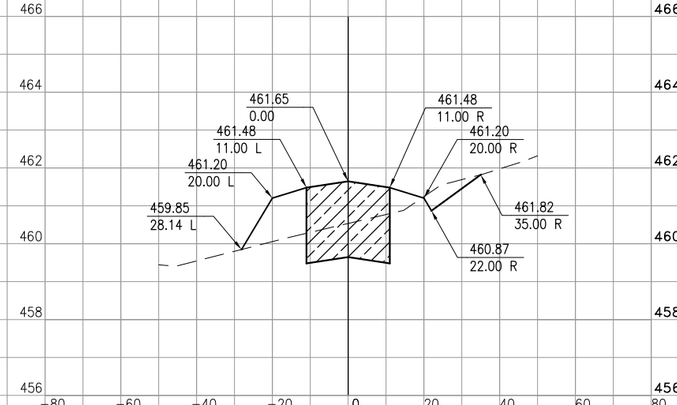

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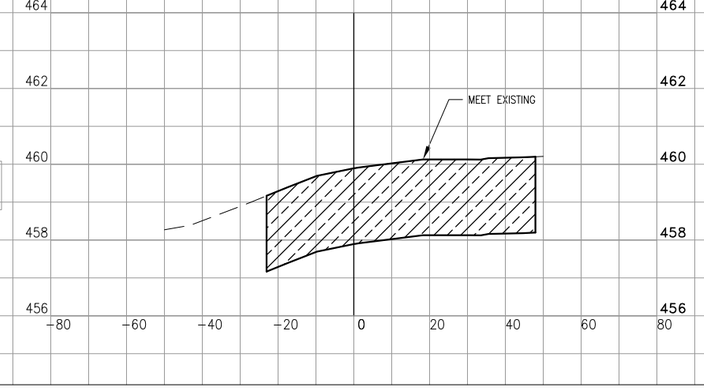

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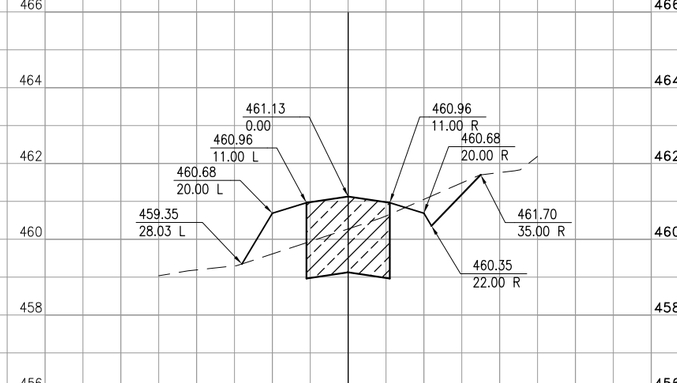

FOR ADDITIONAL GRADING INFORMATION, SEE GRADING PLAN (TYP.)

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A0044D
Filename 14-C-302-HAUL03.DWG
Scale H-1:20; V-1:2
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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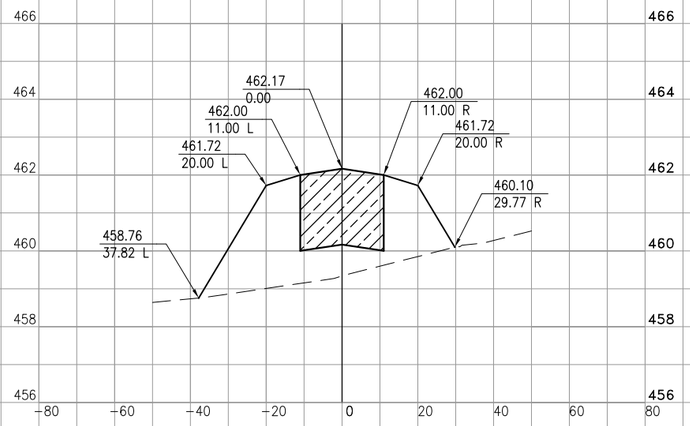
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

HAUL ROAD CROSS SECTIONS

14

FEB 20, 2013 2:19 PM HAUSM00682

STA. 104+50



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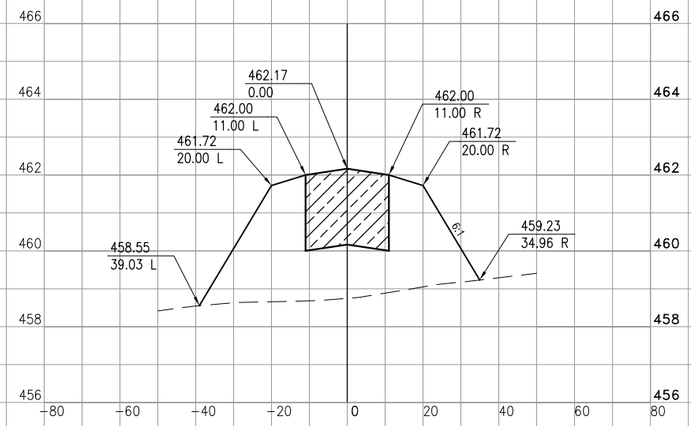

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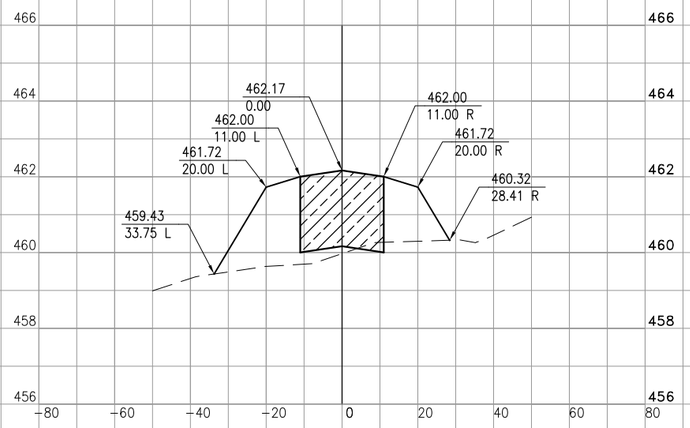

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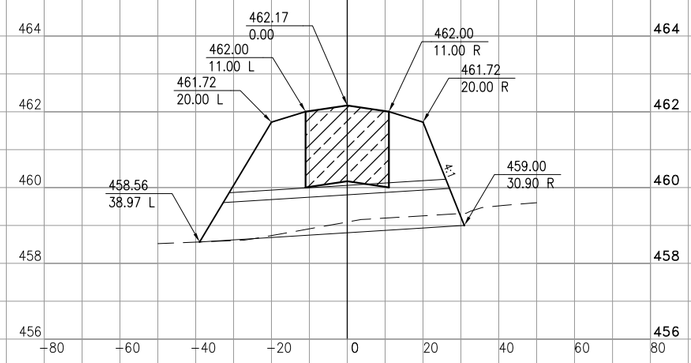

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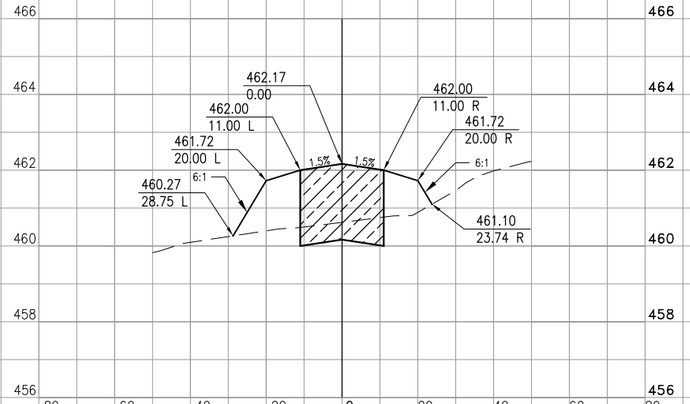

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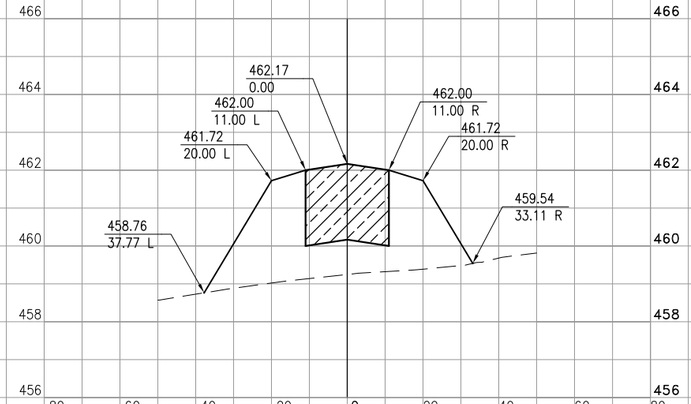

FOR ADDITIONAL GRADING INFORMATION, SEE GRADING PLAN (TYP.)

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440D
Filename 15-C-304-HAUL04.DWG
Scale H-1:20; V-1:2
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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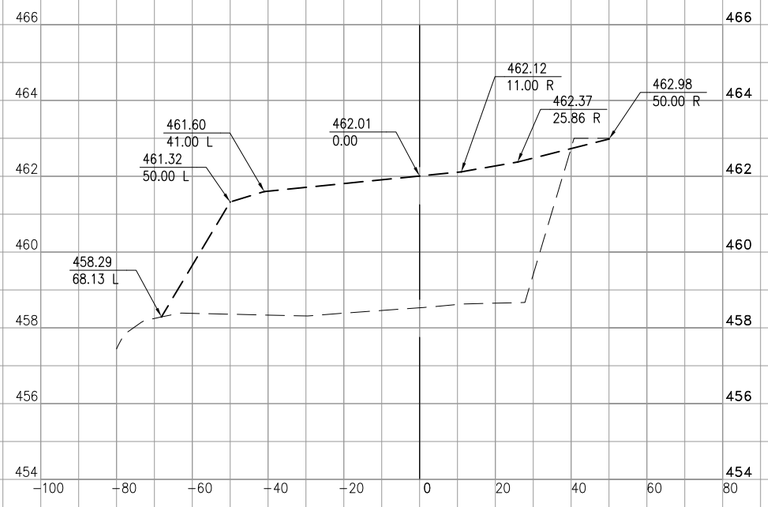
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

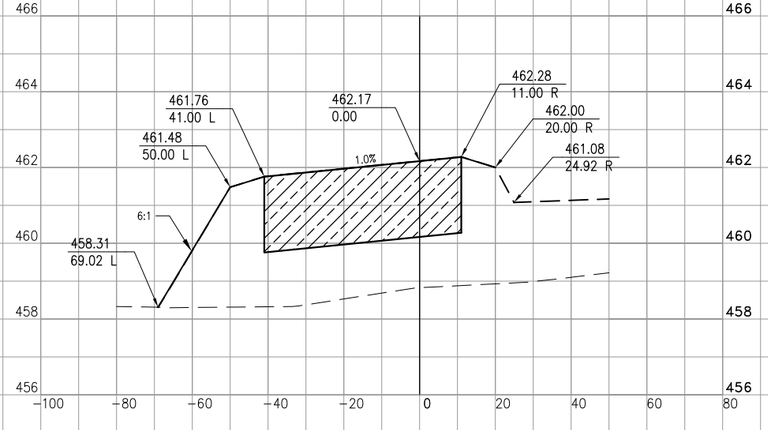
HAUL ROAD CROSS SECTIONS

FEB 20, 2013 2:20 PM HAUSM00682

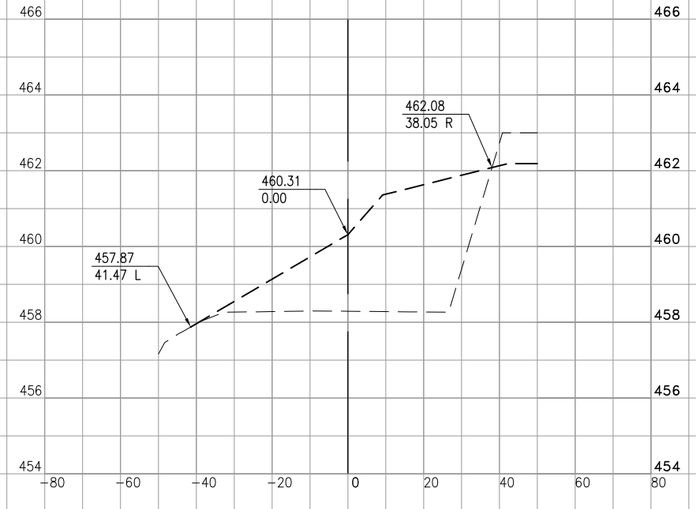
MV059



STA. 107+00



STA. 106+50



STA. 107+50

FOR ADDITIONAL GRADING INFORMATION, SEE GRADING PLAN (TYP.)

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No.	12A00440	
Filename	16-C-305-HAUL05.DWG	
Scale	H-1:20; V-1:2	
Date	3/1/13	
LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

HAUL ROAD CROSS SECTIONS

16

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FEB 21, 2013 11:25 AM HAUSM00682

MV059

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

GRADING PLAN

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Springfield, Illinois 62703-2886

Hanson Project No.	12A0044D
Filename	17-C-100-GRD.DWG
Scale	1:40
Date	3/1/13

LAYOUT	LDH	12/17/12
DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

MT. VERNON AIRPORT

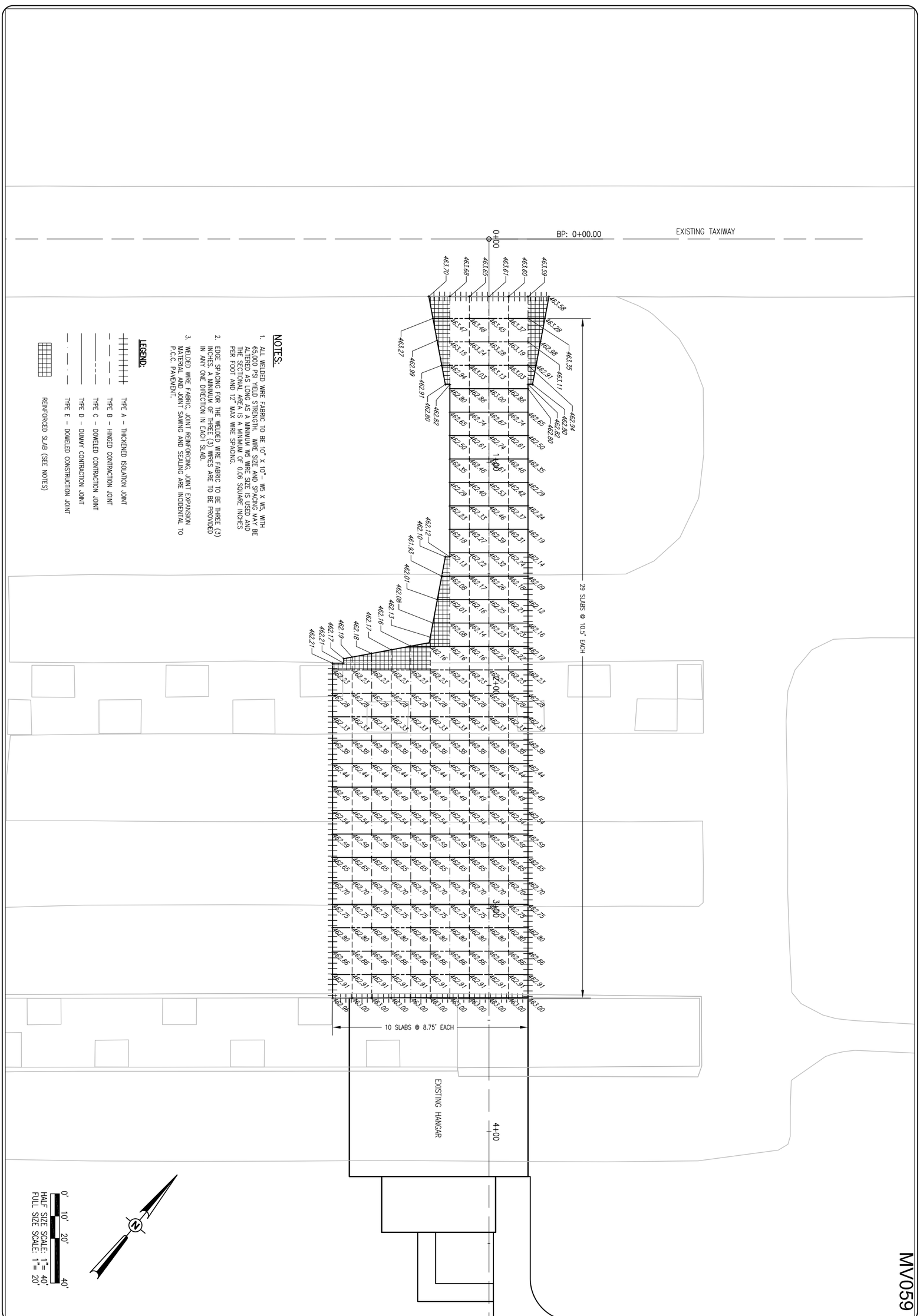
MVN

MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

DATE	REVISION

FEB 20, 2013 3:51 PM HAUSM00682



MV059

18 of 32 sheets

18

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

JOINTING PLAN

HANSON

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1525 South Sixth Street
Springfield, Illinois 62703-2886

Hanson Project No.	12A0044D
Filename	18-C-101-JNT.DWG
Scale	1:20
Date	3/1/13

LAYOUT	LDH	12/18/12
DRAWN	LDH	12/18/12
REVIEWED	BSS	2/21/13

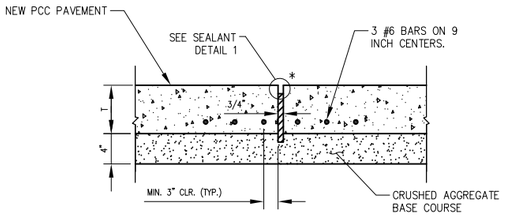
MT. VERNON AIRPORT

MVN

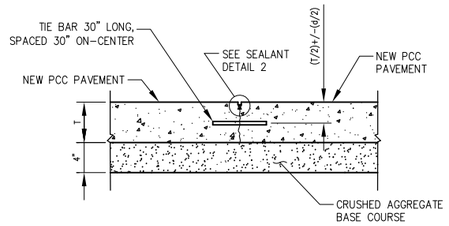
MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

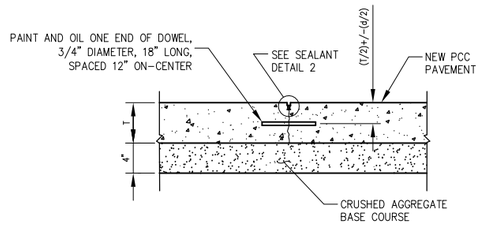
DATE	REVISION



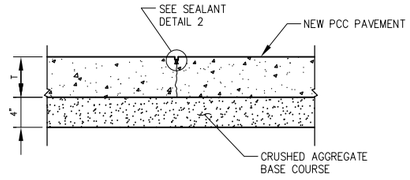
TYPE A-1 - REINFORCED ISOLATION JOINT



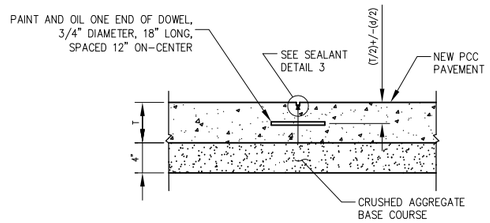
TYPE B - HINGED CONTRACTION JOINT



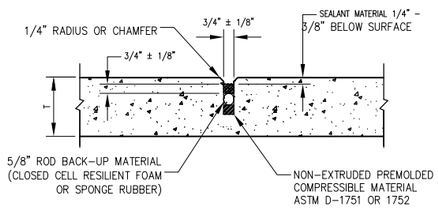
TYPE C - DOWELED CONTRACTION JOINT



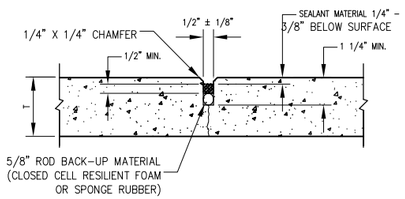
TYPE D - DUMMY CONTRACTION JOINT



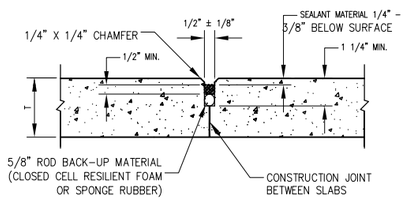
TYPE E - DOWELED CONSTRUCTION JOINT



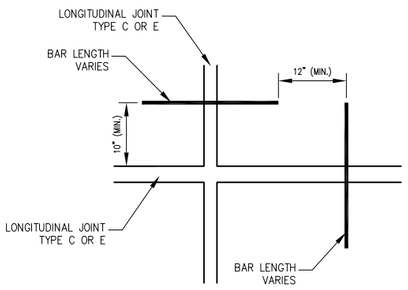
DETAIL 1 - SEALANT



DETAIL 2 - SEALANT



DETAIL 3 - SEALANT



POSITION OF DOWELS AT EDGE OF JOINT TYPE C OR E

DOWEL PLAN VIEW

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A0044D
Filename 19-C-500-JNT.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/18/12
DRAWN	LDH	12/18/12
REVIEWED	BSS	2/21/13

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1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

JOINTING DETAILS

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19 of 32 sheets

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UNDERDRAIN SCHEDULE

Structure	Station	Offset	Type	Rim El.	Invert El.	Pay Length	Slope %
U1	0+30.14	27.60 LT	Cleanout	463.38	460.38	82.4	0.80
U2A	1+11.86	19.00 LT	RCP Connection	---	459.72		
U2B	1+11.86	19.00 LT	RCP Connection	---	459.59	76.7	0.40
U3	1+88.60	19.00 LT	Cleanout	461.90	459.90		
U4	0+30.00	27.62 RT	Cleanout	463.48	460.48	82.5	0.80
U5A	1+11.88	19.00 RT	RCP Connection	---	459.82		
U5B	1+11.88	19.00 RT	RCP Connection	---	459.72	106.7	0.40
U6	1+86.64	65.65 RT	Cleanout	462.15	460.15		

STORM SEWER SCHEDULE

Structure	Station	Offset	Type	Rim El.	Invert El.	Pay Length	Size	Type	Slope %
S1	101+00	30.00 RT	FES	---	458.26	48.0	12	RCP	0.52
S2	101+00	30.00 LT	FES	---	457.95				
S3	105+50	30.90 RT	FES	---	459.00	57.9	12	RCP	0.76
S4	105+50	38.97 LT	FES	---	458.56				

PROPOSED INLET SCHEDULE

Structure	Station	Offset	Type	Rim El.	Invert El.
S5	1+12.28	45.00 LT	Inlet	461.50	459.50

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REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 20-C-800-DRNSCHLDWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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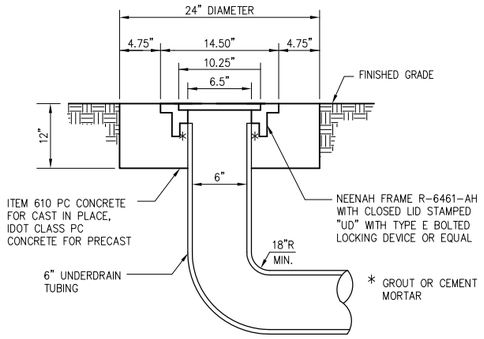
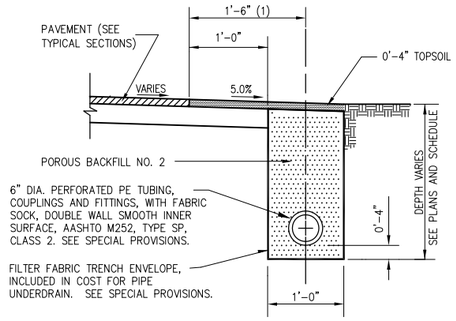
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

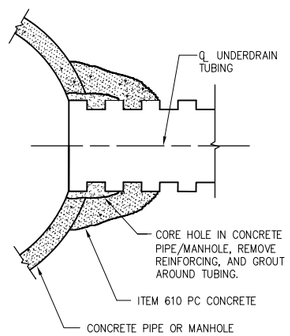
DRAINAGE SCHEDULES



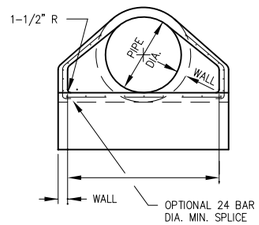
UNDERDRAIN CLEANOUT



UNDERDRAIN ALONG PAVEMENT EDGE

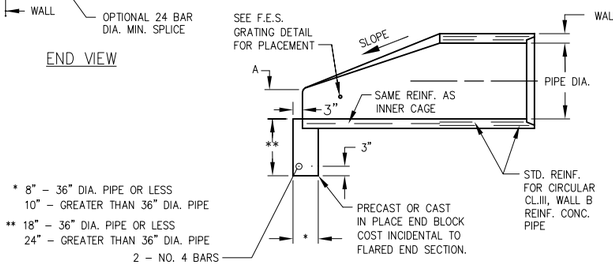


STORM SEWER CONCRETE COLLAR AND GROUT CONNECTION

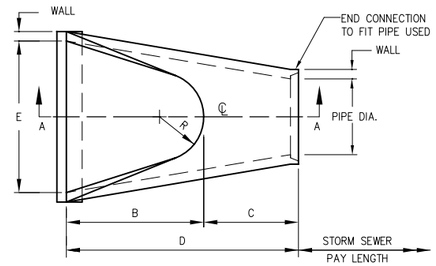


END VIEW

PIPE DIA.	WALL	A	B	C	D	E	R	SLOPE
12"	2"	4"	2'-0"	4'-0 7/8"	6'-0 7/8"	2'-0"	9"	3:1



SECTION A–A



TOP VIEW

PRECAST CONCRETE FLARED END SECTION

(IDOT STANDARD 542301–MODIFIED)

DETAILS SHOWN ARE NOT TO SCALE

FEB 20, 2013 2:23 PM HAUSM00682

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

DATE	REVISION

Hanson Project No. 12A00440
Filename 21-C-801-DRNDET.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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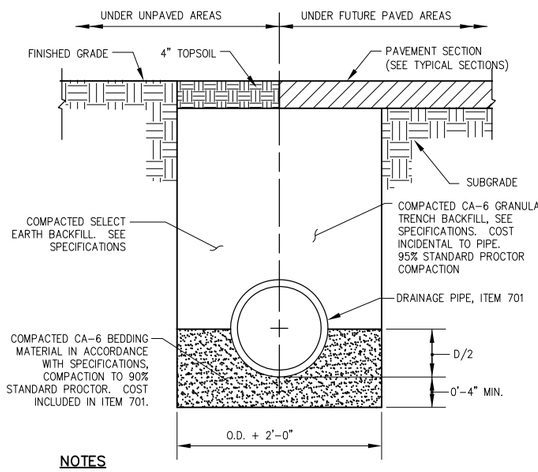
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

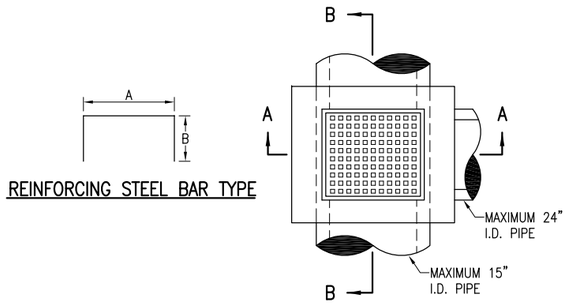
UNDERDRAIN AND DRAINAGE DETAILS



NOTES

1. UNSUITABLE MATERIAL ENCOUNTERED DURING PLACEMENT OF BEDDING SHALL BE REMOVED AND REPLACED.
2. WITHIN 3 FEET OF FUTURE PAVED AREA, GRANULAR BACKFILL IS TO BE USED INSTEAD OF EARTH BACKFILL.
3. AT CONTRACTOR'S OPTION IDOT CONTROLLED LOW STRENGTH MATERIAL WITH A HIGH EARLY STRENGTH, "FLASH FILL", MAY BE USED INSTEAD OF GRANULAR TRENCH BACKFILL UNDER PAVEMENTS.

PIPE TRENCH



REINFORCING BARS SCHEDULE					
TYPE	QUANTITY PER INLET	DIMENSIONS A	DIMENSIONS B	SIZE	APPROX. WT. OF BARS IN INLET
A	2	3'-4"	2'-4"	#5	16.7

INLET NOTES

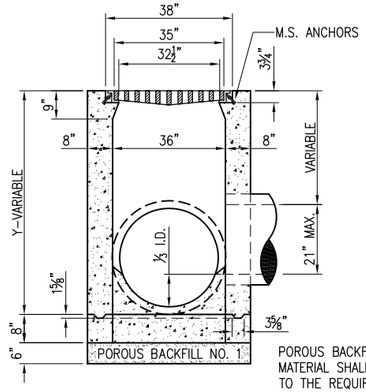
INLET TO BE CONSTRUCTED OF STRUCTURAL P.C. CONCRETE. THE CONTRACT UNIT PRICE PER INLET SHALL INCLUDE THE FRAME, GRATE AND STEPS IN PLACE AND COMPLETE PER UNIT.

1/2" CHAMFER TO BE USED ON ALL EXPOSED CORNERS OF INLETS. BARS TO BE INSTALLED 2" FROM FACE OF WALLS.

THE FRAME AND GRATE SHALL BE NEENAH R-3475-A, DEETER 2425-E.

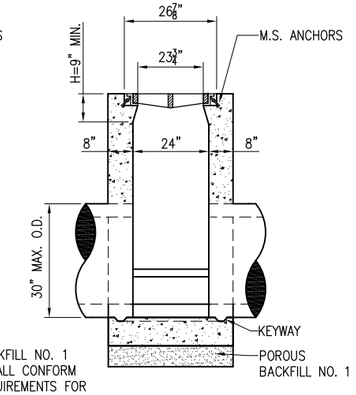
"H" SHALL BE EQUAL TO THE PROPOSED PAVEMENT THICKNESS AND NOT LESS THAN THE ATTACHED MINIMUMS. TYPE A_____ 9" MINIMUM.

INLET STEPS SHALL BE NEENAH R-1980-1. 12" TO 15" C.C. STEPS TO BE INSTALLED WHEN Y IS GREATER THAN 5' COST. THE COST OF THE STEPS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EACH INLET.



SECTION A-A

POROUS BACKFILL NO. 1 MATERIAL SHALL CONFORM TO THE REQUIREMENTS FOR IDOT CA-14 OR CA-16.



SECTION B-B

DETAILS SHOWN ARE NOT TO SCALE

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 22-C-802-DRNDET.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/14/12
DRAWN	LDH	12/14/12
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

UNDERDRAIN AND DRAINAGE DETAILS

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BP: 0+00.00

0+00 1+00 2+00 3+00 4+00 5+00

EXISTING TAXIWAY

PROPOSED TAXIWAY AND APRON

EXISTING HANGAR

PROPOSED HAUL ROUTE

STA 4+60.80, 96.77' L
TERMINATE FENCE AT EXISTING FENCE

STA 4+60.86, 58.29' L
FENCE CORNER

PROPOSED FENCE, SEE DETAILS.

STA 4+20.08, 17.50' L
TERMINATE FENCE AT EXISTING HANGAR

STA 4+20.08, 62.50' R
TERMINATE FENCE AT EXISTING HANGAR

EXISTING FENCE TO BE REMOVED, SEE REMOVAL PLAN.

STA 4+60.97, 103.40' R
TERMINATE FENCE AT EXISTING FENCE

0' 10' 20' 40'
HALF SIZE SCALE: 1"= 40'
FULL SIZE SCALE: 1"= 20'

FEB 20, 2013 2:24 PM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 23-C-100-FEN.DWG
Scale 1:20
Date 3/1/13

LAYOUT	LDH	12/17/12
DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

HANSON

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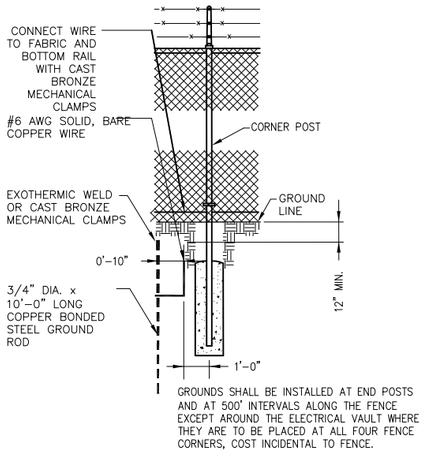
1525 South Sixth Street
Springfield, Illinois 62703-2886

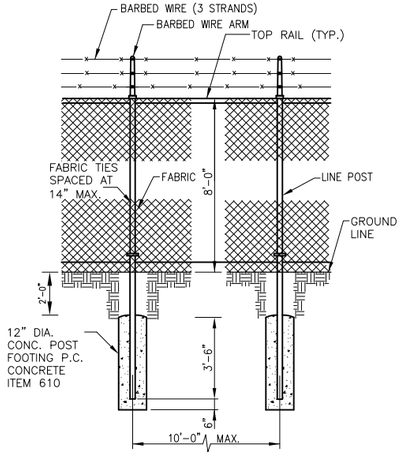
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

FENCING PLAN

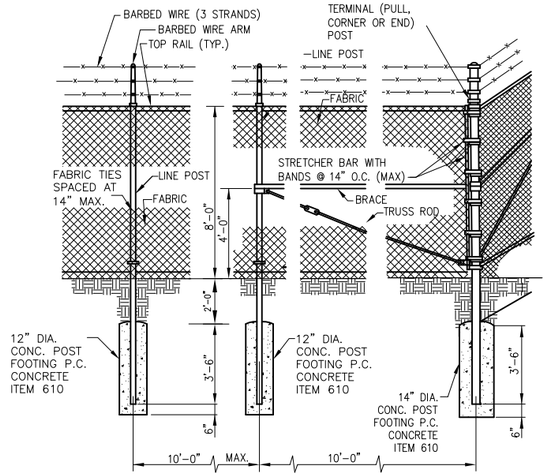
23



PROTECTIVE ELECTRICAL GROUND



LINE POST



TERMINAL (PULL, CORNER OR END) POST

FENCING NOTES

1. ALL FENCE, FABRIC, POSTS, GATES, TENSION WIRE, RODS, BRACES, ARMS, BARBED WIRE AND MISCELLANEOUS FITTINGS SHALL BE GALVANIZED STEEL.
2. BARBED WIRE FOR FENCE AND GATES SHALL BE GALVANIZED STEEL.
3. PULL POSTS SHALL BE PLACED AT 660 FOOT INTERVALS BETWEEN CORNER OR END POSTS TO WHICH THE ENDS OF THE FABRIC ARE CLAMPED OR MIDWAY BETWEEN SUCH POSTS WHEN THE DISTANCE IS LESS THAN 1,320 FEET AND GREATER THAN 660 FEET.
4. ALUMINUM RESTRICTED AREA SIGNS SHALL BE FURNISHED AS SHOWN IN THE DETAIL. COST INCIDENTAL TO FENCE OR GATE.
5. SONOTUBE TO BE USED FOR CASTING POST FOUNDATIONS IN WETLAND AREAS AND WHERE REQUIRED BY THE SOIL CONDITIONS TO PROVIDE A CONSTANT WIDTH FOOTING
6. SEE SPECIAL PROVISIONS.

LINE POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.375 (60.3) O.D.	4.64 (6.90)
Pipe Type B 2.375 (60.3) O.D.	4.64 (6.90)
Pipe Type C 2.25x1.7 (57.2x43.2)	2.78 (4.14)
H 2.25x1.70 (57.2x43.2)	2.72 (4.05)

TERMINAL POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.875 (73.0) O.D.	4.64 (6.90)
Pipe Type B 2.875 (73.0) O.D.	4.64 (6.90)
Pipe Type C 3.5x3.5 (89.0x89.0)	5.10 (7.59)
Roll Formed 3.5x3.5 (89.0x89.0)	See detail
Sq. Tubing 2.5x2.5 (63.5x63.5)	5.10 (7.59)

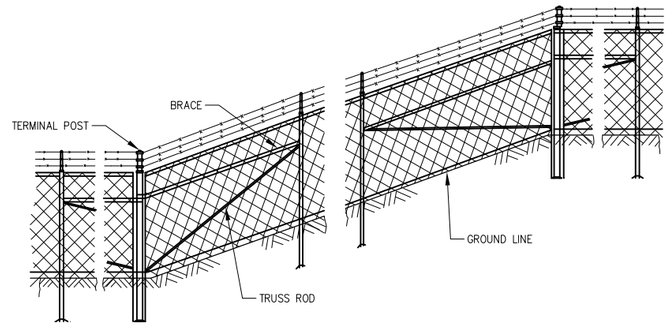
HORIZONTAL BRACES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)
H 1.31x1.5 (33.3x38.1)	2.25 (3.35)
Roll Formed 1.625x1.25 (41.3x31.8)	See detail

GATE FRAMES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)

WEIGHTS FOR STANDARD STEEL PIPE ARE SHOWN IN THE TABLE. FOR HIGH STRENGTH PIPE AT LIGHTER WEIGHTS, CONTRACTOR SHALL SUBMIT COMPARATIVE DESIGN DATA SHOWING ADDITIONAL STRENGTH ALLOWS REDUCTION IN PIPE WEIGHT.

* The 3.5x3.5 (89.0 x 89.0) roll formed section as detailed may be used as gate posts for single gate up to 6' (1.8 m) and double gate up to 12' (3.6 m).

GATE POSTS *				
Gate Opening * ft. (m)	Pipe Type A		Pipe Type B	
Type II Gate Opening	Size (O.D.)	lbs./ft. (kg/m)	Size (O.D.)	kg/m (lbs./ft.)
Over 12 (3.75) but not over 30 (9.375)	4.0 (101.6)	9.11 (13.6)	4.0 (101.6)	9.11 (13.6)



INSTALLATION ON SLOPES

DETAILS SHOWN ARE NOT TO SCALE

FEB 21, 2013 11:26 AM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 24-C-500-FEN.DWG
Scale N/A
Date 3/1/13

LAYOUT	LDH	12/17/12
DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

FENCING NOTES AND DETAILS

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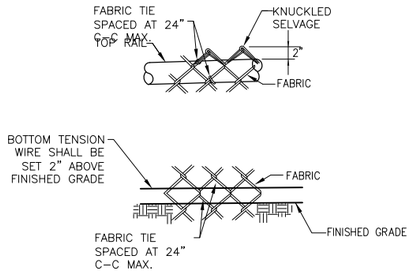
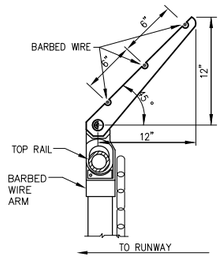
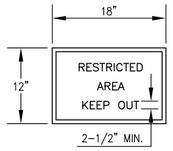


FABRIC TIES



BARBED WIRE ARM

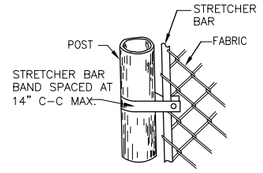


0.08 GA. ALUMINUM ALLOY SHEET (LETTERING COLOR SHALL BE RED ON WHITE BACKGROUND.)

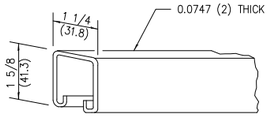
NOTES:

1. EACH GATE SHALL REQUIRE ONE SIGN.
2. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN.
3. COST OF THESE SIGNS AND THEIR INSTALLATION IS INCIDENTAL TO FENCE OR GATE.

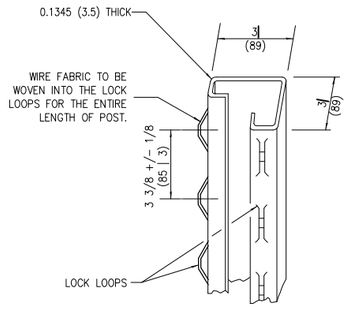
SIGN DETAIL



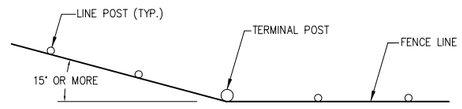
STRETCHER BAR BAND



ROLL FORMED SECTION OF BRACE



ROLL FORMED SECTION OF TERMINAL + GATE POST



WHEN FENCE LINE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE. WHERE ANGLE IS LESS THAN 15° AND EXISTING CONDITIONS REQUIRE A TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.

INSTALLATION AT CORNERS

DETAILS SHOWN ARE NOT TO SCALE

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
Filename 25-C-501-FEN.DWG
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Date 3/1/13

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DRAWN	LDH	12/17/12
REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

FENCING NOTES AND DETAILS

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THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVE GROUND UTILITIES.

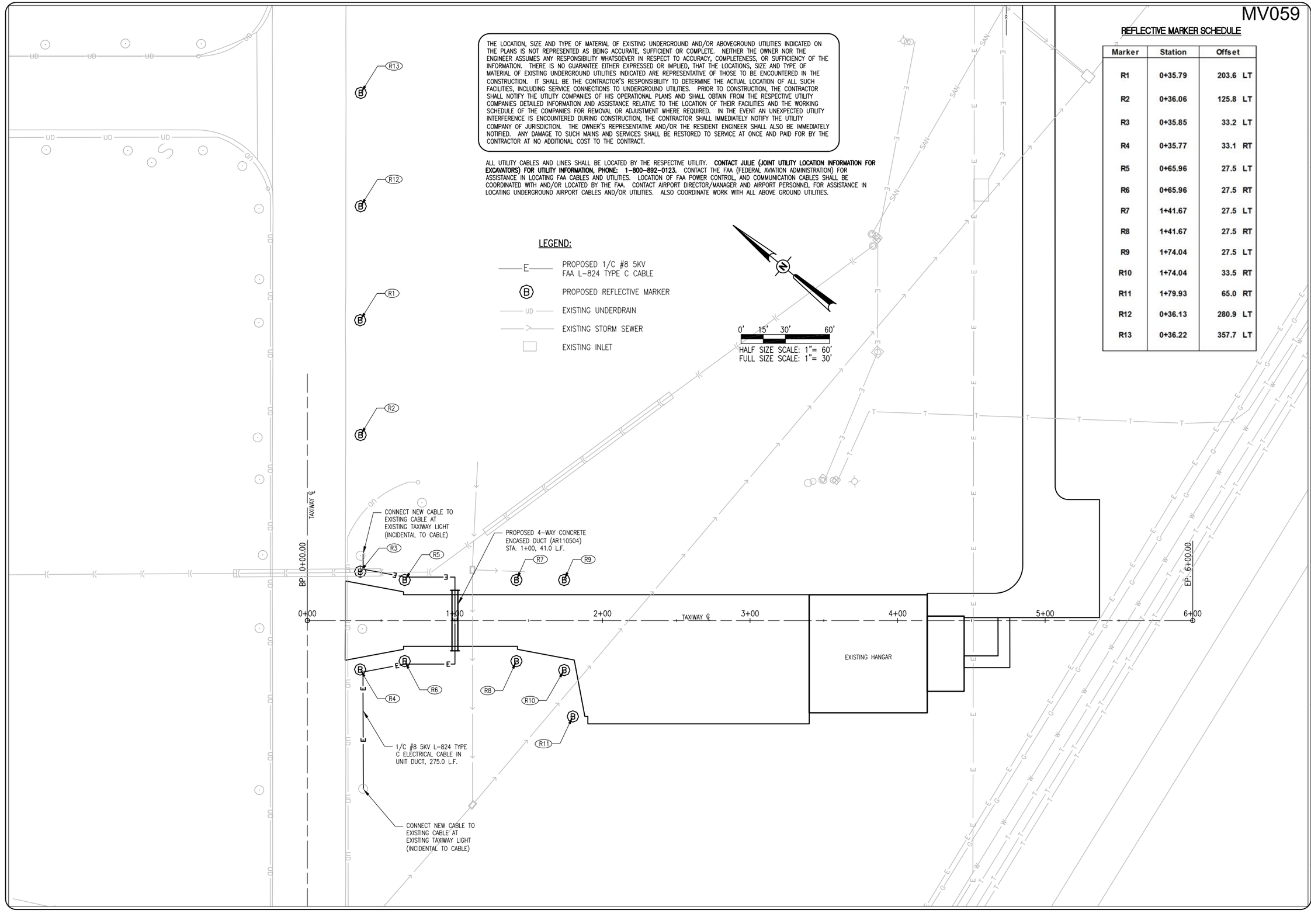
REFLECTIVE MARKER SCHEDULE

Marker	Station	Offset
R1	0+35.79	203.6 LT
R2	0+36.06	125.8 LT
R3	0+35.85	33.2 LT
R4	0+35.77	33.1 RT
R5	0+65.96	27.5 LT
R6	0+65.96	27.5 RT
R7	1+41.67	27.5 LT
R8	1+41.67	27.5 RT
R9	1+74.04	27.5 LT
R10	1+74.04	33.5 RT
R11	1+79.93	65.0 RT
R12	0+36.13	280.9 LT
R13	0+36.22	357.7 LT

LEGEND:

- E — PROPOSED 1/C #8 5KV FAA L-824 TYPE C CABLE
- (B) PROPOSED REFLECTIVE MARKER
- UD — EXISTING UNDERDRAIN
- SAN — EXISTING STORM SEWER
- EXISTING INLET

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'



MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

REFLECTIVE MARKER AND ELECTRICAL PLAN

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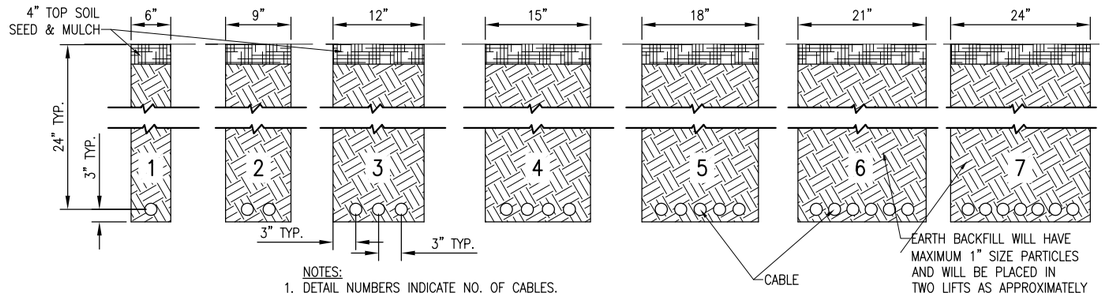
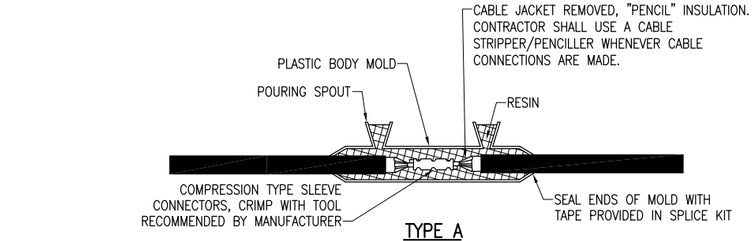


NOTES:
1. DETAIL NUMBERS INDICATE NO. OF CABLES.
2. TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.

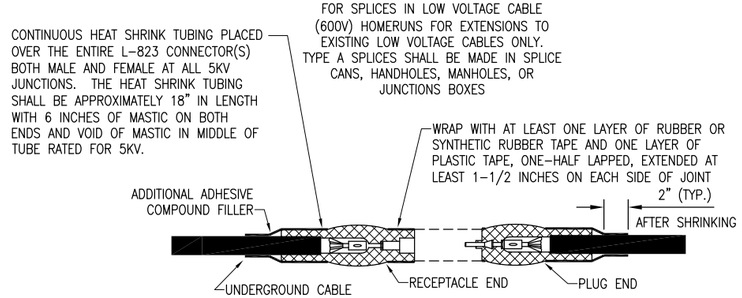
CABLE TRENCHES

(NOT TO SCALE)



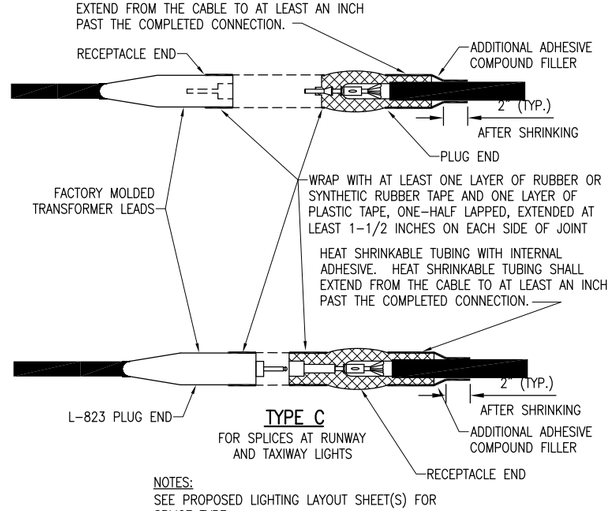
TYPE A

FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTIONS BOXES



TYPE B

FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT AND FOR SPLICES IN HOMERUNS TO EXISTING CABLES



TYPE C

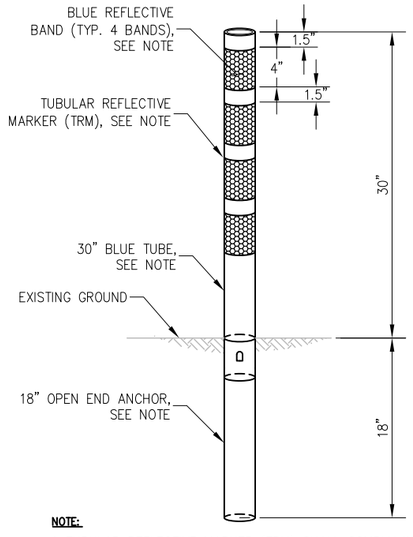
FOR SPLICES AT RUNWAY AND TAXIWAY LIGHTS

NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.

INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES

(NOT TO SCALE)

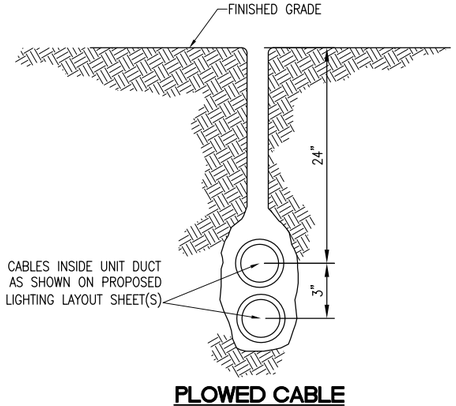


NOTE:

1. TUBULAR REFLECTIVE MARKER (TRM) SHALL COMPLY WITH FAA AC 150\5345-39.
2. TUBULAR REFLECTIVE MARKER TO BE INSTALLED PER MANUFACTURER'S INSTRUCTION.

TAXIWAY REFLECTIVE MARKER (TRM)

(NOT TO SCALE)



PLOWED CABLE

(NOT TO SCALE)

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197
SBG PROJ.: 3-17-0074-B27

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

ELECTRICAL DETAILS

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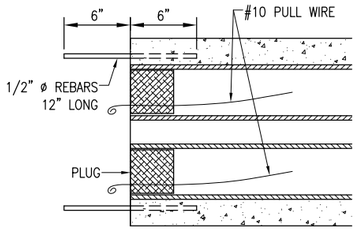
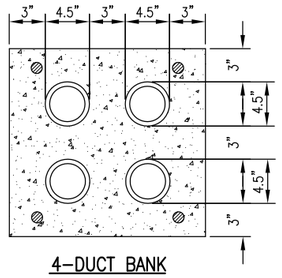


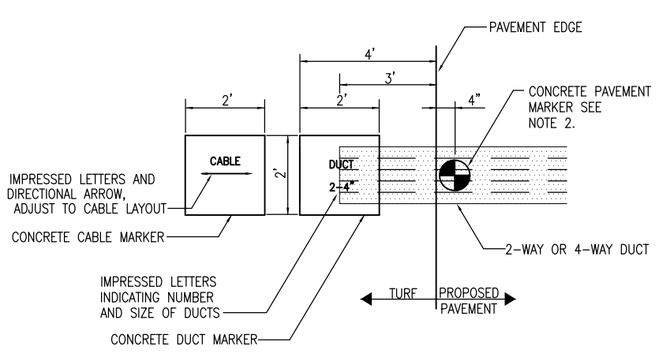
DUCT BANK TYPICAL SECTION
(NOT TO SCALE)



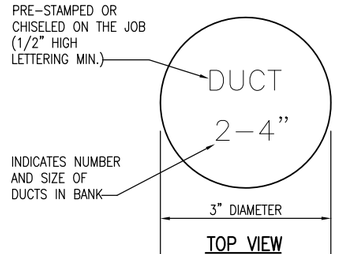
4–DUCT BANK
(NOT TO SCALE)

DUCT BANK NOTES:

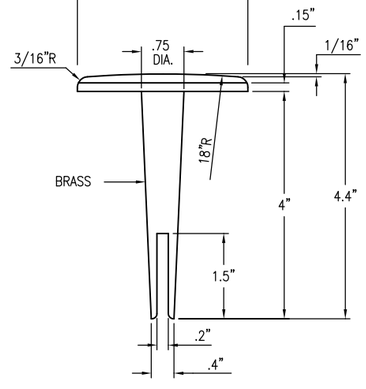
1. DIMENSIONS FOR CONCRETE COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM.
2. INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., OR APPROVED EQUAL TO MAINTAIN PROPER SEPARATION OF CONDUITS.
3. REBAR IS REQUIRED TO ACCOMMODATE FUTURE DUCT EXTENSIONS & INTERFACE AT DUCT BANK TERMINATIONS. CONCRETE ENCASED DUCT BANKS TERMINATING IN HANDHOLES REQUIRE REBAR AT TERMINATIONS.
4. CONDUITS FOR CONCRETE ENCASED DUCT SHALL BE SCHEDULE 40 PVC CONFORMING TO ITEM 110.
5. MINIMUM DEPTH OF TOP OF DUCT ENCASEMENT SHALL BE 18" BELOW FINISHED GRADE.
6. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
7. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT SHALL BE INSTALLED IN THE SAME RACEWAY OR DUCT.
8. DUCT INTERFACE TO HANDHOLES OR MANHOLES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCT PAY ITEM.
9. CONCRETE ENCASED DUCTS AND/OR DIRECT BURY DUCTS SHALL MAINTAIN 3 INCH MINIMUM SEPARATION BETWEEN DUCTS.



LOCATION PLAN



TOP VIEW

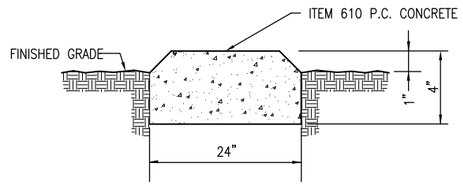


SIDE VIEW

NOTES:

1. TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.
2. BRASS DUCT MARKERS ARE AVAILABLE FROM G&S FOUNDRY AND MANUFACTURING CO. INC., 210 KASKASKIA DRIVE, RED BUD, IL 62278, PHONE: 618–282–4114, OR APPROVED EQUAL.

BITUMINOUS
PAVEMENT MARKER



CONCRETE MARKER

NOTES:

1. THE COSTS OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND EVERY 200' ALONG CABLE RUNS.
4. LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.

TURF AND PAVEMENT DUCT AND CABLE MARKERS

REVISION | DATE

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MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

ELECTRICAL DETAILS

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.

2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.

3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).

4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.

5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.

6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.

7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.

8. ANY AND ALL INSTRUCTIONS FROM THE RESIDENT ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER/RESIDENT PROJECT REPRESENTATIVE REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.

9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:

   A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.

   B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.

   C. INSTALLATION INSTRUCTION.

   D. START–UP INSTRUCTIONS.

   E. PREVENTATIVE MAINTENANCE REQUIREMENTS.

   F. CHART FOR TROUBLE–SHOOTING.

   G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE–SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.

   H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.

   I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR PHASE CONDUCTORS ON 120/240VAC SINGLE–PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE–PHASE, FOUR WIRE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).

3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.

4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.

5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.

6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.

7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:

   A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS–SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS–SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.

   B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.

8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.

9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.

10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.

11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL–MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.

12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.

13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.

14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.

16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL. LISTED. CONFIRM LIQUID–TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.

17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.

18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.

19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.

20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.

21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL–VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.

22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINUMUM.

23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:

   A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.

   B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.

   C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN–EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED–EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.

   D. WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.

   E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.

   F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.

   G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.

   H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.

   I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.

   J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

FEB 20, 2013 2:27 PM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
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Date 3/1/13

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REVIEWED	BSS	2/21/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

ELECTRICAL NOTES SHEET 1

29

AIRFIELD LIGHTING NOTES

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE XLP-USE-2 COPPER CONDUCTORS. CONDUCTOR SIZES SHALL BE AS SPECIFIED, HEREIN.

2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.

3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.

4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON ELECTRICAL DETAILS SHEET 1.

5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON ELECTRICAL DETAILS SHEET 1.

6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).

7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.

8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.

9. DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.

10. A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.

11. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.

12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.

13. BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.

14. THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.

15. WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.

16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.

17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.

18. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.

19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.

20. ENTRANCES INTO L-867 BASES SHALL HAVE CONDUIT COUPLINGS OR REDUCERS TO INTERFACE UNIT DUCT/CONDUIT TO L-867 BASE HUBS, OR SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON ELECTRICAL DETAILS SHEET 1.

21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.

22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.

23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.

24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.

25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.

26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.

27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.

28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.

29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3500 PSI, AIR-ENTRAINED.

30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.

31. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING uNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

32. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

GROUNDING NOTES FOR AIRFIELD LIGHTING

1. GROUNDING FOR RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS SHALL BE AS DETAILED ON THE PLANS AND AS SPECIFIED HEREIN. PER FAA AC 150/5340-30G DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE LIGHT BASE GROUND IS TO PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A LIGHT BASE GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AND CONNECTED TO THE METAL FRAME OF EACH TAXI GUIDANCE SIGN AS DETAILED ON THE PLANS AND IN ACCORDANCE WITH THE RESPECTIVE TAXI GUIDANCE SIGN MANUFACTURER RECOMMENDATIONS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 5/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. CONNECTIONS TO GROUND LUGS ON THE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE SHALL BE WITH A UL LISTED GROUNDING CONNECTOR. CONNECTIONS TO GROUND RODS SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440), ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437), OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS. TOP OF GROUND RODS SHALL BE BURIED 12 INCHES MINIMUM BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.

2. FOR BASE MOUNTED LIGHT FIXTURES THE LIGHT FIXTURE MUST BE BONDED TO THE LIGHT BASE INTERNAL GROUND LUG VIA A #6 AWG STRANDED COPPER WIRE RATED FOR 600 VOLTS WITH GREEN XHHW INSULATION, OR A BRAIDED GROUND STRAP OF EQUIVALENT CURRENT RATING. THE GROUND WIRE LENGTH MUST BE SUFFICIENT TO ALLOW THE REMOVAL OF THE LIGHT FIXTURE FROM THE LIGHT BASE FOR ROUTINE MAINTENANCE. SEE LIGHT FIXTURE MANUFACTURER'S INSTRUCTIONS FOR PROPER METHODS OF ATTACHING A BONDING WIRE.

3. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL PER 2011 NATIONAL ELECTRICAL CODE ARTICLE 250-12.

4. PER FAA 150/5340-30G THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.

5. FOR EACH GROUND ROD/GROUNDING ELECTRODE SYSTEM THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUNDING SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH GROUNDING ELECTRODE SYSTEM. IF GROUND RESISTANCE EXCEEDS 25 OHM, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. RECORD DATE AND SITE CONDITIONS FOR EACH TEST. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT PROJECT REPRESENTATIVE/RESIDENT ENGINEER.

FEB 21, 2013 11:27 AM HAUSM00682

REVISION | DATE

MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A00440
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Date 3/1/13

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REVIEWED	BSS	2/21/13

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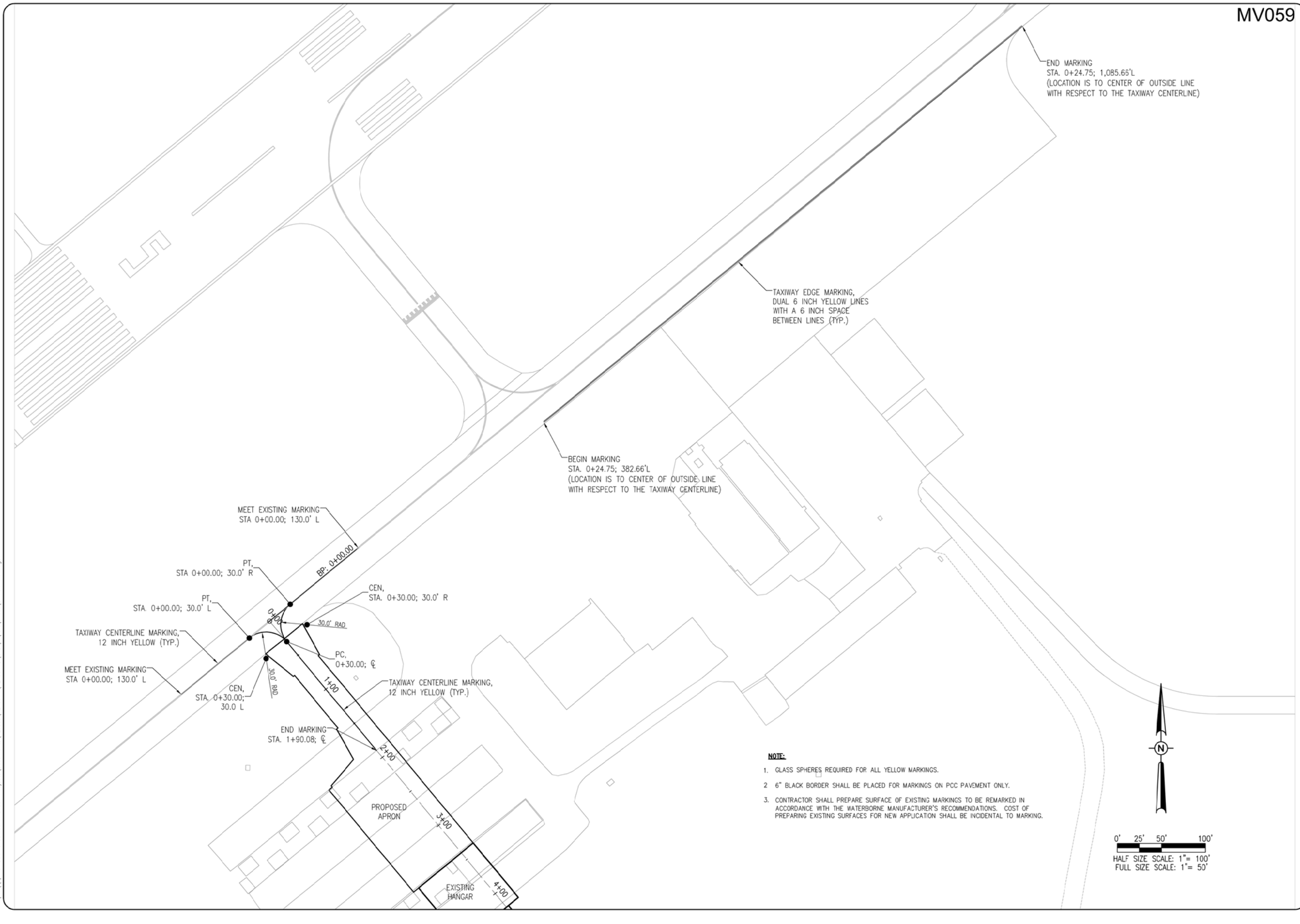
CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

ELECTRICAL NOTES SHEET 2

30
30 of 32 sheets

MV059



NOTE:

1. GLASS SPHERES REQUIRED FOR ALL YELLOW MARKINGS.
2. 6" BLACK BORDER SHALL BE PLACED FOR MARKINGS ON PCC PAVEMENT ONLY.
3. CONTRACTOR SHALL PREPARE SURFACE OF EXISTING MARKINGS TO BE REMARKED IN ACCORDANCE WITH THE WATERBORNE MANUFACTURER'S RECOMMENDATIONS. COST OF PREPARING EXISTING SURFACES FOR NEW APPLICATION SHALL BE INCIDENTAL TO MARKING.

DATE	REVISION

MT. VERNON AIRPORT

MT. VERNON, ILLINOIS

IL. PROJ.: MVN-4197 SBG PROJ.: 3-17-0074-B27

Hanson Project No. 12A0044D
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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

MARKING PLAN

31

31 of 32 sheets

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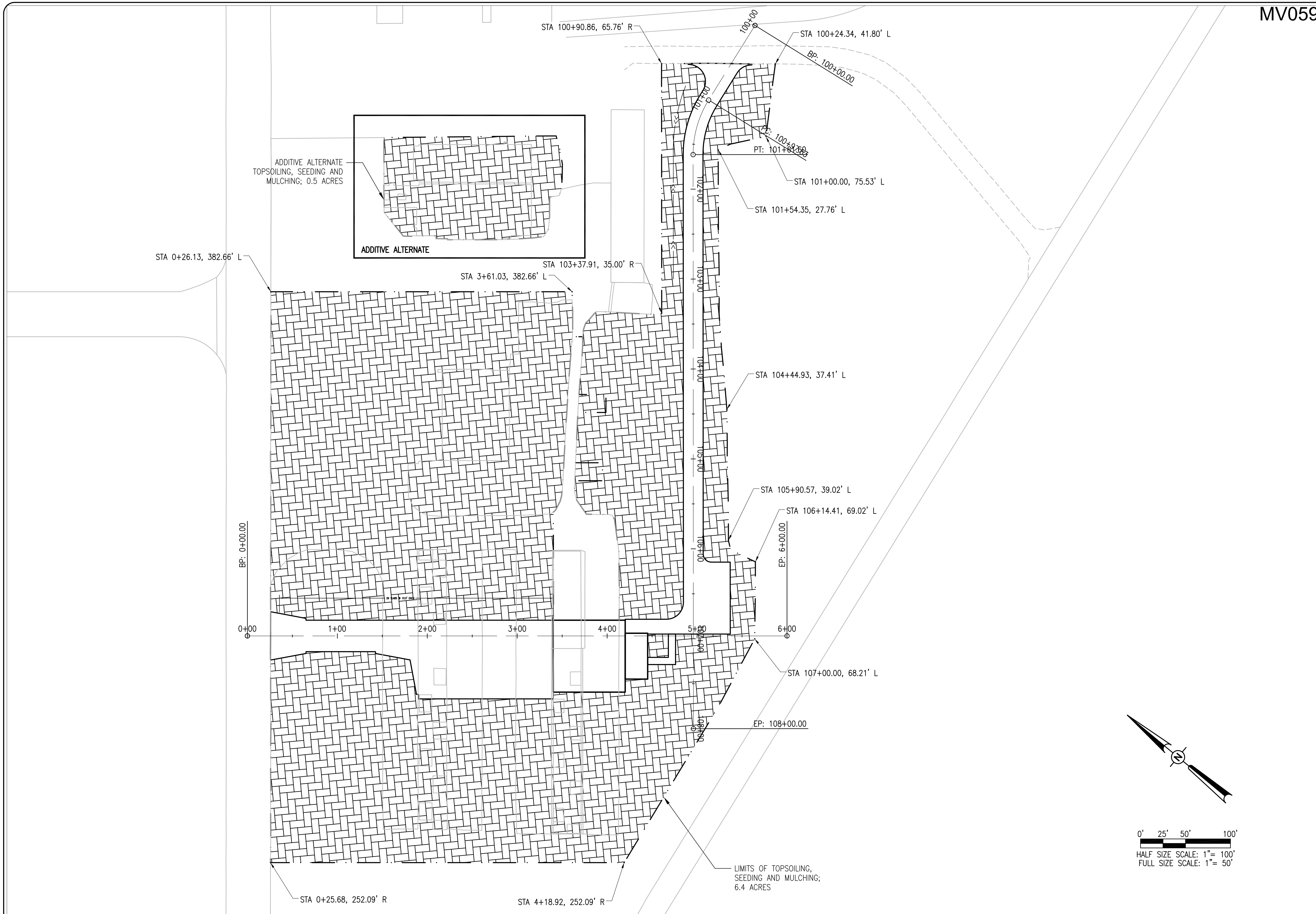
STA 100+90.86, 65.76' R
100+00
STA 100+24.34, 41.80' L
BP: 100+00.00
101+00
PC: 100+97.60
PT: 101+61.60
STA 101+00.00, 75.53' L
STA 101+54.35, 27.76' L
ADDITIVE ALTERNATE TOPSOILING, SEEDING AND MULCHING; 0.5 ACRES
ADDITIVE ALTERNATE
STA 0+26.13, 382.66' L
STA 103+37.91, 35.00' R
STA 3+61.03, 382.66' L
102+00
103+00
104+00
STA 104+44.93, 37.41' L
105+00
STA 105+90.57, 39.02' L
STA 106+14.41, 69.02' L
106+00
BP: 0+00.00
EP: 6+00.00
0+00
1+00
2+00
3+00
4+00
5+00
6+00
107+00
STA 107+00.00, 68.21' L
108+00
EP: 108+00.00
LIMITS OF TOPSOILING, SEEDING AND MULCHING; 6.4 ACRES
STA 0+25.68, 252.09' R
STA 4+18.92, 252.09' R
0' 25' 50' 100'
HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'

FEB 21, 2013 11:30 AM HAUSM00682

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MT. VERNON AIRPORT
MT. VERNON, ILLINOIS
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Date	3/1/13

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CONSTRUCT APRON AND TAXIWAY IN SOUTH FRONTAL AREA

LANDSCAPING PLAN