

CHICAGO EXECUTIVE AIRPORT WHEELING/PROSPECT HEIGHTS, ILLINOIS

CONSTRUCTION PLANS

FOR

CHICAGO EXECUTIVE AIRPORT

CONSTRUCT ENGINEERED MATERIALS ARRESTING SYSTEM (EMAS) PHASE 3A - RUNWAY 16 END (34 DEPARTURE END) INCLUDING RUNWAY 16/34 OFA/RSA IMPROVEMENTS AND SITEWORK



811 Know what's below.
Call before you dig.

J.U.L.I.E.
JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS
www.illinois1call.com

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ACTUAL LOCATIONS OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF HIS OPERATIONAL PLANS, OBTAIN FROM 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 AND THE ONE-CALL NOTICE SYSTEM. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH UTILITY OR SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 811.

CHICAGO EXECUTIVE AIRPORT

TOWNSHIP: 42 NORTH WHEELING TOWNSHIP
RANGE: 11 EAST (SECTION: 13)
COOK COUNTY

CMT 11290-02-00
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS

SHEETS: 1-18, 22-31
SUBMITTED BY JEREMY R. LINKE, P.E.

DATE 6/25/14

ZODIAC AEROSPACE ENGINEERED ARRESTING SYSTEMS CORPORATION
2239 High Hill Road
Logan Township, New Jersey, USA 08085
Phone 856.241.8620 Fax 856.241.8621

SHEETS: 19-21
SUBMITTED BY JOHN BOSCO, P.E.

DATE 6/25/14

CHICAGO EXECUTIVE AIRPORT

APPROVED *Jamie L. Abbott*
JAMIE L. ABBOTT, CM
EXECUTIVE DIRECTOR

DATE 7/8/14

ILLINOIS PROJECT: PWK-4407
S.B.G. PROJECT: 3-17-SBGP-XX

DATE: AUGUST 1, 2014

PROJECT INFORMATION

CONTRACTOR:
RESIDENT ENGINEER:
ORIGINAL CONTRACT AMOUNT:
FINAL CONSTRUCTION COST:
IDOT LETTING DATE:
IDOT AWARD DATE:
NOTICE TO PROCEED:
START OF CONSTRUCTION:
SUBSTANTIAL COMPLETION:

LOCAL AGENCY CONTACT INFORMATION

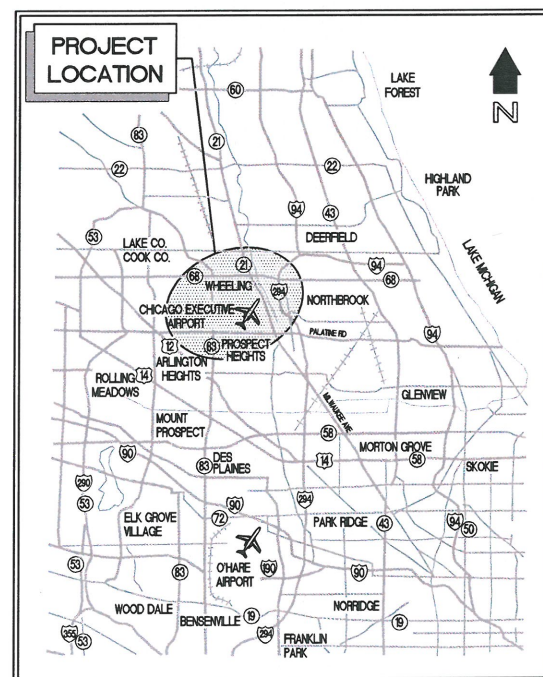
VILLAGE OF WHEELING - 847.459.2600
CITY OF PROSPECT HEIGHTS - 847.398.6070

ENGINEER'S PROJECT PERMIT LOG

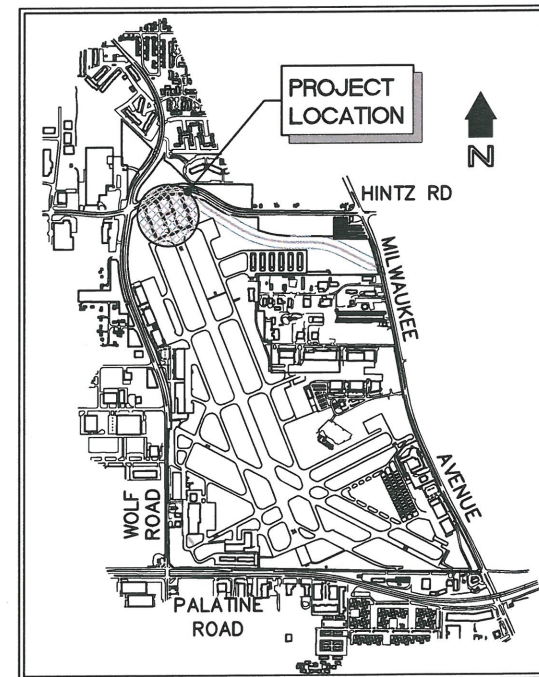
NPDES #
FAA AIRSPACE #
CCDD LPC-663 DATED N/A
MWRDGC PERMIT # 03-246 & RL 09-063
VILLAGE APP FOR CONSTRUCTION PERMIT #
VILLAGE FLOODPLAIN PERMIT #
CONTRACTORS REGISTRATION WITH VILLAGE
VILLAGE SITE ALTERATION PERMIT #
CITY APPLICATION FOR PERMIT #
CITY FLOODPLAIN PERMIT #
CITY SITE GRADING PERMIT #
CONTRACTORS REGISTRATION WITH CITY

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LOCATION MAP



SITE PLAN

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	RECORD QUANTITY
AR108108	1/C #8 5KV UG CABLE	LF	2,800	
AR110202	2" PVC DUCT, DIRECT BURY	LF	902	
AR110212	2" STEEL DUCT, DIRECT BURY	LF	200	
AR110504	4-WAY CONCRETE ENCASED DUCT	LF	180	
AR110550	SPLIT DUCT	LF	1,050	
AR110610	ELECTRICAL HANDHOLE	EACH	4	
AR125555	THRESHOLD LIGHTS, INPAVEMENT	EACH	8	
AR125610	REILS	PAIR	1	
AR125907	REMOVE REILS	PAIR	1	
AR150510	ENGINEER'S FIELD OFFICE	LS	1	
AR150520	MOBILIZATION	LS	1	
AR152410	UNCLASSIFIED EXCAVATION	CY	15,906	
AR152540	SOIL STABILIZATION FABRIC	SY	7,734	
AR156510	SILT FENCE	LF	1,596	
AR156511	DITCH CHECK	EACH	6	
AR156520	INLET PROTECTION	EACH	7	
AR156530	TEMPORARY SEEDING	ACRE	6.0	
AR208515	POROUS GRANULAR EMBANKMENT	CY	2,968	
AR209610	CRUSHED AGG. BASE COURSE - 10"	SY	7,627	
AR401610	BITUMINOUS SURFACE COURSE	TON	1,285	
AR401650	BITUMINOUS PAVEMENT MILLING	SY	3,468	
AR401900	REMOVE BITUMINOUS PAVEMENT	SY	50	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	SY	60	
AR403610	BITUMINOUS BASE COURSE	TON	886	
AR602510	BITUMINOUS PRIME COAT	GAL	2,288	
AR603510	BITUMINOUS TACK COAT	GAL	1,623	
AR620520	PAVEMENT MARKING - WATERBORNE	SF	20,770	
AR620525	PAVEMENT MARKING - BLACK BORDER	SF	6,281	
AR701518	18" RCP, CLASS IV	LF	93	
AR701900	REMOVE PIPE	LF	540	
AR705506	6" PERFORATED UNDERDRAIN	LF	1,100	
AR751540	MANHOLE 4'	EACH	1	
AR751903	REMOVE MANHOLE	EACH	4	
AR751943	ADJUST MANHOLE	EACH	1	
AR751960	RELOCATE INLET	EACH	1	
AR751983	RECONSTRUCT MANHOLE	EACH	1	
AR760510	10" DUCTILE IRON WATERMAIN	LF	175	
AR760512	12" DUCTILE IRON WATERMAIN	LF	1,100	
AR760850	WATER VAULT	EACH	5	
AR760862	12" X 12" TAPPING VALVE & SLEEVE	EACH	4	
AR760900	REMOVE WATER MAIN	LF	1,200	
AR760907	REMOVE WATER VALVE	EACH	2	
AR770945	ADJUST SANITARY MANHOLE	EACH	1	
AR770985	RECONSTRUCT SANITARY MANHOLE	EACH	1	
AR800062	RELOCATE APPROACH LIGHT	EACH	5	
AR800063	REMOVE APPROACH LIGHT	EACH	2	
AR800101	12" X 10" TAPPING VALVE & SLEEVE	EACH	1	
AR800194	REMOVE ELEVATED RETROREFLECTIVE MARKER	EACH	4	
AR800205	ELEVATED RETROREFLECTIVE MARKER - TYPE 1	EACH	6	
AR800206	ELEVATED RETROREFLECTIVE MARKER - TYPE 2	EACH	28	
AR800207	EMAS CONCRETE GRADE BEAM	LS	1	
*AR800208	EMAS BED INSTALLATION	LS	1	
*AR800209	EMAS BED	LS	1	
AR901510	SEEDING	ACRE	6.0	
AR908515	HEAVY DUTY HYDRAULIC MULCH	ACRE	6.0	

* DENOTES SPECIALTY ITEM

UTILITY CONTACT LIST

UTILITY SERVICE OR FACILITY	CONTACT (PERSON)	CONTACT (PHONE)
AT&T, COMMONWEALTH EDISON, NICOR GAS, WIDE OPEN WEST, COMCAST, LEVEL 3 COMMUNICATIONS, MCI, ABOVENET, REDSPEED ILLINOIS, TDS METROCOM WEST SHORE PIPELINE NORTHWEST WATER COMMISSION	J.U.L.I.E. (JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS)	811 OR 1-800-892-0123
AIRFIELD FAA CONTROL AND COMMUNICATION CABLES	FAA SECTOR FIELD OFFICE	(630) 587-7801
CITY OF PROSPECT HEIGHTS WATER, SANITARY AND STORM SEWER	OPERATIONS AND MAINTENANCE CITY OF PROSPECT HEIGHTS	(847) 398-6700
ILLINOIS AMERICAN WATER COMPANY - WATER, SANITARY AND STORM SEWER	SUPERVISOR OF CONSTRUCTION	(630) 739-8810
VILLAGE OF WHEELING WATER, SANITARY AND STORM SEWER	OPERATIONS AND MAINTENANCE	(847) 459-2600
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO, SANITARY SEWER	FIELD OFFICE PERSONNEL	(708) 588-4055
MISCELLANEOUS COMMUNICATION CABLES	SIGNATURE FLIGHT GROUP AL PALICKI ATLANTIC AVIATION DAVID KAUFMAN	(847) 537-1200 (847) 808-0812
AIRPORT UTILITIES ELECTRICAL, STORM SEWER, SANITARY SEWER	OPERATIONS AND MAINTENANCE	(847) 537-2580

NOTES:

- WHEN FAA CABLES ARE REQUIRED TO BE LOCATED, A 10 WORKING DAY ADVANCED NOTICE SHALL BE GIVEN TO THE FAA BEFORE ANY SUCH MARKINGS ARE REQUIRED. ONCE FAA MARKS THE CABLES, THE CONTRACTOR WILL BE REQUIRED TO SURVEY THE FAA UTILITIES SO THEY CAN BE REPLACED DURING CONSTRUCTION WITHOUT REMARKING BY THE FAA. THIS SHALL BE INCIDENTAL TO THE CONTRACT. THE FAA PERSONNEL ARE ONLY AVAILABLE FROM 9 AM TO 3 PM, MONDAY THROUGH FRIDAY WITH ADVANCED NOTICE.

MUNICIPALITIES GENERAL NOTES

- THE CHICAGO EXECUTIVE AIRPORT IS A JOINT OWNERSHIP BY BOTH THE VILLAGE OF WHEELING AND CITY OF PROSPECT HEIGHTS.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH VILLAGE/CITY CODES, ORDINANCES AND STANDARDS AS APPLICABLE.
- ALL ELEVATIONS SHOWN ON PLANS ARE IN 1929 DATUM. SUBTRACT 0.24 FEET FROM ELEVATIONS SHOWN TO OBTAIN 1988 NAVD.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE REGISTERED WITH THE VILLAGE/CITY PRIOR TO THE NOTICE TO PROCEED. ALL REGISTRATION FEES SHALL BE INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL WORK WITH THE AIRPORT AND ENGINEER TO SECURE THE REQUIRED VILLAGE AND CITY LOCAL CONSTRUCTION PERMITS PRIOR TO THE NOTICE TO PROCEED.
- ALL STORM SEWERS AND SANITARY SEWERS ON THE AIRPORT SITE ARE OWNED, OPERATED AND MAINTAINED BY THE CHICAGO EXECUTIVE AIRPORT UNLESS LABELED OTHERWISE.
- THE CONTRACTOR SHALL COORDINATE WITH THE VILLAGE/CITY AT THE WEEKLY PROGRESS MEETINGS AND SHALL NOTIFY THE CITY OF PROSPECT HEIGHTS (847.398.6700) AND THE VILLAGE OF WHEELING (847.459.2600) A MINIMUM OF 48 HOURS PRIOR TO ANY REQUIRED VILLAGE/CITY INSPECTIONS.

IL. CONTRACT: **PA057**
 IL. LETTING ITEM: **7A**
 IL. PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
 THIS BAR IS EQUAL TO 2"
 AT FULL SCALE (34X22).

CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

SUMMARY OF QUANTITIES
 AND GENERAL NOTES

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CHICAGO EXECUTIVE AIRPORT

DESIGN BY: JRL

DRAWN BY: JRO

CHECKED BY: DKP

APPROVED BY: BW

DATE: 7/10/14

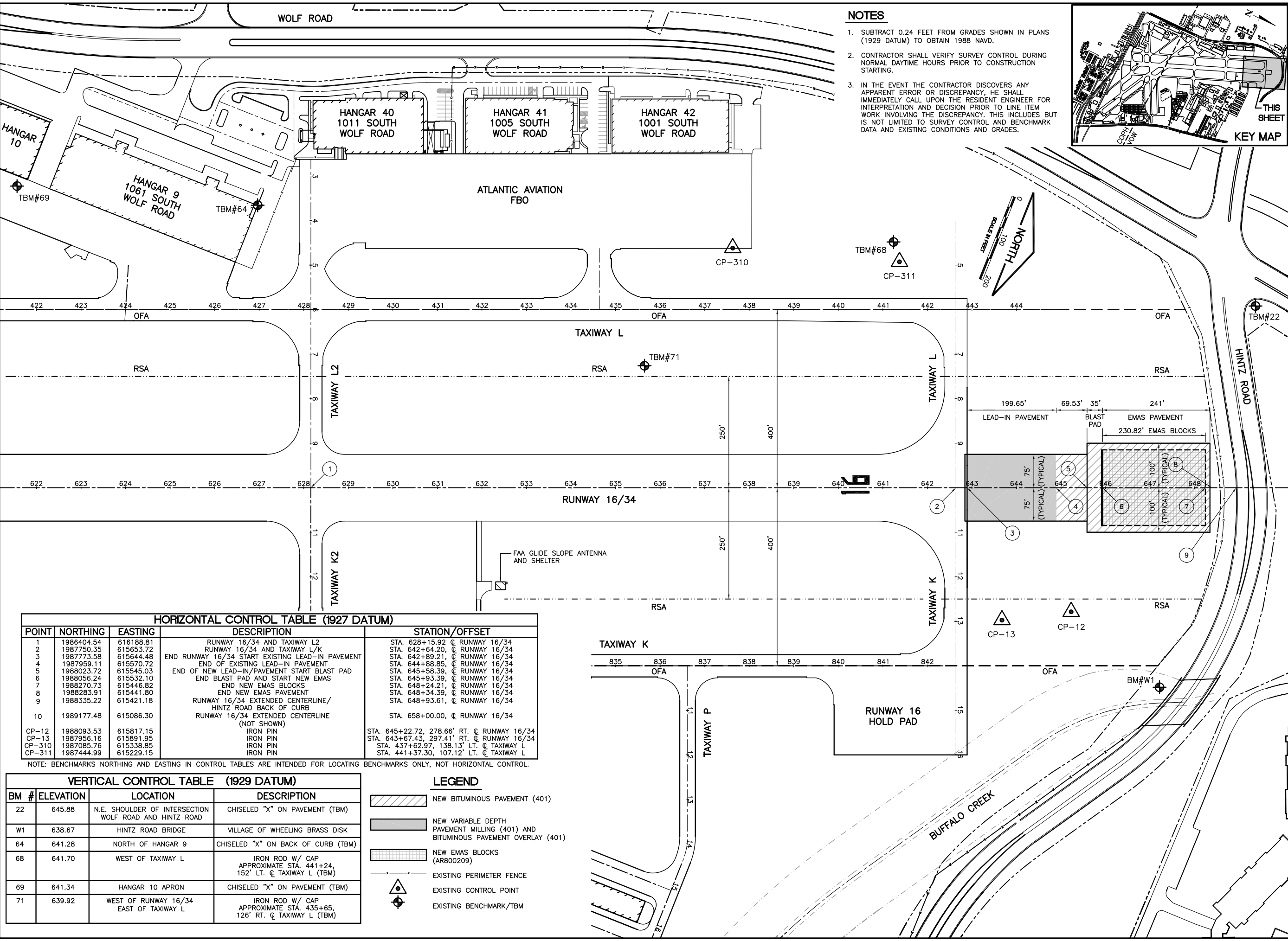
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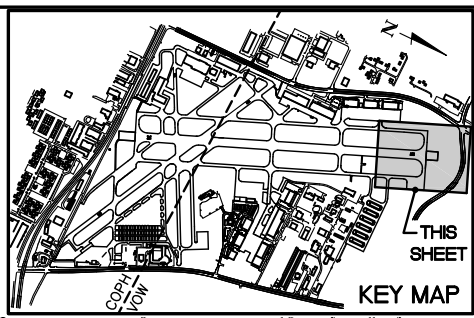
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 UPDATE BY: Jeremy Linke
 LAYOUT: 2 - SUMMARY OF QUANTITIES - GENERAL NOTES
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 UPDATE BY: Jeremy Linke
 LAYOUT: 3 SITE PLAN - PROJECT CONTROL PLAN (C:\iprus\Stms\4-YEAR-4-Color-Setup\DWG\ESTLIT16.EMAS)



- NOTES**
- SUBTRACT 0.24 FEET FROM GRADES SHOWN IN PLANS (1929 DATUM) TO OBTAIN 1988 NAVD.
 - CONTRACTOR SHALL VERIFY SURVEY CONTROL DURING NORMAL DAYTIME HOURS PRIOR TO CONSTRUCTION STARTING.
 - IN THE EVENT THE CONTRACTOR DISCOVERS ANY APPARENT ERROR OR DISCREPANCY, HE SHALL IMMEDIATELY CALL UPON THE RESIDENT ENGINEER FOR INTERPRETATION AND DECISION PRIOR TO LINE ITEM WORK INVOLVING THE DISCREPANCY. THIS INCLUDES BUT IS NOT LIMITED TO SURVEY CONTROL AND BENCHMARK DATA AND EXISTING CONDITIONS AND GRADES.



IL CONTRACT: **PA057**
 IL LETTING ITEM: **7A**
 IL PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

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REVISIONS		
NUMBER	BY	DATE

0 1 2
 THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

HORIZONTAL CONTROL TABLE (1927 DATUM)

POINT	NORTHING	EASTING	DESCRIPTION	STATION/OFFSET
1	1986404.54	616188.81	RUNWAY 16/34 AND TAXIWAY L2	STA. 628+15.92 @ RUNWAY 16/34
2	1987750.35	615653.72	RUNWAY 16/34 AND TAXIWAY L/K	STA. 642+64.20 @ RUNWAY 16/34
3	1987773.58	615644.48	END RUNWAY 16/34 START EXISTING LEAD-IN PAVEMENT	STA. 642+89.21 @ RUNWAY 16/34
4	1987959.11	615570.72	END OF EXISTING LEAD-IN PAVEMENT	STA. 644+88.85 @ RUNWAY 16/34
5	1988023.72	615545.03	END OF NEW LEAD-IN/PAVEMENT START BLAST PAD	STA. 645+58.39 @ RUNWAY 16/34
6	1988056.24	615532.10	END BLAST PAD AND START NEW EMAS	STA. 645+93.39 @ RUNWAY 16/34
7	1988270.73	615446.82	END NEW EMAS BLOCKS	STA. 648+24.21 @ RUNWAY 16/34
8	1988283.91	615441.80	END NEW EMAS PAVEMENT	STA. 648+34.39 @ RUNWAY 16/34
9	1988335.22	615421.18	RUNWAY 16/34 EXTENDED CENTERLINE/ HINTZ ROAD BACK OF CURB	STA. 648+93.61 @ RUNWAY 16/34
10	1989177.48	615086.30	RUNWAY 16/34 EXTENDED CENTERLINE (NOT SHOWN)	STA. 658+00.00 @ RUNWAY 16/34
CP-12	1988093.53	615817.15	IRON PIN	STA. 645+22.72, 278.66' RT. @ RUNWAY 16/34
CP-13	1987956.16	615891.95	IRON PIN	STA. 643+67.43, 297.41' RT. @ RUNWAY 16/34
CP-310	1987085.76	615338.85	IRON PIN	STA. 437+62.97, 138.13' LT. @ TAXIWAY L
CP-311	1987444.99	615229.15	IRON PIN	STA. 441+37.30, 107.12' LT. @ TAXIWAY L

NOTE: BENCHMARKS NORTHING AND EASTING IN CONTROL TABLES ARE INTENDED FOR LOCATING BENCHMARKS ONLY, NOT HORIZONTAL CONTROL.

VERTICAL CONTROL TABLE (1929 DATUM)

BM #	ELEVATION	LOCATION	DESCRIPTION
22	645.88	N.E. SHOULDER OF INTERSECTION WOLF ROAD AND HINTZ ROAD	CHISELED "X" ON PAVEMENT (TBM)
W1	638.67	HINTZ ROAD BRIDGE	VILLAGE OF WHEELING BRASS DISK
64	641.28	NORTH OF HANGAR 9	CHISELED "X" ON BACK OF CURB (TBM)
68	641.70	WEST OF TAXIWAY L	IRON ROD W/ CAP APPROXIMATE STA. 441+24, 152' LT. @ TAXIWAY L (TBM)
69	641.34	HANGAR 10 APRON	CHISELED "X" ON PAVEMENT (TBM)
71	639.92	WEST OF RUNWAY 16/34 EAST OF TAXIWAY L	IRON ROD W/ CAP APPROXIMATE STA. 435+65, 126' RT. @ TAXIWAY L (TBM)

- LEGEND**
- NEW BITUMINOUS PAVEMENT (401)
 - NEW VARIABLE DEPTH PAVEMENT MILLING (401) AND BITUMINOUS PAVEMENT OVERLAY (401)
 - NEW EMAS BLOCKS (AR800209)
 - EXISTING PERIMETER FENCE
 - EXISTING CONTROL POINT
 - EXISTING BENCHMARK/TBM

CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
SITE PLAN - PROJECT CONTROL PLAN

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CHICAGO EXECUTIVE AIRPORT

DESIGN BY: JRL
 DRAWN BY: JRO
 CHECKED BY: DKP
 APPROVED BY: BW
 DATE: 7/10/14
 JOB No: 11290-02

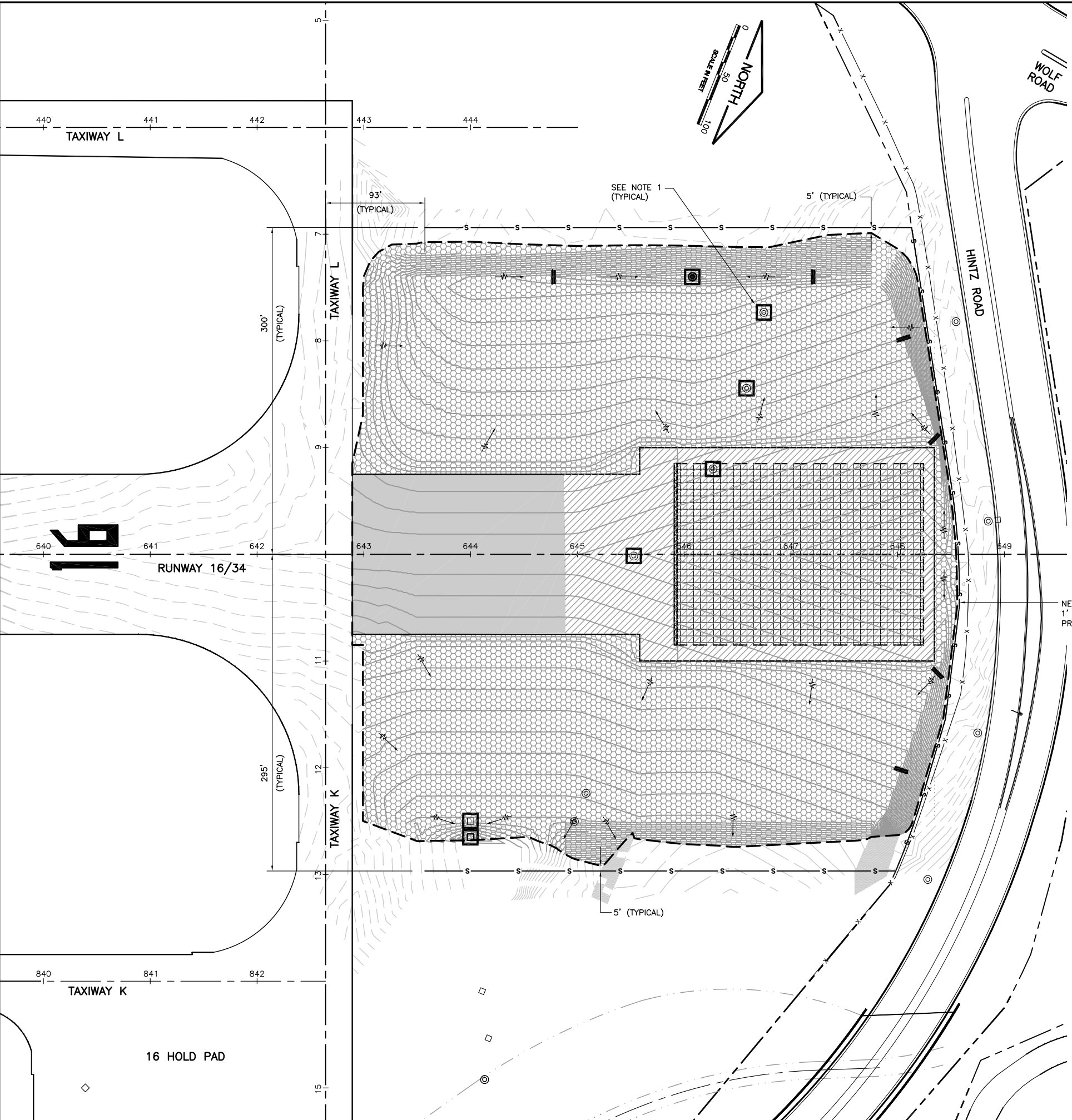
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SHEET 3 OF 31 SHEETS

KREF DWG: RW16-emms-hold-pad.dwg
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 Grading and Staking Plan.dwg

UPDATE BY: Jeremy Linke
 LAYOUT: 7 STORM WATER POLLUTION PREVENTION PLAN

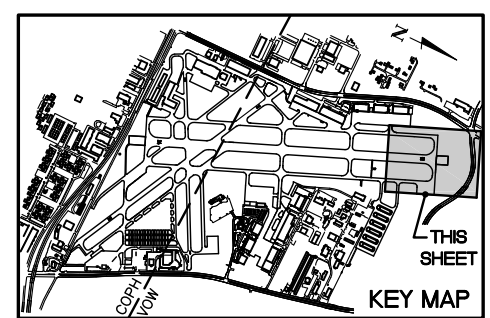
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LEGEND

	NEW 4" TOPSOIL PLACEMENT (152), SEED (901) AND HEAVY DUTY HYDRAULIC MULCH (908)
	NEW BITUMINOUS PAVEMENT
	NEW VARIABLE DEPTH PAVEMENT MILLING AND BITUMINOUS OVERLAY
	NEW EMAS CONCRETE GRADE BEAM (AR800207)
	NEW EMAS BLOCKS (AR800209)
	AIRPORT PROPERTY LINE
	NEW SILT FENCE (156)
	NEW LANDSCAPING/GRADING LIMITS
	NEW INLET PROTECTION/SEDIMENT TRAP (156)
	NEW DITCH CHECK (156)
	EXISTING AIRFIELD FENCE LINE
	EXISTING MANHOLE/INLET/SLOPE BOX/FLARED END SECTION
	NEW MANHOLE/INLET/SLOPE BOX/FLARED END SECTION
	ANTICIPATED FLOW DIRECTION

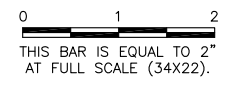
- NOTES**
1. INLET PROTECTION/SEDIMENT TRAPS SHALL BE PLACED ON REMOVAL STORM SEWER STRUCTURES UNTIL THEY ARE COMPLETELY REMOVED.
 2. BEFORE LANDSCAPING, THE CONTRACTOR SHALL OBTAIN THE RESIDENT ENGINEER'S APPROVAL ON THE AREAS TO BE LANDSCAPED. THE AREA SHALL BE TO FINAL GRADE AND THE CONTRACTOR SHALL REMOVE ROCKS, GARBAGE, DEBRIS, AND ANY OTHER FOREIGN MATERIAL FROM THE TOPSOIL THAT IS TO BE LANDSCAPED (COST INCIDENTAL). SEE SPECIAL PROVISIONS.
 3. THE CONTRACTOR SHALL REMOVE THE SILT FENCE WITH APPROVAL FROM THE RESIDENT ENGINEER (COST INCIDENTAL TO SILT FENCE).
 4. ONCE SILT FENCE IS REMOVED, THE CONTRACTOR MUST FILL THE SILT FENCE TRENCH WITH TOPSOIL, GRADE AND SEED TO ORIGINAL CONDITION (COST INCIDENTAL TO SILT FENCE).
 5. THE HAUL ROAD, STABILIZED CONSTRUCTION ENTRANCE(S) AND MATERIAL/EQUIPMENT STORAGE AREA SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF CONSTRUCTION. TOPSOIL RESTORED, SEEDED AND MULCHED (INCIDENTAL).
 6. THE CONTRACTOR SHALL PROTECT ANY UTILITIES THAT THE HAUL ROAD CROSSES (INCIDENTAL).



IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 STORMWATER POLLUTION PREVENTION PLAN**

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CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

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DATE: Thursday, July 10, 2014 2:08:08 PM
FILE: K:\Chicago\Bids\11290-02_Rwy16\EMAS\Draw\Sheet\RWY 16 EMAS-swpmp Notes.dwg
UPDATE BY: Jeremy Link
LAYOUT: 8 - STORMWATER POLLUTION PREVENTION PLAN (8) NPDES
IMAGE FILE: pwk\new\OGC_CEA-4-4-Color-8-8-16-EMAS-swpmp Notes.dwg
KREF DWG: bchm1_34-embas.dwg

STORM WATER POLLUTION PREVENTION PLAN

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE WITH NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIMEFRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING, WHICH WILL BE AT THE CONTRACTOR'S COST. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS.

SITE DESCRIPTION:

THE FOLLOWING IS A DESCRIPTION OF THE CONSTRUCTION ACTIVITY WHICH IS THE SUBJECT OF THIS PLAN:

THIS PROJECT CONSISTS OF CONSTRUCTING BITUMINOUS PAVEMENT WIDENING AND INSTALLING AN EMAS SYSTEM AT THE CHICAGO EXECUTIVE AIRPORT. THE PROJECT INCLUDES EARTH EXCAVATION, EMBANKMENT, UNDER DRAINS, VARIOUS PAVEMENT ITEMS, ELECTRICAL WORK, EMAS INSTALLATION AND OTHER MISCELLANEOUS CONSTRUCTION WORK.

DESCRIPTION OF CONSTRUCTION ACTIVITY:

THE FOLLOWING IS A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE, SUCH AS GRUBBING, EXCAVATION AND GRADING:

PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL. SUCH AS PERIMETER SILT FENCE, TEMPORARY DITCH CHECKS AND INLET PROTECTION.

REMOVAL, ADJUSTMENTS AND INSTALLATION OF ELECTRICAL AND MISCELLANEOUS ITEMS.

EXCAVATION, STABILIZATION AND AGGREGATE BASE INSTALLATION FOR BITUMINOUS PAVEMENT WIDENING.

INSTALLATION OF UNDERDRAIN.

CONSTRUCTION OF CONCRETE EMAS BEAM.

VARIABLE DEPTH PAVEMENT MILLING.

CONSTRUCTION OF NEW BITUMINOUS PAVEMENTS AND OVERLAYS.

RSA GRADING, SEEDING AND MULCHING.

EMAS BLOCK INSTALLATION.

INSTALLATION OF NEW PAVEMENT MARKING AND RETROREFLECTIVE MARKERS.

PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS SEEDING, MULCHING AND EROSION CONTROL BLANKET. REMOVAL AND DISPOSAL OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES.

AREA OF CONSTRUCTION SITE:

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 8 ACRES OF WHICH 8 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING AND OTHER ACTIVITIES.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS AND SOIL BORINGS THAT WERE UTILIZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.

2. PROJECT PLAN DOCUMENTS, SPECIFICATION AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

THE CONSTRUCTION SITE DRAINS INTO THE DES PLAINES RIVER THROUGH A STORM SEWER SYSTEM.

EROSION AND SEDIMENT CONTROL:

DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:

THE DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, EROSION CONTROL BLANKET, SOD, EROSION CONTROL BLOCK, PROTECTION OF TREES, PRESERVATION OF NATURAL VEGETATION, AND ALL OTHER APPROPRIATE MEASURES AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

AREAS OF EXISTING VEGETATION (WOOD AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.

DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET PROTECTION AND PERIMETER SILT FENCE SHALL BE INSTALLED AS CALLED OUT IN THE PLAN AND DIRECTED BY THE ENGINEER.

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF THE NPDES PERMIT NUMBER ILR10, ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.

WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.

EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTORS EXPENSE, IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.

THE DOWN STREAM SIDE OF ALL STOCKPILES SHALL BE ENCOMPASSED WITH EROSION CONTROL BARRIER.

THE TEMPORARY SEED PAY ITEM (AR156) IS TO BE USED AND PAID FOR IF A WINTER SHUTDOWN OR EXTENDED SHUTDOWN PERIOD (3 MONTHS OR MORE) IS NECESSARY TO COMPLETE THE PROJECT.

AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:

A. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.

B. CONSTRUCT DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.

C. BUILD NECESSARY EMBANKMENT AT CULVERT/STORM SEWER LOCATIONS AND THEN EXCAVATE AND PLACE PIPE.

D. EXCAVATED AREAS AND EMBANKMENT AREAS SHALL BE PERMANENTLY SEEDED OR SODDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTOR'S COST, IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.

CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS WITHIN THE STAGING AREA. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.

THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT PERIODICALLY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 OR GREATER OR EQUIVALENT SNOWFALL AND DURING WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE RESIDENT ENGINEER ON A BI-WEEKLY BASIS TO DETERMINE THAT THE EROSION AND SEDIMENT CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.

SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION AND EROSION CONTROL ITEMS.

THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SOIL CONTAMINATION FROM BUILDING MATERIALS, FERTILIZERS, CHEMICALS, PAVEMENT MARKING, WASTE PILES, FUEL CONTAINMENT, AND ANY OTHER POTENTIAL HAZARDOUS MATERIALS THAT MAY EXIST ONSITE.

NO DEDICATED CONCRETE OR ASPHALT BATCH PLANTS SHALL BE LOCATED ON THIS SITE.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:

TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS ARE SEEDED AND ESTABLISHED.

COST OF MAINTAINING THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE INCLUDED INCLUDED IN THE UNIT BID PRICE FOR THE VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RE-SEEDED AND/OR SODDED.

MAINTENANCE AFTER CONSTRUCTION:

CONSTRUCTION IS COMPLETE AFTER FINAL ACCEPTANCE BY THE ILLINOIS DIVISION OF AERONAUTICS. MAINTENANCE OF TEMPORARY AND PERMANENT EROSION CONTROL SYSTEMS UP TO THIS DATE WILL BE REQUIRED BY THE CONTRACTOR.

DOCUMENTATION:

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COMPLETE AND SUBMIT A "NOTICE OF INTENT (NOI)" PROPERLY SIGNED TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL POST A SIGN OR OTHER NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE. IF THIS IS NOT POSSIBLE, THEN IT MAY BE PERMITTED TO POST THIS NOTICE IN A LOCAL PUBLIC BUILDING. THE SIGN OR NOTICE MUST CONTAIN THE FOLLOWING:

1. A COPY OF THE COMPLETED NOTICE OF INTENT (NOI) AS SUBMITTED TO THE IEPA
2. THE LOCATION OF THE SWPPP AND NAME AND 24/7 TELEPHONE NUMBER OF THE CONTACT PERSON.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN AND UPDATE AN "AS-BUILT" SET OF STORM WATER POLLUTION PREVENTION PLANS IN THE PROJECT FILES. THE SWPPP SHALL BE UPDATED WITHIN 7-DAYS OF ANY MODIFICATIONS TO THE PLANS. THE SWPPP AND ALL REVISIONS SHALL BE RETAINED FOR THREE YEARS AFTER FINAL STABILIZATION OF THE SITE, WHICH SHALL BE DEFINED AS VEGETATION COVER OF AT LEAST 70% OF HISTORIC CONDITIONS.

A STORM WATER POLLUTION PREVENTION PLAN EROSION CONTROL INSPECTION REPORT (FORM BC 2259) SHALL BE COMPLETED WITH INSPECTION FREQUENCIES AS OUTLINED HEREIN. SWPPP REPORTS SHALL BE RETAINED FOR THREE YEARS AFTER THE DATE OF FINAL STABILIZATION AS DEFINED HEREIN.

IF ANY VIOLATION OF THE PROVISIONS OF THE PLAN IS IDENTIFIED DURING THE CONDUCT OF THE CONSTRUCTION COVERED IN THIS PLAN, THE ENGINEER AND/OR CONTRACTOR SHALL COMPLETE AND FILE AN "INCIDENT OF NONCOMPLIANCE (ION)" REPORT FOR THE IDENTIFIED VIOLATION. THE FORMS SHALL BE AS PROVIDED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, AND SHALL INCLUDE SPECIFIC INFORMATION ON THE INCIDENT THAT CAUSED NONCOMPLIANCE, ACTIONS THAT WERE TAKEN TO CORRECT THE NONCOMPLIANCE AND TO PREVENT ITS REOCCURRENCE, AND A STATEMENT DETAILING ANY ENVIRONMENTAL IMPACT WHICH MAY HAVE RESULTED FROM THE NONCOMPLIANCE. ALL REPORTS OF NONCOMPLIANCE SHALL BE SIGNED BY A RESPONSIBLE AUTHORITY IN ACCORDANCE WITH PART VI. G. OF THE GENERAL PERMIT.

AFTER PROJECT FINAL ACCEPTANCE, THE CONTRACTOR SHALL COMPLETE AND SUBMIT A "NOTICE OF TERMINATION (NOT)" FORM PROPERLY SIGNED TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY. FORMS FOR THE IEPA SHALL BE MAILED TO THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL, MAIL CODE #15
ATTN: PERMIT SECTION
1021 NORTH GRAND AVENUE EAST
P.O. BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

NPDES PERMIT # _____
DATE ISSUED _____
DATE EXPIRED _____

GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL:

1. ALL TREE PROTECTION, SEDIMENT CONTROL MEASURES, AND PERMANENT AND TEMPORARY STORM WATER PRACTICES SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION.
2. NO WORK SHALL BE PERFORMED IN FLOWING WATER. WORK IN AND NEAR FLOWING WATER SHALL BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOWS AT ALL TIMES. THE USE OF EARTHEN MATERIAL FOR ISOLATION WILL NOT BE ACCEPTABLE.
3. CONSTRUCTION MATERIALS AND/OR OTHER STOCKPILES SHALL NOT BE LOCATED ON STREAM BANKS NOR IN THE PATH OF STREAM FLOW.
4. TEMPORARY EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. PERMANENT SEEDING SHALL BE USED WHENEVER POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PROLONG GRADING OR SHAPING SO THAT THE ENTIRE PROJECT CAN BE PERMANENTLY SEEDED AT ONE TIME.
6. THE CONTRACTOR SHALL INSPECT ADJACENT STREETS DAILY AND CLEAN ADJACENT STREETS WHEN NECESSARY. ADJACENT STREETS SHALL BE KEPT FREE OF SOIL AND DEBRIS.
7. SHOULD IT BE NECESSARY TO REMOVE ANY EROSION CONTROL DEVICES FOR CONSTRUCTION REASONS, THE CONTRACTOR SHALL FIRST OBTAIN PERMISSION AND SHALL REPLACE AND/OR REPAIR THE REMOVED DEVICES THE SAME DAY. THE COST OF REMOVING AND REPLACING THE DEVICE SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
8. ALL OTHER SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MEASURES DEEMED NECESSARY BY THE RESIDENT ENGINEER, COOK COUNTY, CHICAGO EXECUTIVE AIRPORT, IDOT DIVISION OF AERONAUTICS, AND THE IEPA SHALL BE IMPLEMENTED IMMEDIATELY UPON NOTIFICATION OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL PROVIDE LOCATIONS FOR CONCRETE TRUCK WASHOUT, AS APPROVED BY THE ENGINEER, PRIOR TO ANY CONCRETE POURS. THESE LOCATIONS SHALL NOT BE NEAR ANY STREAM OR BODY OF WATER. LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY CONCRETE POURS. ADDITIONALLY THE CONTRACTOR SHALL PROVIDE ADEQUATE FACILITIES TO WASH OUT PAVING EQUIPMENT AND FINISHING TOOLS. ALL WASTE WATER AND EXCESS CONCRETE MATERIALS SHALL BE CONTAINED BY AN APPROVED CONCRETE WASHOUT FACILITY.
10. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO ENSURE THAT EROSION CONTROL MEASURES ARE CONSISTENT BETWEEN ALL PROJECT PHASES AND ALL SUB-CONTRACTORS.
11. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT WETLANDS TO REMAIN FROM DAMAGE BY SEDIMENT, CONSTRUCTION EQUIPMENT, OR BY HIS PERSONNEL. THE CONTRACTOR SHALL ASSURE THAT DEBRIS OR ANY CONSTRUCTION MATERIAL IS NOT DISPOSED OF IN THE WETLANDS.
12. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED BY AN APPROVED MEANS.
13. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE DEVICE OR AS RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS LESS.
14. ALL EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE OPERATIONAL.
15. THE CONDITION OF THE CONSTRUCTION SITE FOR WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THAT SLOPES AND OTHER BARE EARTH AREAS MAY BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATIVE COVER. ALL OPEN AREAS THAT ARE TO REMAIN IDLE THROUGHOUT THE WINTER SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY SEEDING, MULCHING AND/OR EROSION CONTROL BLANKET PRIOR TO THE END OF THE FALL GROWING SEASON. THE AREAS TO BE WORKED BEYOND THE END OF THE GROWING SEASON MUST INCORPORATE SOIL STABILIZATION MEASURES THAT DO NOT RELY ON VEGETATIVE COVER SUCH AS EROSION CONTROL BLANKET AND HEAVY MULCHING.
16. PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN 7 DAYS FOR AREAS WHERE WORK IS COMPLETED.

CONTRACTOR CERTIFICATION STATEMENT

THIS CERTIFICATION STATEMENT IS A PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT DESCRIBED BELOW IN ACCORDANCE WITH NPDES PERMIT NO. ILR10 ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

PROJECT INFORMATION:

ROUTE: CHICAGO EXECUTIVE AIRPORT MARKED: RUNWAY 16 END EMAS
SECTION: 13 PROJECT NUMBER: PWK-4407
COUNTY: COOK CONTRACT NUMBER: 3-17-SBGP-XX (PA057)

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE: _____ DATE: _____
PRINTED NAME: _____ TITLE: _____
NAME OF FIRM: _____
STREET ADDRESS: _____
CITY, STATE, ZIP: _____
PHONE NUMBER: _____

THE INFORMATION WITHIN THIS BOX SHALL BE COMPLETED BY THE CONTRACTOR AFTER THE AWARD OF THE CONTRACT TO OBTAIN THE REQUIRED NPDES PERMIT FROM IEPA. COMPLETION OF THIS IS A CONTRACT REQUIREMENT.

RECORD OF SITE DISTURBANCE AND STABILIZATION

MAJOR GRADING ACTIVITIES: LOCATION: _____	BEGINNING DATE: _____ COMPLETION DATE: _____
MAJOR GRADING ACTIVITIES: LOCATION: _____	BEGINNING DATE: _____ COMPLETION DATE: _____
SITE STABILIZATION: LOCATION: _____	BEGINNING DATE: _____ COMPLETION DATE: _____
SITE STABILIZATION: LOCATION: _____	BEGINNING DATE: _____ COMPLETION DATE: _____
CONSTRUCTION CEASED: EXPLANATION: _____	BEGINNING DATE: _____ COMPLETION DATE: _____

THE INFORMATION WITHIN THIS BOX SHALL BE COMPLETED BY THE CONTRACTOR AS CONSTRUCTION PROGRESSES IN ACCORDANCE WITH THE NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES. THIS INFORMATION MAY ALSO BE NOTED DIRECTLY ON THE SWPPP SITE MAP.

IL CONTRACT: **PA057**

IL LETTING ITEM: **7A**

IL PROJECT: **PWK-4407**

A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).

**CHICAGO EXECUTIVE AIRPORT
WHEELING PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)**

**STORMWATER POLLUTION
PREVENTION PLAN NOTES**

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**CHICAGO EXECUTIVE
AIRPORT**

DESIGN BY: JRL

DRAWN BY: JRO

CHECKED BY: DKP

APPROVED BY: BW

DATE: 7/10/14

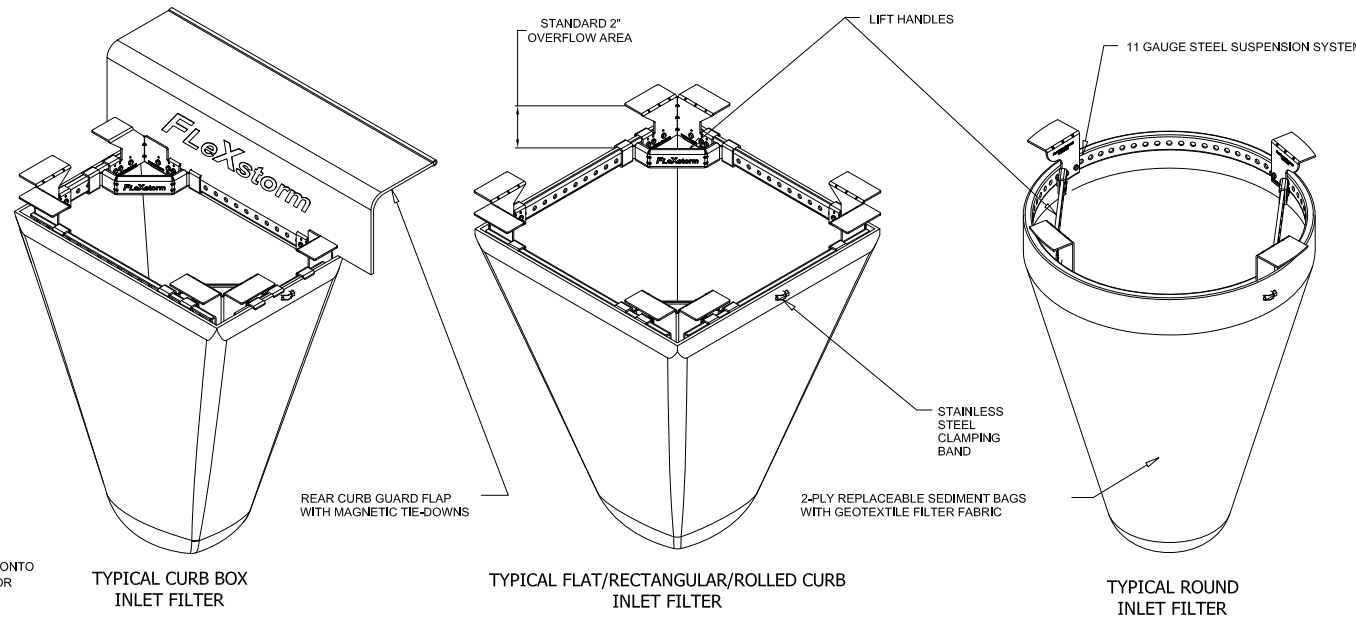
JOB No: 11290-02

FINAL

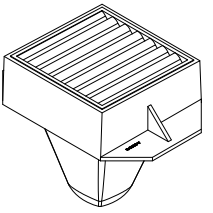
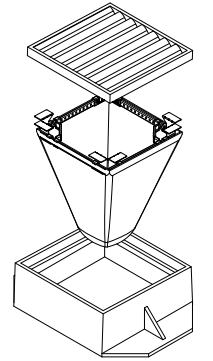
SHEET 8 OF 31 SHEETS

REF: DWG: 11290-02.dwg
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 IUM-620B.dwg
 IUM-620C.dwg
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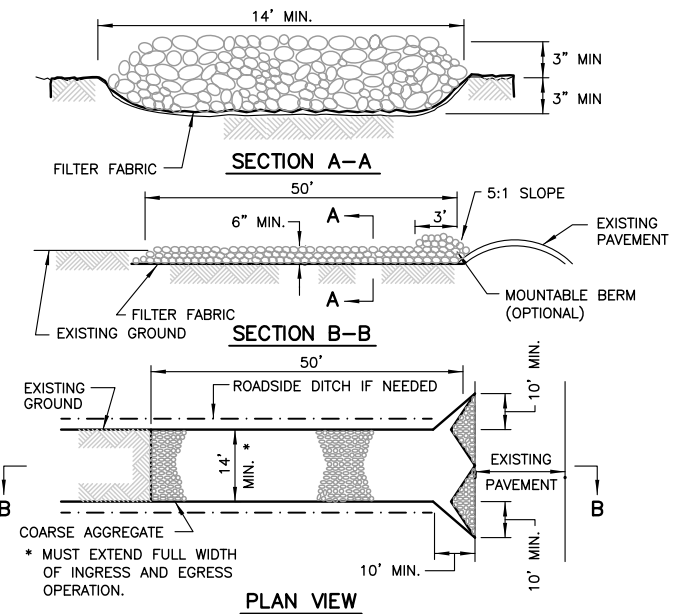
IPP Flexstorm Inlet Filter Specifications			
Material Property	Test Method	Value (min ave)	
> Inner Filter Bag Specs (2 ft³ min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0 /sec	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft	145 gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/- 15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel; 11 Gauge; Zinc Plated	ASTM A 576	Tensile Strength > 58,000 psi; Yield Strength > 36,000 psi	



INSTALLATION:
 1. REMOVE GRATE
 2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
 3. REPLACE GRATE



INLET PROTECTION / SEDIMENT TRAP
 NOT TO SCALE
 STORM SEWER INLET PROTECTION SHALL BE FLEXSTORM INLET FILTERS AS DETAILED HEREIN OR APPROVED EQUAL

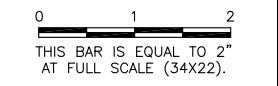


- FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFIED FOR AR152540 IN THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.
- ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATION, CA-1, CA-2, CA-3 OR CA-4.
- ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND SHALL BE INCIDENTAL TO THE CONTRACT.
- MINIMUM WIDTH IS 14' FOR ONE-WAY TRAFFIC AND 20' FOR TWO WAY TRAFFIC. TWO-WAY TRAFFIC WIDTHS SHALL BE INCREASED A MINIMUM OF 4' FOR TRAILER TRAFFIC. DEPENDING ON THE TYPE OF VEHICLE OR EQUIPMENT, SPEED, LOADS, CLIMATIC AND OTHER CONDITIONS UNDER WHICH VEHICLES AND EQUIPMENT OPERATE AN INCREASE IN THE MINIMUM WIDTHS MAY BE REQUIRED.
- ROADWAY SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE.
- STABILIZED CONSTRUCTION ENTRANCE SHALL BE INCIDENTAL TO THE CONTRACT.

STABILIZED CONSTRUCTION ENTRANCE
 FROM NRCS STANDARD DRAWING NO. IL-630 (MODIFIED)

IL CONTRACT: **PA057**
 IL LETTING ITEM: **7A**
 IL PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

REVISIONS		
NUMBER	BY	DATE



CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
STORMWATER POLLUTION PREVENTION PLAN DETAILS

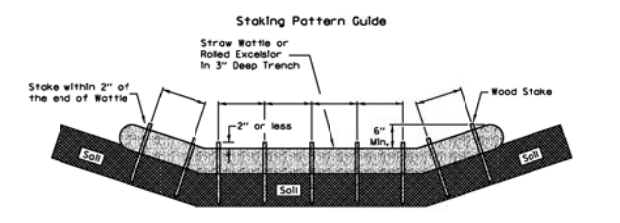
CMT
 CRANFORD, MURPHY & TULLY, INC.
 CONSULTING ENGINEERS
 License No. 184-000693

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

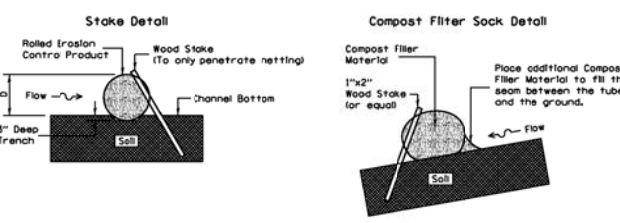
FINAL

SHEET 9 OF 31 SHEETS

ROLLED EROSION CONTROL PRODUCTS



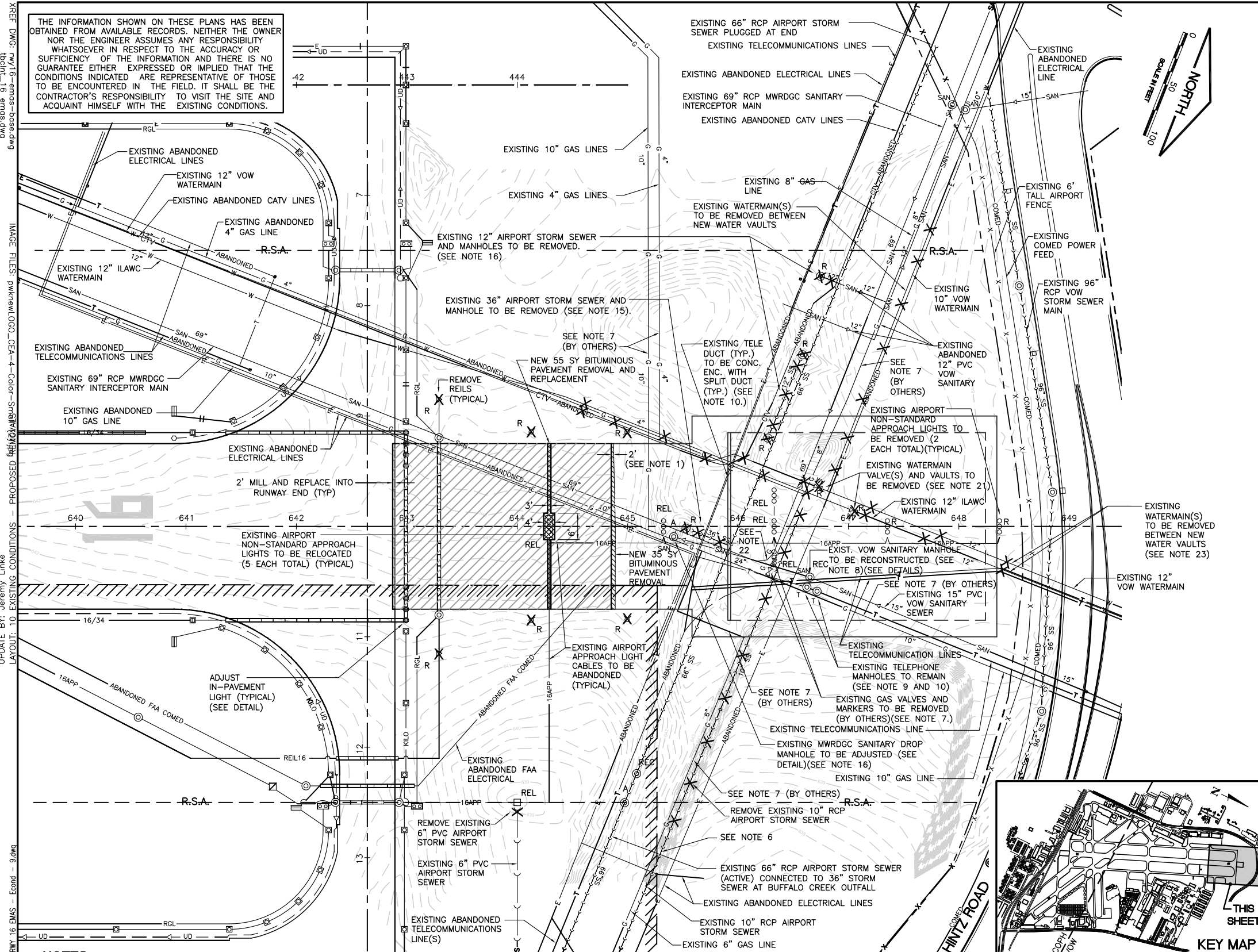
- Notes:**
- Overlap minimum is the diameter of the roll.
 - 4' spacing for wattles.
 - 2' spacing for rolled excelsior.
 - Or space according to manufacturer's specifications.



- Notes:**
- Drawings are not to scale.
 - Ends of wattles or rolled excelsior shall be turned at least 6" up slope.
 - Recommended stakes are 1 1/8" wide x 1 1/8" thick x 30" long.
 - Stakes shall not extend above the straw wattle more than 2".
 - Spacing: The toe of the upstream ditch check shall create a horizontal line with the top of the downstream ditch check.
 - When compost filter sock ditch check

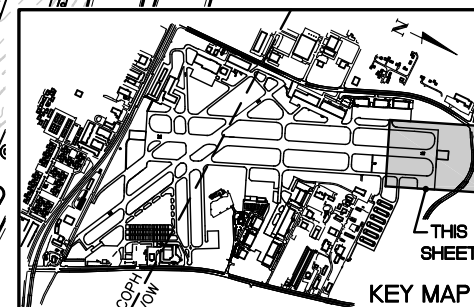
DATE: Thursday, July 10, 2014 2:08:22 PM
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 UPDATE BY: Jeremy Linke
 LAYOUT: 10 EXISTING CONDITIONS
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THE INFORMATION SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM AVAILABLE RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED THAT THE CONDITIONS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE FIELD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS.



LEGEND

	EXISTING BASE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT
	EXISTING BASE MOUNTED HIGH INTENSITY RUNWAY LIGHT
	EXISTING ELEVATED RETROREFLECTIVE MARKER
	EXISTING RUNWAY END IDENTIFIER LIGHT (REIL)
	EXISTING AIRFIELD GUIDANCE SIGN
	EXISTING ROADWAY SIGN
	EXISTING ELECTRICAL/STORM/SANITARY/TELEPHONE MANHOLE OR EXISTING WATER VALVE VAULT
	EXISTING ELECTRICAL HANDHOLE
	EXISTING STORM INLET
	EXISTING SLOPE BOX
	EXISTING FIRE HYDRANT
	EXISTING WATER/GAS VALVE
	EXISTING UTILITY PEDESTAL
	EXISTING AIRPORT OWNED NON-STANDARD APPROACH LIGHTS
	EXISTING CONDUIT/DUCT BANK
	EXISTING RUNWAY 16/34 CIRCUIT
	EXISTING TAXIWAY G AND D CIRCUIT
	EXISTING TAXIWAY KILO CIRCUIT
	EXISTING RUNWAY 16 REIL CABLES
	EXISTING RUNWAY 16 END AIRPORT APPROACH LIGHT CABLES
	EXISTING FAA CABLES
	EXISTING NATURAL GAS (NICOR)
	EXISTING RUNWAY GUARD LIGHT CIRCUIT
	EXISTING ELECTRICAL UTILITY (COMED)
	EXISTING ABANDONED UTILITY
	EXISTING STORM SEWER (AIRPORT OWNED)
	EXISTING UNDERDRAIN
	EXISTING UNDERDRAIN COLLECTION STRUCTURE
	EXISTING WATERMAIN (ILAWC AND VOW)
	EXISTING SANITARY SEWER (MWRDGC)
	ILLINOIS AMERICAN WATER COMPANY
	VILLAGE OF WHEELING
	EXISTING AIRFIELD FENCE
	EXISTING VEHICLE GATE
	EXISTING CONTOUR
	EXISTING AIRPORT PROPERTY LINE
	EXISTING TELEPHONE/COMMUNICATION CABLE (AT&T)
	EXISTING COMED POWER CABLE (COMED)
	NEW VARIABLE DEPTH BITUMINOUS PAVEMENT MILLING (AR401650)(0.1'-2')(SEE GRADING PLAN)
	NEW REMOVE AND REPLACE BITUMINOUS PAVEMENT (AR401910)(DEPTHS VARY, SEE TYPICAL SECTION)
	NEW BITUMINOUS PAVEMENT REMOVAL (AR401900)(DEPTHS VARY, SEE TYPICAL SECTION)
	EXISTING ITEM TO BE REMOVED
	EXISTING ITEM TO BE RELOCATED
	EXISTING ITEM TO BE ADJUSTED
	EXISTING ITEM TO BE RECONSTRUCTED



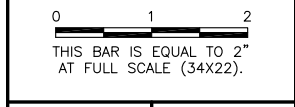
NOTES

- THE EXISTING PAVEMENT TO BE REMOVED SHALL BE SAWED FULL DEPTH AROUND PERIMETER OF THE REMOVAL LIMITS. COST OF SAWCUTTING AND DISPOSAL OF PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE ITEM.
- THE TAXIWAY LIGHTS AND TRANSFORMER TO BE REMOVED SHALL BE TURNED OVER TO THE AIRPORT. LIGHT CONCRETE BASES SHALL BE DISPOSED OF OFF SITE.
- ANY TEMPORARY CABLING REQUIRED FOR THIS PROJECT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- IN AREAS WHERE REMOVED UTILITIES, UNDERDRAIN OR STORM SEWER IS BELOW LIMITS OF PROPOSED PAVEMENTS, TRENCH SHALL BE BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) CONFORMING TO IDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION SECTION 593, (MIX 1). COST OF BACKFILLING SHALL BE INCIDENTAL TO RESPECTIVE REMOVAL ITEM.
- ITEMS REMOVED DUE TO PROPOSED PAVEMENT EXCAVATION WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO UNCLASSIFIED EXCAVATION UNLESS OTHERWISE NOTED ON THE PLANS.
- CONTRACTOR SHALL SEAL WITH ITEM 610 CONCRETE, BRICK AND MORTAR PIPE ENDS AT REMOVAL LIMITS WHERE NOTED TO THE SATISFACTION OF THE RESIDENT ENGINEER (SEE DETAIL). THIS SHALL BE CONSIDERED INCIDENTAL TO THE PIPE REMOVAL.
- EXISTING GAS LINES (NICOR) NEED TO BE VERTICALLY ADJUSTED AND/OR RELOCATED (BY OTHERS) TO ACCOMMODATE NEW PAVEMENT STRUCTURE, EMAS CONCRETE GRADE BEAM AND R.S.A. GRADING REQUIREMENTS AND REQUIRED UTILITY CLEARANCES.**
- CONTRACTOR TO RECONSTRUCT SANITARY SEWER MANHOLE TO FINAL GRADE PER VILLAGE OF WHEELING STANDARDS. ACCESSIBLE EMAS BLOCKS TO BE INSTALLED OVER UTILITY MANHOLES TO ALLOW FOR ACCESS AS REQUIRED (SEE DETAILS).
- NO ADJUSTMENT OF TELECOMMUNICATIONS MANHOLE IS ANTICIPATED. ACCESSIBLE EMAS BLOCKS TO BE INSTALLED OVER UTILITY MANHOLES TO ALLOW FOR ACCESS AS REQUIRED.
- CONTRACTOR TO CONSTRUCT CONCRETE ENCASED PVC SPLIT DUCT OVER EXISTING TELECOMMUNICATIONS CABLES/CONDUIT WHERE TELECOMMUNICATION CABLES/CONDUIT AS REQUIRED BY TELECOMMUNICATION COMPANY (SEE DETAILS).
- SPECIAL ATTENTION IS NECESSARY WHEN WORKING NEAR FAA POWER AND CONTROL CABLES. ANY FAA UTILITY THAT IS DAMAGED OR CUT DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY. FAA REQUIRES THAT ANY DAMAGED CABLE BE REPLACED IN ITS ENTIRETY, FROM POWER/CONTROL SOURCE TO THE EQUIPMENT/SERVICE. SPLICES OF ANY KIND WILL NOT BE PERMITTED. EXPOSURES OF ANY FAA CABLES MUST BE DONE BY HAND DIGGING OR HYDRO-EXCAVATION. NO ADDITIONAL COMPENSATION WILL BE MADE FOR LOCATING, REPLACEMENT OR REPAIR OF FAA FACILITIES OR CABLES BUT, SHALL BE INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING AND PROPOSED PAVEMENT STRUCTURE AND SUBGRADE FROM DAMAGE, WHICH MAY INCLUDE BUT NOT BE LIMITED TO USE OF TRACKED EQUIPMENT, SHORT HAUL TRUCKS OR TRACKED PAVERS, AT NO ADDITIONAL COST TO CONTRACTOR.
- AT ALL TIMES THE CONTRACTOR SHALL PERFORM ALL MAINTENANCE WORK NECESSARY TO KEEP EACH PAVEMENT SECTION LAYER IN A SATISFACTORY CONDITION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE DONE BY HIS HAULING, CONSTRUCTION EQUIPMENT AND CONSTRUCTION OPERATIONS. ANY WORK NECESSARY TO CORRECT DAMAGED WORK, EXISTING AND NEW PAVEMENT SHALL BE PERFORMED BY THE CONTRACTOR AND AT THE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR SHALL LEAVE A 2' STUB OF THE EXISTING STORM SEWER IN THE EXISTING 66" STORM SEWER. THE STUB WILL BE SEALED WITH ITEM 610 CONCRETE, BRICK AND MORTAR TO THE SATISFACTION OF THE RESIDENT ENGINEER. (INCIDENTAL)(SEE DETAIL).
- CONTRACTOR TO ADJUST SANITARY SEWER DROP MANHOLE TO FINAL GRADE PER MWRDGC STANDARDS (SEE DETAILS).
- CONTRACTOR SHALL REMOVE EXISTING CABLES IN ALL CONDUIT/UNIT DUCT FOR ALL CIRCUITS THAT ARE BEING REPLACED WITH NEW CIRCUITS (INCIDENTAL).
- ALL EXISTING AIRFIELD CABLES SHOWN SPACED APART FROM EACH OTHER FOR CLARITY, EXACT LOCATIONS TO BE DETERMINED BY THE CONTRACTOR AND ASSOCIATED UTILITY OWNERS IN THE FIELD. (INCIDENTAL).
- ITEMS REMOVED DUE TO PROPOSED PAVEMENT EXCAVATION WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO UNCLASSIFIED EXCAVATION UNLESS OTHERWISE NOTED ON THE PLANS.
- NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY VARIANCE IN EXISTING PAVEMENT SECTIONS ENCOUNTERED.
- VAULT REMOVAL IS INCIDENTAL TO AR760907 REMOVE WATER VALVE.
- CONTRACTOR SHALL PROTECT EXISTING MWRDGC JUNCTION CHAMBER LOCATED AT INTERCEPTOR REDIRECTION AT THIS LOCATION.
- CONTRACTOR WILL BE REQUIRED TO INSTALL, TEST AND PERFORM PRESSURE CUTS ON NEW WATERMAIN PRIOR TO REMOVING EXISTING WATERMAIN. A MINIMAL SERVICE INTERRUPTION AS APPROVED BY ILAWC SHALL BE ALLOWED IN ORDER TO SWITCH OVER FROM THE OLD WATERMAIN TO THE NEW WATERMAIN

IL. CONTRACT: **PA057**
 IL. LETTING ITEM: **7A**
 IL. PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 EXISTING CONDITIONS - PROPOSED REMOVALS**

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CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02
FINAL	
SHEET 10 OF 31 SHEETS	

KREF DWG: RW16-emas-base.dwg
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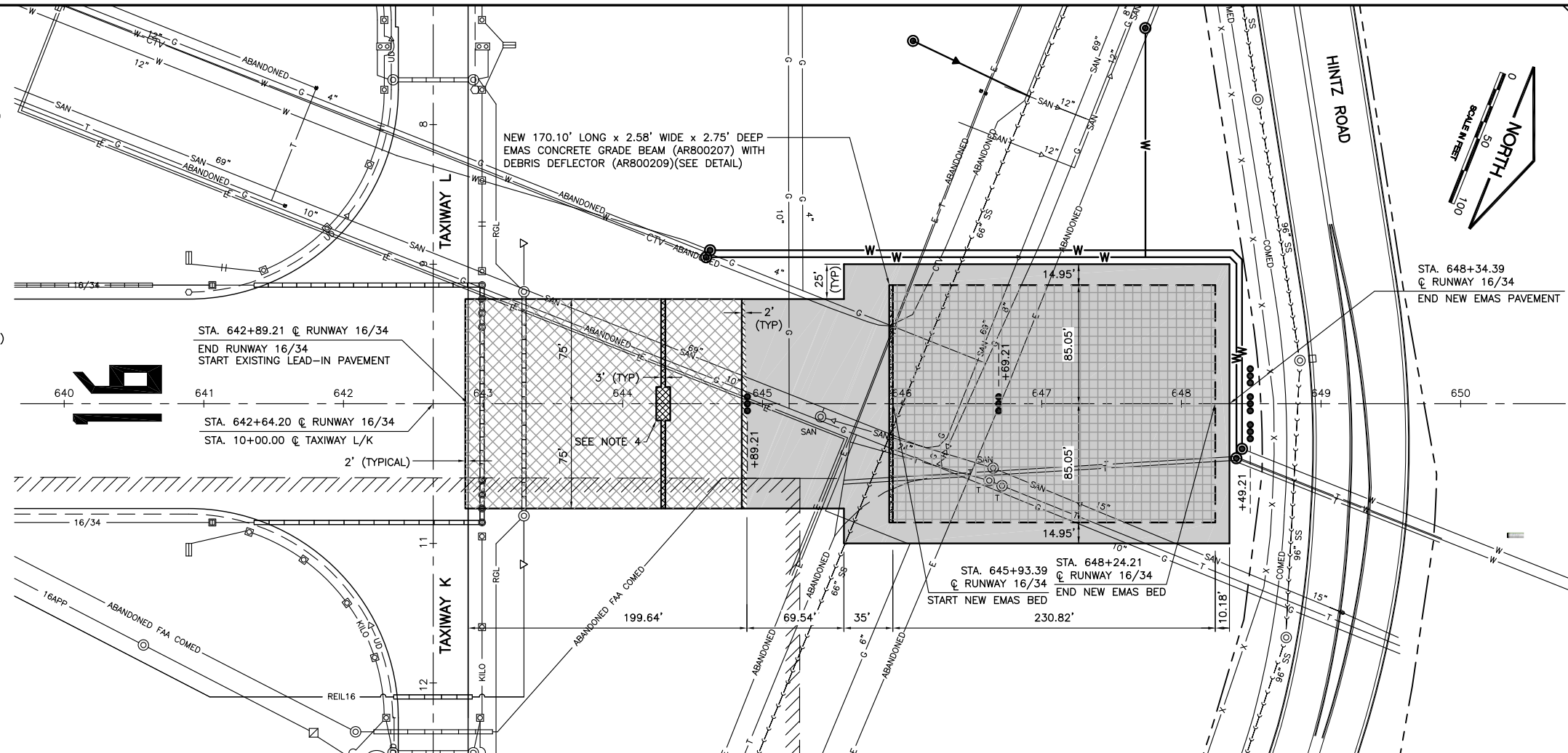
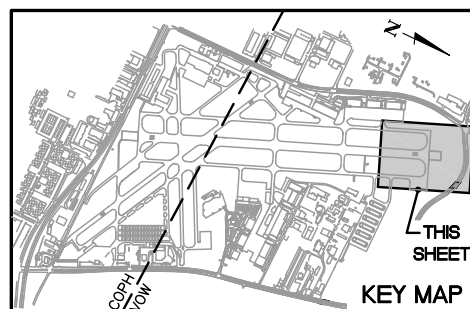
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UPDATE BY: Jeremy Linke
 LAYOUT: 12 PLAN AND PROFILE

DATE: Thursday, July 10, 2014 2:08:40 PM
 FILE: K:\Chicago\Drawings\11290-02\Drawings\11290-02-PA057-18-emas.dwg

LEGEND

- NEW VARIABLE DEPTH BITUMINOUS PAVEMENT MILLING (401) AND 2" BITUMINOUS SURFACE COURSE OVERLAY (401)
- NEW BITUMINOUS PAVEMENT: NEW 2" BITUMINOUS SURFACE COURSE (401) NEW 2" BITUMINOUS BASE COURSE (403) NEW 10" CRUSHED AGGREGATE BASE COURSE (209) NEW 12" POROUS GRANULAR EMBANKMENT (208) NEW SOIL STABILIZATION FABRIC (152)
- NEW EMAS BLOCKS (AR800209)
- NEW REMOVE AND REPLACE BITUMINOUS PAVEMENT (AR401910)(DEPTHS VARY, SEE TYPICAL SECTION)
- NEW BITUMINOUS PAVEMENT REMOVAL (AR401900)(DEPTHS VARY, SEE TYPICAL SECTION)
- NEW EMAS CONCRETE GRADE BEAM (AR800207)(SEE DETAIL)
- EXISTING FENCE LINE
- EXISTING PROPERTY LINE
- FAA CRITICAL AREA



IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

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NUMBER	BY	DATE

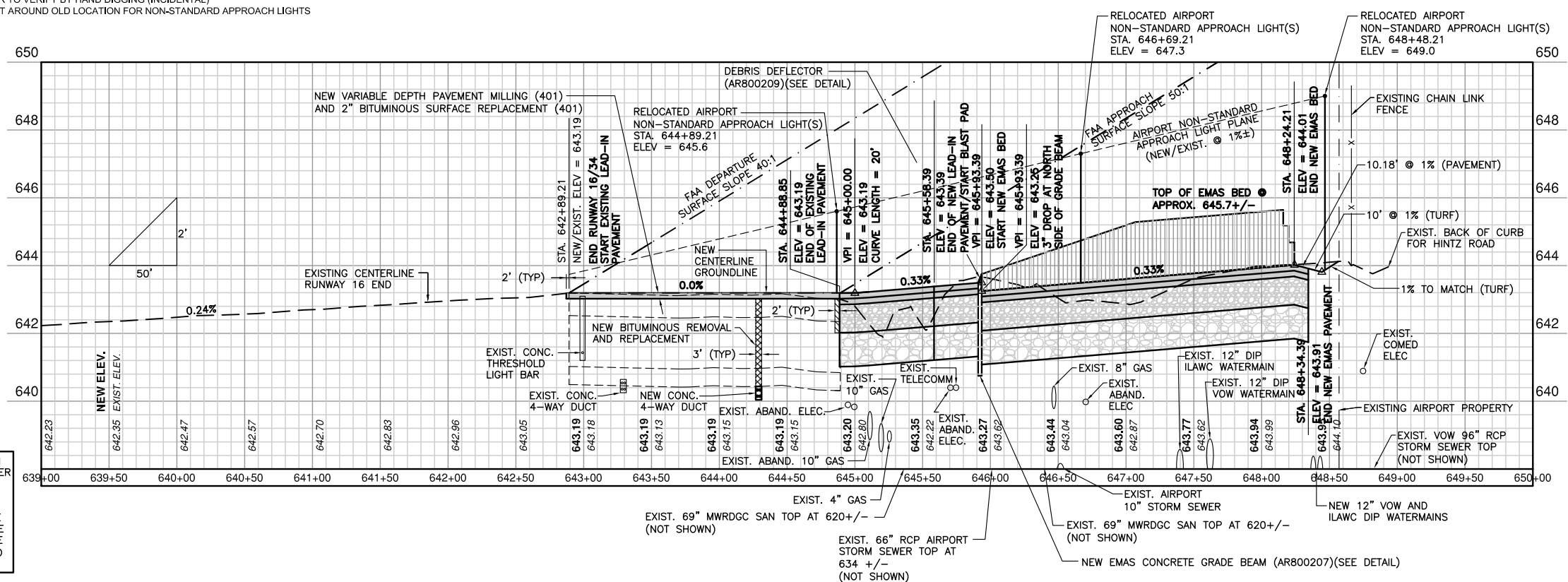
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**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 PLAN AND PROFILE**

NOTES

- SANITARY AND STORM SEWER BASED ON RECORD DRAWING INVERT INFORMATION.
- ASSUMED THE FOLLOWING UTILITY DEPTHS FROM EXISTING GROUNDLINE:
 NATURAL GAS = RANGES FROM 3.5' TO 7'
 CATV & TELECOMMUNICATIONS = 3'
 ELECTRICAL & POWER = 3'
 WATERMAIN = 5' TO TOP OF PIPE
- ACTUAL UTILITY ELEVATIONS MAY VARY. CONTRACTOR TO VERIFY BY HAND DIGGING (INCIDENTAL)
- BITUMINOUS PAVEMENT REMOVAL AND REPLACEMENT AROUND OLD LOCATION FOR NON-STANDARD APPROACH LIGHTS

THE INFORMATION SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM AVAILABLE RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED THAT THE CONDITIONS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE FIELD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS.



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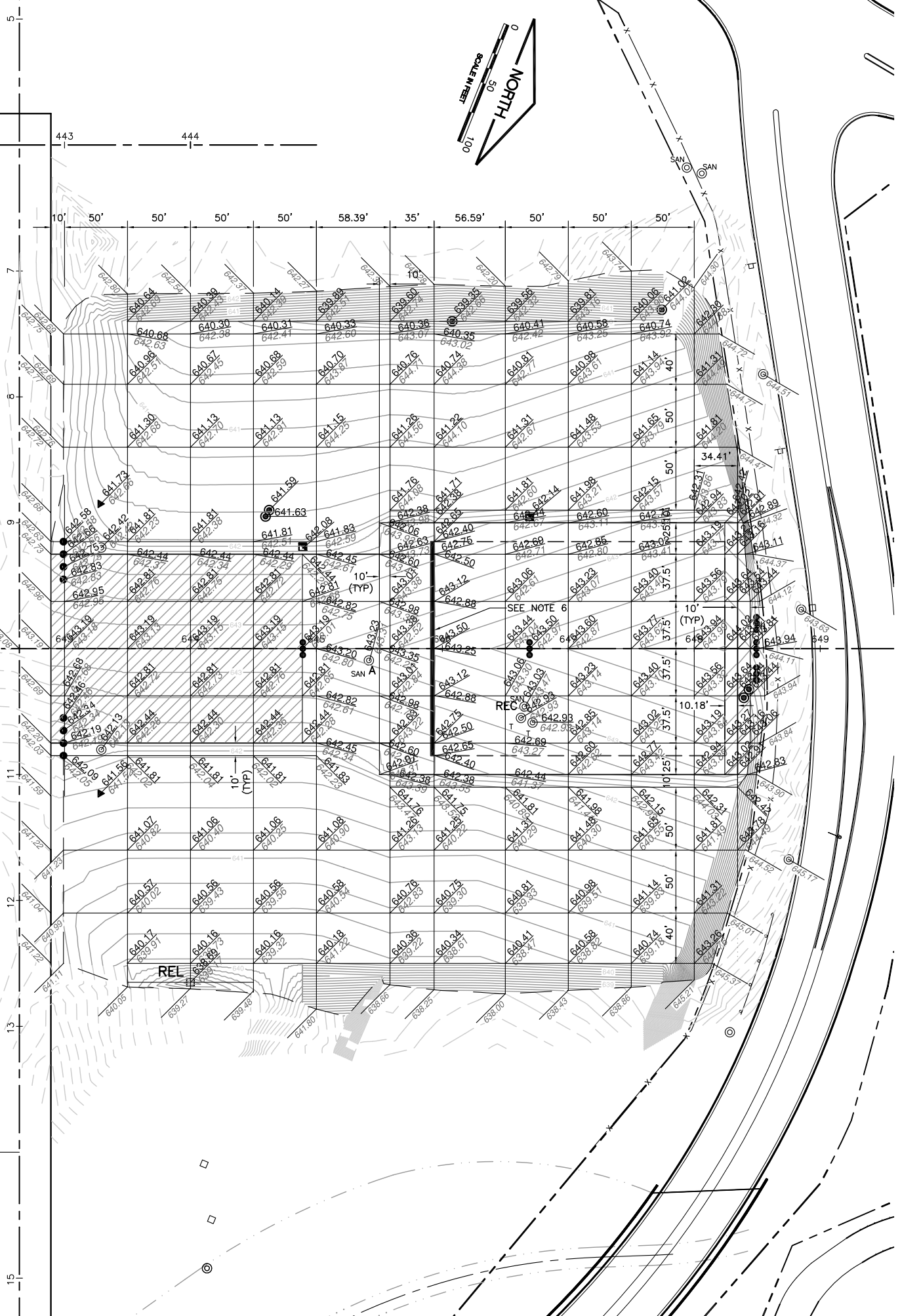
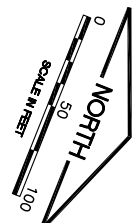
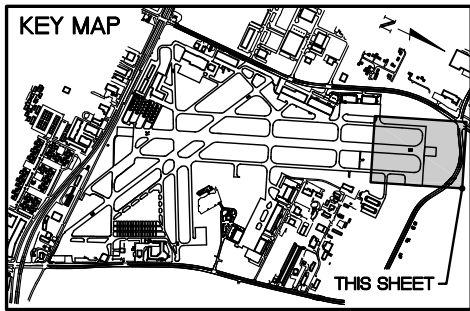
CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

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SHEET 12 OF 31 SHEETS

DATE: Thursday, July 10, 2014, 2:08:53 PM
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 Grading and Staking Plan.dwg



LEGEND

- NEW ELEVATION
- EXISTING ELEVATION
- 640 ——— NEW CONTOUR
- 640 --- EXISTING CONTOUR
- ⊙ / □ EXISTING MANHOLE/INLET
- ⊙ / ■ NEW MANHOLE/INLET
- A ITEM TO BE ADJUSTED
- REC ITEM TO BE RECONSTRUCTED
- REL ITEM RELOCATED
- EMAS CONCRETE GRADE BEAM
- APPROXIMATE GRADING LIMITS
- NEW ELECTRICAL HANDHOLE
- NEW REIL
- NEW IN-PAVEMENT LIGHT
- RELOCATED NON-STANDARD LIGHTS

NOTES

1. SUBTRACT 0.24 FEET FROM GRADES SHOWN IN PLANS (1929 DATUM) TO OBTAIN 1988 NAVD DATUM.
2. FEMA BASE FLOOD ELEVATION (BFE) = 640.24 (1929 DATUM)
3. PRIOR TO INSTALLING THE EMAS BLOCKS THE CONTRACTOR SHALL GET THE APPROVAL OF THE RESIDENT ENGINEER.
4. PRIOR TO PLACING NEW 2" BITUMINOUS SURFACE OVERLAY (401), THE CONTRACTOR SHALL GET THE APPROVAL OF THE RESIDENT ENGINEER.
5. SEE TABLE 1 BELOW FOR EXISTING PAVEMENT MILLING DEPTHS (401) IN INCHES. CONTRACTOR TO VERIFY EXISTING GRADES AND MILLING DEPTHS PRIOR TO MILLING (INCIDENTAL).
6. NOTE 3 INCH DROP ON NORTH SIDE OF EMAS CONCRETE GRADE BEAM (SEE DETAIL).

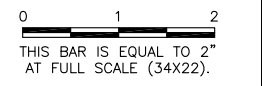
TABLE 1

(INCHES)	642+89.21	643+00	643+50	644+00	644+50	644+88.85
LT-75	2.0	2.0	1.2	0.8	0.2	0.1
LT-37.5	2.0	2.4	1.4	1.3	0.9	0.4
CL-0	2.0	1.9	1.3	1.5	1.5	0.0
RT-37.5	2.0	1.9	0.9	1.0	1.4	0.1
RT-75	2.0	3.6	0.1	0.3	1.0	0.1

IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

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**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 GRADING PLAN**

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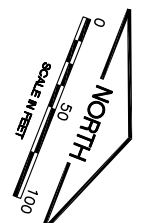
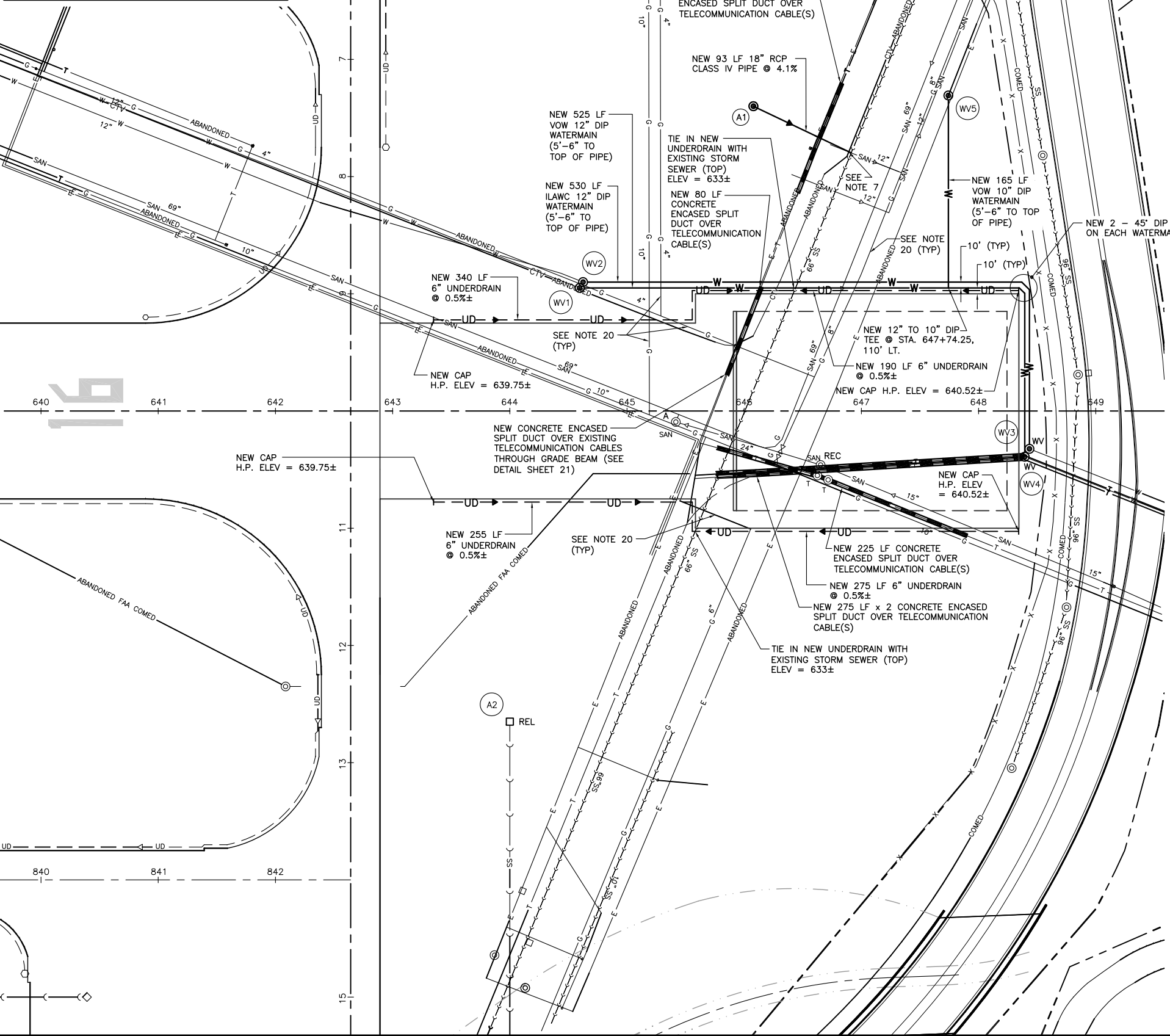
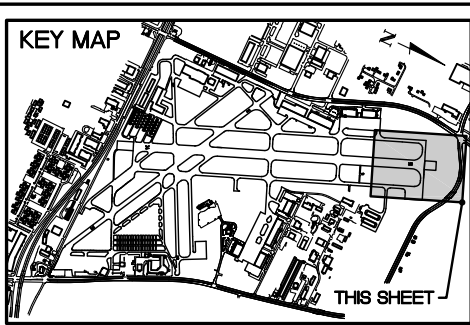
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 APPROVED BY: BW
 DATE: 7/10/14
 JOB No: 11290-02

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DATE: Thursday, July 10, 2014 2:09:01 PM
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LEGEND

(WV) (C)	NEW WATER VALVE VAULT, VALVE AND TAPPING SLEEVE (760)
(A1)	NEW STORM MANHOLE/INLET (751)
(C) (S)	EXISTING MANHOLE/INLET
(-)-	EXISTING STORM SEWER
(-)-W	EXISTING WATERMAIN
(-)-W	NEW WATERMAIN
(-)-SS	NEW STORM SEWER
(-)-UD	NEW 6" PERFORATED UNDERDRAIN (705)
(-)-UD	EXISTING UNDERDRAIN
REC	RECONSTRUCT ITEM
REL	RELOCATED ITEM
A	ADJUST ITEM
(-)-G	EXISTING GAS LINE
(-)-COMED	EXISTING COMED
(-)-SAN	EXISTING SANITARY SEWER
(-)-T	EXISTING TELEPHONE
(-)-E	EXISTING ELECTRIC

NOTE: SEE STRUCTURE SCHEDULE FOR LOCATIONS

GENERAL NOTES

- CONTRACTOR SHALL FIELD VERIFY EXISTING STORM SEWER/UNDERDRAIN INVERTS BEFORE INSTALLING PROPOSED PIPE, CONNECTIONS AND ORDERING MATERIALS.
- ALL UNDERDRAIN CONNECTIONS, CORING INTO STRUCTURES, TEES, BENDS, STORM SEWER ETC. SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE UNDERDRAIN.
- UNDERDRAIN SLOPES FOLLOW EDGE OF PAVEMENT SLOPE UNLESS OTHERWISE NOTED.
- INSTALL PROPOSED ELECTRICAL DUCTS/CONDUITS TO BE CLEAR OF UNDERDRAIN, COST INCIDENTAL.
- UNDERDRAIN CONFLICTS WITH EXISTING CONDITIONS SHALL BE RESOLVED AND COST SHALL BE INCIDENTAL TO UNDERDRAIN.
- PRIOR TO ORDERING AND INSTALLING ALL FIELD TILE REPLACEMENT PIPE, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND INVERTS OF EXISTING FIELD TILE CONNECTIONS. ADJUSTMENTS SHALL BE MADE AS NECESSARY AT NO ADDITIONAL COST TO THE CONTRACT.
- CORING OF DRAINAGE STRUCTURE, PIPES AND REMOVAL OF EXISTING STORM SEWER MANHOLE/INLET CONCRETE BENCHES TO FACILITATE CONNECTIONS OF PROPOSED STORM SEWER PIPE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PIPE.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH VILLAGE CODES, ORDINANCES AND PRACTICES.
- ALL CONTRACTORS AND SUBCONTRACTORS TO BE REGISTERED WITH VILLAGE OF WHEELING.
- ANY EXISTING FIELD TILE HIT DURING CONSTRUCTION SHALL BE RECONNECTED AT NO ADDITIONAL COST TO THE CONTRACT. IN THE EVENT THAT FIELD TILES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE SHOWN ON AS-BUILT PLANS.
- ALL EXISTING OR PROPOSED UTILITIES SHALL BE HAND DUG, EXPOSED AND ELEVATIONS VERIFIED BY THE CONTRACTOR BEFORE STARTING THE PROPOSED UNDERDRAIN INSTALLATION. THE RESIDENT ENGINEER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS WITH THE PROPOSED UNDERDRAIN. IF CONFLICTS DO OCCUR, THE RESIDENT ENGINEER WILL PROVIDE REVISED GRADES AND SLOPES.
- PROPOSED UNDERGROUND ELECTRICAL CONDUITS/CABLES AND OTHER UTILITIES SHALL BE INSTALLED AT AN ELEVATION THAT WILL NOT CONFLICT WITH THE PROPOSED UNDERDRAIN AT NO ADDITIONAL COST TO THE CONTRACT.
- THE MAXIMUM ADJUSTMENT TO BE MADE WITH RINGS IS 18" TOTAL HEIGHT. ANY ADJUSTMENT GREATER THAN 18" REQUIRES STRUCTURE RECONSTRUCTION (SEE DETAILS).
- UNDERDRAIN CONFLICTS WITH EXISTING CONDITIONS SHALL BE RESOLVED AND COST SHALL BE INCIDENTAL TO UNDERDRAIN CONSTRUCTION.
- CONTRACTOR SHALL CAP ANY EXISTING OR NEW UNDERDRAIN ENDS THAT ARE NOT TO BE TIED INTO NEW OR EXISTING STRUCTURES OR STORM SEWERS (INCIDENTAL).
- SUBTRACT 0.24 FEET FROM ELEVATIONS SHOWN ON PLANS (1929 DATUM) TO OBTAIN 1988 NAVD.
- THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF WHEELING A MINIMUM OF 48 HOURS PRIOR TO ANY UTILITY INSTALLATION.
- ALL STORM SEWERS ON THE AIRPORT SITE ARE OWNED, OPERATED AND MAINTAINED BY THE CHICAGO EXECUTIVE AIRPORT.
- REMOVAL ITEMS NOT SHOWN.
- EXISTING GAS LINES (NICOR) NEED TO BE VERTICALLY ADJUSTED AND/OR RELOCATED (BY OTHERS) TO ACCOMMODATE NEW PAVEMENT STRUCTURE, EMAS CONCRETE GRADE BEAM AND R.S.A. GRADING REQUIREMENTS AND REQUIRED UTILITY CLEARANCES.
- SEE SHEET 10 EXISTING CONDITIONS FOR ADDITIONAL UTILITY NOTES.

IL. CONTRACT: PA057
 IL. LETTING ITEM: 7A
 IL. PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
 THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 DRAINAGE AND UTILITY PLAN**

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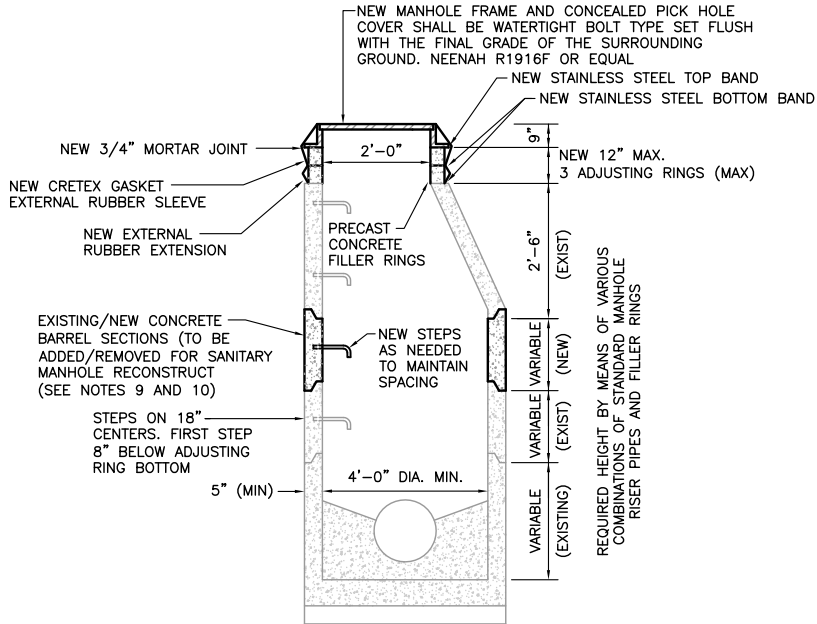
CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

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SHEET 14 OF 31 SHEETS

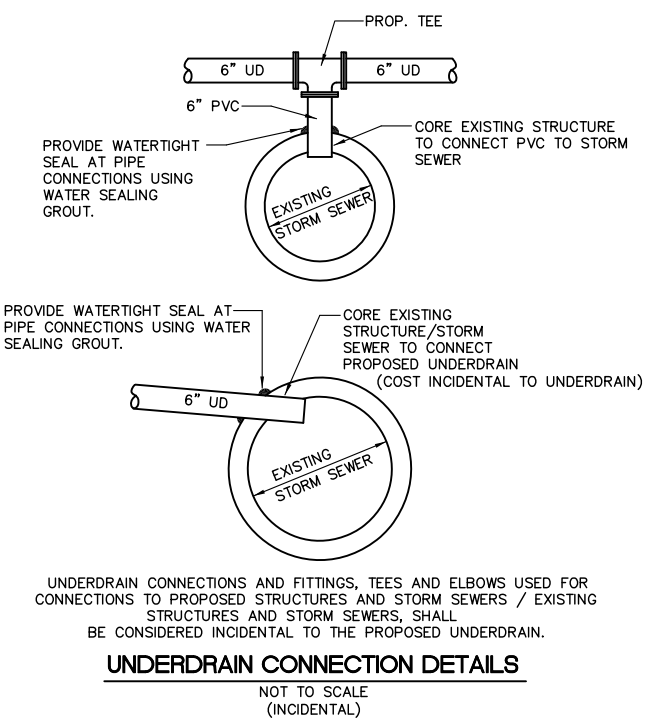
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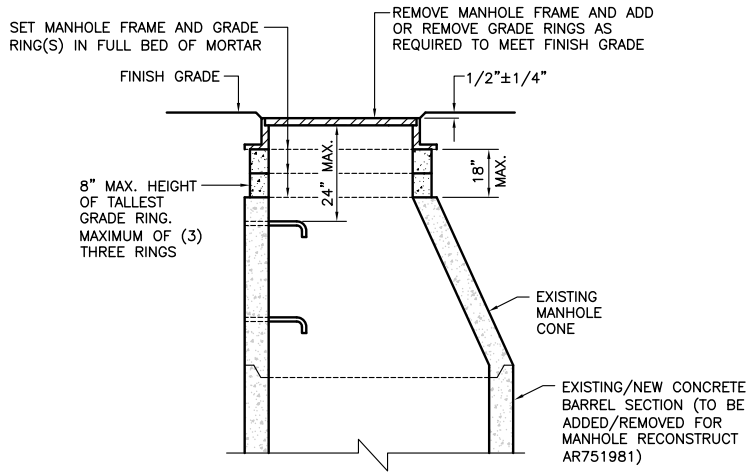
RECONSTRUCT SANITARY MANHOLE (AR770985)
VILLAGE OF WHEELING
NO SCALE

NOTES

- ALL JOINTS SHALL BE SEALED WATER-TIGHT BY MEANS OF E-Z STIK, KENT SEAL, OR EQUAL (INCLUDING CAST IRON FRAME TO CONCRETE MANHOLE STRUCTURE).
- MANHOLE STRUCTURE TO BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
- MANHOLE CONSTRUCTION SHALL CONFORM TO A.S.T.M. DESIGNATION C478-80 OR LATER REVISION.
- 60" I.D. MANHOLE WALLS SHALL BE 6" THICK (MIN.).
- CASTING MANHOLE COVER SHALL BE FURNISHED WITH THE WORD "SANITARY" AND "VILLAGE OF WHEELING" CAST IN LID.
- CRETEX TYPE SEAL ON ALL SANITARY MANHOLES.
- STEPS TO BE MADE OF COPOLYMER PROPYLENE PLASTIC, A.S.T.M. C-478M (SEE STORM MANHOLE DETAIL).
- VACUUM TEST REQUIRED ON ALL NEW MANHOLE INSTALLATIONS.
- CURRENT CONFIGURATION HAS NO EXISTING ADJUSTING RINGS. CONTRACTOR MUST REMOVE AND REPLACE WITH NEW BARREL RISER SECTION AND USE ADJUSTING RING(S) IF NECESSARY TO OBTAIN NEW ELEVATION. SEE PROPOSED GRADING PLAN. NEW ELEVATION IS -0.44' FROM EXISTING.
- MANHOLE ADJUSTMENTS AND RECONSTRUCT HEIGHTS TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.



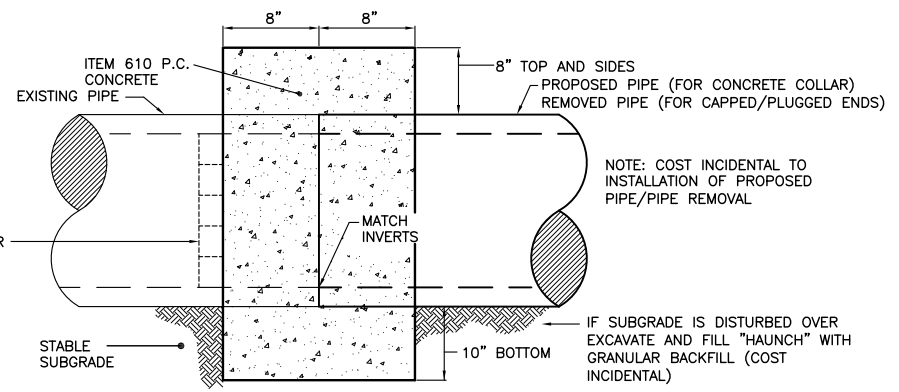
UNDERDRAIN CONNECTION DETAILS
NOT TO SCALE
(INCIDENTAL)



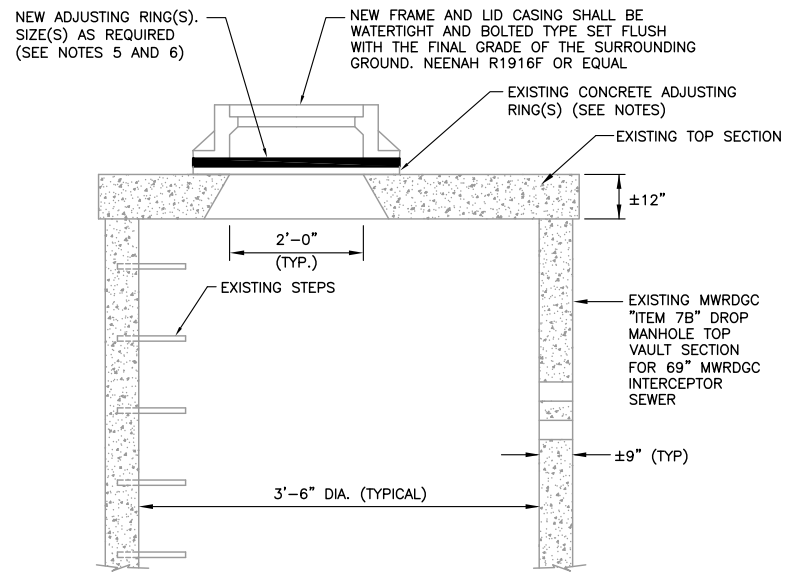
ADJUST (AR751943) / RECONSTRUCT (AR751981) MANHOLE
NO SCALE

NOTES

- REFER TO ASTM DESIGNATION C-478 FOR DESIGN AND STRENGTH REQUIREMENTS.
- WHEN AN ADJUSTMENT OF GREATER THAN 18" IN GRADE RINGS IS REQUIRED, THE MANHOLE SHALL BE RECONSTRUCTED WITH APPROVED PRE-CAST CONC. BARREL SECTIONS THE SAME SIZE AS MANHOLE DIA. AND PAID FOR AS MANHOLE RECONSTRUCT (AR751981).
- ADJUSTING RINGS SHALL BE PRE-CAST REINFORCED CONCRETE. ALL ADJUSTING RINGS AND METAL FRAME SHALL BE MORTARED INTO PLACE WITHOUT THE USE OF SHIMS OF ANY TYPE.
- MORTAR SHALL HARDEN FOR 72 HOURS PRIOR TO PLACING GRAVEL OR ASPHALT DIRECTLY AROUND ADJUSTED STRUCTURE.
- THE MAXIMUM HEIGHT OF ANY SINGLE ADJUSTING RING(S) SHALL BE 8 INCHES INCLUDING EXISTING RINGS.
- THE MAXIMUM NUMBER OF RINGS IN ANY STRUCTURE IS THREE. THIS MAY REQUIRE THE CONTRACTOR TO REMOVE EXISTING RINGS AND REPLACE WITH DIFFERENT SIZE RINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD CHECKING EXISTING MANHOLE CONFIGURATIONS AND SIZES FOR THE NECESSARY ADJUSTMENT AND RECONSTRUCT.



CAPPED/PLUGGED ENDS - CONCRETE COLLAR - STORM SEWER
NOT TO SCALE
(INCIDENTAL)

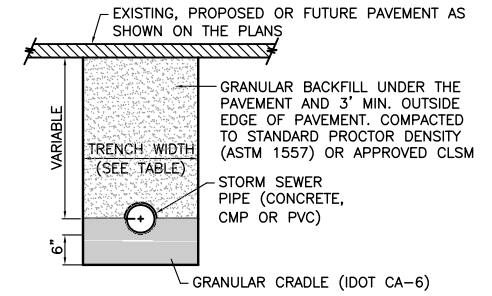


ADJUST SANITARY MANHOLE (AR770945)
MWRDGC
NOT TO SCALE

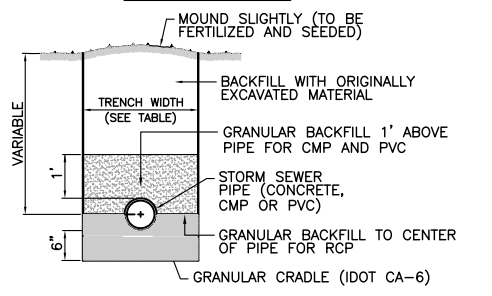
NOTES

- ADJUSTING RINGS SHALL BE PRE-CAST REINFORCED CONCRETE. ALL ADJUSTING RINGS AND METAL FRAME SHALL BE MORTARED INTO PLACE WITHOUT THE USE OF SHIMS OF ANY TYPE.
- MORTAR SHALL HARDEN FOR 72 HOURS PRIOR TO PLACING GRAVEL OR ASPHALT DIRECTLY AROUND ADJUSTED STRUCTURE.
- THE MAXIMUM HEIGHT OF A SINGLE ADJUSTING RING SHALL BE 8 INCHES INCLUDING EXISTING RINGS.
- THE MAXIMUM NUMBER OF RINGS IN ANY STRUCTURE IS THREE. THIS MAY REQUIRE THE CONTRACTOR TO REMOVE EXISTING RINGS AND REPLACE WITH DIFFERENT SIZE RINGS.
- CURRENT CONSTRUCTION HAS TWO EXISTING ADJUSTMENT RINGS. ONE AT 4" HEIGHT± AND ONE AT 8" HEIGHT±. CONTRACTOR MUST REMOVE AND REPLACE ADJUSTING RING(S) TO OBTAIN NEW ELEVATION. SEE PROPOSED GRADING PLAN. NEW ELEVATION IS -0.08 FROM EXISTING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD CHECKING AND VERIFYING ELECTRICAL MANHOLE CONFIGURATIONS FOR THE NECESSARY ADJUSTMENTS.
- CONTRACTOR SHALL COORDINATE WORK WITH MWRDGC AT 847-568-8329 PRIOR TO BEGINNING WORK.

INSIDE DIAMETER OF STORM SEWER (INCHES)	MAXIMUM TRENCH WIDTH	MAXIMUM PAVEMENT REMOVAL WIDTH
6	3'-7"	5'-7"
8	3'-9"	5'-9"
12	4'-2"	6'-2"
15	4'-6"	6'-6"
18	4'-9"	6'-9"
21	5'-0"	7'-0"
24	5'-4"	7'-4"
27	5'-7"	7'-7"
30	5'-11"	7'-11"
36	6'-6"	8'-6"
42	7'-1"	9'-1"
48	7'-8"	9'-8"
54	8'-3"	10'-3"
60	8'-10"	10'-10"
66	9'-5"	11'-5"
72	10'-0"	12'-0"
78	10'-7"	12'-7"
84	11'-2"	13'-2"
90	11'-9"	13'-9"
96	12'-4"	14'-4"
102	12'-11"	14'-11"
108	13'-6"	15'-6"



ALL PAVED AREAS



NON-PAVED AREAS

TRENCH DETAILS
NOT TO SCALE
(INCIDENTAL)

IL CONTRACT: **PA057**
 IL LETTING ITEM: **7A**
 IL PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

CHICAGO EXECUTIVE AIRPORT
WHEELING PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

DRAINAGE AND UTILITY DETAILS
SHEET 1

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DESIGN BY: JRL
 DRAWN BY: JRO
 CHECKED BY: DKP
 APPROVED BY: BW
 DATE: 7/10/14
 JOB No: 11290-02

FINAL

SHEET 16 OF 31 SHEETS

ILLINOIS AMERICAN WATER COMPANY (ILAWC) WATERMAIN DETAILS

MATERIALS SPECIFICATIONS FOR WATER DISTRIBUTION

- PIPE MATERIAL FOR WATER MAINS IN ACCORDANCE WITH SECT. 15108
 - WATER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE 4" THROUGH 12" SHALL BE PRESSURE CLASS 350, PIPE 16" AND GREATER SHALL BE PRESSURE CLASS 250. ALL WITH CEMENT MORTAR LINING AND SEAL COATING (AWWA-C104).
 - THE JOINTS SHALL BE RUBBER GASKET PUSH-ON OR MECHANICAL (AWWA-C111). WATER MAIN FITTINGS SHALL BE OF DUCTILE IRON WITH CEMENT MORTAR LINING AND SEAL COATING WITH MECHANICAL JOINTS AND SHALL CONFORM TO (AWWA-C110).
 - ALL PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES UNLESS PRIOR APPROVAL IS RECEIVED FROM ILLINOIS AMERICAN.
- FIRE HYDRANTS
 - FIRE HYDRANTS SHALL BE MUELLER "SUPER CENTURIAN" EACH HYDRANT SHALL HAVE A TRAFFIC FLANGE, BE COMPRESSION TYPE, OPEN WITH PRESSURE IN A COUNTERCLOCKWISE DIRECTION WITH RISING STEM, AND MEET OR EXCEED AWWA SPECIFICATION C-502.
 - THREADS FOR FIRE HYDRANTS IN ALL PROPERTIES SHALL BE NATIONAL STANDARD. HYDRANT IS TO HAVE ONE 4 1/2" PUMPER PORT AND TWO 2 1/2" HOSE PORTS.
 - HYDRANT LENGTH SHALL BE SUPPLIED TO PROVIDE A MINIMUM OF 5.5 FEET OF COVER OVER THE TOP OF THE WATER MAIN.
 - ALL FIRE HYDRANTS ARE TO BE SUPPLIED PAINTED ON THE EXTERIOR WITH TWO COATS OF INEMEC BRAND "NEME-GLOSS" FEDERAL SAFETY YELLOW ENAMEL #2019 (OSHA 1910.44-ANSI 53.1).
 - MECHANICAL JOINT (M) ANCHORING TEES SHALL BE USED FOR THE AUXILIARY CONNECTION TO THE WATER MAIN. THE AUXILIARY VALVE SHALL BE MECHANICAL JOINT, RESILIENT WEDGE TYPE AS MANUFACTURED BY MUELLER.
 - CONNECTION OF THE AUXILIARY VALVE TO THE FIRE HYDRANT SHALL BE COMPLETED UTILIZING A 6" DIA. U.S. PIPE (M) ANCHORING (ONE ROTATING) COUPLING FOR LAYING DISTANCES 12" TO 16". FOR GREATER DISTANCES, USE CLASS 52 DUCTILE IRON PIPE WITH "MEGALUG" (AS MANUFACTURED BY EBBA IRONS SALES, INC.) RETAINER GLANDS.
 - COVER FOR FIRE HYDRANT AUXILIARY VALVE SHALL BE PAINTED WITH INEMEC BRAND "NEME-GLOSS" FEDERAL SAFETY BLUE ENAMEL #2045 (OSHA 1910.144-ANSI 53.1).
- VALVES - 16" AND SMALLER
 - VALVES 16" AND SMALLER SHALL BE MECHANICAL JOINT FITTED RESILIENT WEDGE TYPE (COMPLETE WITH 304 STAINLESS STEEL NUTS AND BOLTS) AND SHALL CONFORM TO AWWA C-509-80. VALVES SHALL OPEN COUNTERCLOCKWISE HAVING NON-RISING STEM.
 - VALVES SHALL BE RESILIENT WEDGE TYPE AS MANUFACTURED BY MUELLER.
- VALVES - LARGER THAN 16"
 - VALVES SHALL BE MANUFACTURED MUELLER. GATE VALVES SHALL BE EPOXY COATED IN ACCORDANCE WITH AWWA C515.
 - VALVES LARGER THAN 16" SHALL BE OF THE BUTTERFLY TYPE WITH RUBBER SEAT AND STAINLESS RING ON THE DISC EDGE TO MATE WITH THE RUBBER SEAT. SHALL OPEN COUNTERCLOCKWISE, SHALL MEET OR EXCEED AWWA C-504 OR AWWA C-505.
- VALVE BOX

THE ENTIRE VALVE BOX ASSEMBLY SHALL BE BINGHAM & TAYLOR 5 1/4" SHAFT, TWO PIECE SCREW TYPE ADJUSTABLE WITH VALVE HOLDER, SIZE 22.
- VAULTS
 - VAULTS REQUIRED FOR PRESSURE TAPS, CHECK VALVES AND METER INSTALLATIONS, SHALL BE OF PRECAST CONCRETE UNIT CONSTRUCTION (ASTM-C478) WITH A CONCENTRIC CONE AND JOINTS SEALED WITH BUTYL-BASED MATERIAL. CONCRETE ADJUSTMENT RINGS SHALL BE USED IF ADJUSTMENT IS NECESSARY. ADJUSTMENT SECTIONS SHALL NOT EXCEED 12" VERTICALLY OVERALL. ALL JOINTS SHALL BE SEALED WITH RUBBER-NEC, OR APPROVED EQUAL BUTYL-BASED MATERIAL. CEMENT GROUTING OF THE SEAMS AND JOINTS SHALL NOT BE COMPLETED. BUTYL MATERIAL SHALL TOTAL A MINIMUM WIDTH OF 2" AS APPLIED IN TWO PIECES.
 - A FLEXIBLE UNION BETWEEN THE PIPE AND MANHOLE WALL, MEETING ASTM C-923, CAST INTEGRALLY INTO THE MANHOLE WALL, SHALL BE PROVIDED FOR EACH PIPE CONNECTION TO THE MANHOLE. UNIONS SHALL BE INTERFACE LOCK JOINT FLEXIBLE MANHOLE SLEEVE, A-LOK MANHOLE PIPE CONNECTOR, LINK SEAL, OR APPROVED EQUAL. SUCH UNIONS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE SPECIFIC TYPE OF PIPE USED. MANHOLE CASTING SHALL BE NEEHAH R-1772-B OR APPROVED EQUAL. LID SHALL BE NEEHAH FOUNDRY TYPE B "SELF SEALING" WITH THE WORD "WATER" IMPRINTED. MANHOLE STEPS SHALL BE M-A INDUSTRIES PLASTIC COATED. MANHOLES ARE TO BE WATER-TIGHT.
- PRESSURE TAPS

PRESSURE TAPS SHALL BE PERFORMED IN THE PRESENCE OF AN ILLINOIS-AMERICAN REPRESENTATIVE. THE OUTSIDE DIAMETER OF THE CUTTER MUST BE AT LEAST 1/4" LESS THAN THE NOMINAL SIZE OF THE TAP TO BE MADE. ILLINOIS-AMERICAN MUST BE PROVIDED WITH A MINIMUM OF 48 HOURS ADVANCE NOTICE (630/739-8831 ISRAEL SANDOVAL) SO THAT INSPECTION BY AN ILLINOIS-AMERICAN REPRESENTATIVE CAN BE SCHEDULED.

8. SIZING OF TAPS

- TAPS 2" AND LARGER ON
 - CAST IRON PIPE
 - CLOW MODEL F-5205 TAPPING SLEEVE, OR APPROVED EQUAL, FOR SIZES 4 INCH THROUGH 12 INCH. ALL BOLTS SHALL BE STAINLESS STEEL (TYPE 304), OR HIGH STRENGTH, CORROSION RESISTANT, LOW ALLOY MATERIAL, SUCH AS ARMOCO COR-TEN.
 - ASBESTOS CEMENT PIPE
 - CLOW MODEL F-5207 TAPPING SLEEVE, OR APPROVED EQUAL, FOR SIZES 4 INCH THROUGH 12 INCH.
 - IN SPECIFYING TAPPING SLEEVES TO FIT ON THE "ROUGH BARREL" OR, THAT IS, THE FULL OUTSIDE DIAMETER PORTION OF THE PIPE, IT IS IMPORTANT THAT THE OUTSIDE DIAMETER OF THE PIPE BE MEASURED BEFORE ORDERING THE TAPPING SLEEVE. OUTSIDE DIAMETERS OF ASBESTOS PIPE CAN VARY SIGNIFICANTLY AND MAY NOT REMAIN CONSISTENT EVEN WITHIN THE SAME PRESSURE CLASS OF PIPE.
 - ALL BOLTS SHALL BE STAINLESS STEEL (TYPE 304), OR HIGH STRENGTH, CORROSION RESISTANT, LOW ALLOY MATERIAL, SUCH AS ARMOCO COR-TEN.
 - DUCTILE IRON PIPE
 - ROMAC INDUSTRIES, INC., STYLE "SST", STAINLESS STEEL TAPPING SLEEVE MAY USE THE SLEEVE INDICATED ABOVE FOR CAST IRON, OR APPROVED EQUAL. TAPPING VALVES SHALL BE THE RESILIENT WEDGE TYPE AS MANUFACTURED BY MUELLER.
- TAPS 2" OR LESS

TAPS TWO INCH AND LESS MAY BE MADE BY DIRECT TAP CONNECTION ON CAST OR DUCTILE IRON MAINS. A TWO INCH DIRECT TAP ON A 6" CAST OR DUCTILE IRON MAIN IS NOT ALLOWED AND REQUIRES A SADDLE. ALL ASBESTOS CEMENT AND PVC MAIN TAPS REQUIRE SADDLES. SADDLES MUST BE OFF ALL BRONZE OR ALL STAINLESS STEEL CONSTRUCTION.

	STAINLESS STEEL	CASCADE C822
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9. SMALL SERVICE LINE APPURTENANCES

- CURB BOX
 - CURB BOX SHALL BE MINNEAPOLIS PATTERN, 1-1/2 INCH INSIDE DIAMETER UPPER SECTION WITH A 6 FOOT FULLY EXTENDED LENGTH TAPPED 2 INCH AT THE BOTTOM AND SUPPLIED WITH A BUSHING FOR SMALLER CURB STOPS. THE LID SHALL BE A TWO-PIECE PLUG TYPE WITH A BRASS SLEEVE IN THE CAP THREADED TO RECEIVE THE BRASS PLUG.
 - ACCEPTABLE UNITS ARE: MUELLER H-10302-72" WITH LID AND PLUG #89960 WITH AN H-10343 BUSHING.
 - CURB STOP
 - FOR 1" SERVICE LINES THE CURB STOP SHALL BE: MUELLER MARK II ORISEAL H-15155
 - FOR 1-1/2" AND 2" SERVICES THE CURB STOP SHALL BE: MUELLER MARK II ORISEAL.
 - CORPORATION STOP

CORPORATION STOPS FOR 1" THROUGH 2" SHALL BE MUELLER 110 #15008
- NOTE: THE CURB STOP AND CORPORATION STOP SHALL BE EQUIPPED WITH CONDUCTIVE COMPRESSION CONNECTIONS. FLARED OR SWEAT CONNECTIONS ARE NOT ALLOWED.

10. SERVICE LINES

- ALL WATER SERVICE LINES SHALL BE TYPE K COPPER. ONE PIECE SHALL BE USED FROM THE MAIN TO THE CURB STOP AND ONE PIECE FROM THE CURB STOP TO THE METER SPREAD, FOR LENGTHS OF 100 FEET OR LESS. THE MINIMUM SIZE SHALL BE 1" FOR A SINGLE-FAMILY RESIDENCE. LINES FOR LARGER SERVICES SHALL BE IN ACCORD WITH AWWA MANUAL OF PRACTICE #22.
- WHEN THE DISTANCE FROM THE CURB STOP TO THE METER IN THE BUILDING EXCEEDS THE LENGTH OF COPPER AVAILABLE, A CONNECTION MAY BE MADE USING A MUELLER THREE-PART UNION (MODEL H-15403) WITH CONDUCTIVE, COMPRESSION CONNECTIONS.

INSTALLATION SPECIFICATIONS

- PROTECTION OF WATER MAINS FROM SANITARY SEWERS AND STORM SEWERS

WATER MAINS SHALL BE PROTECTED FOR HORIZONTAL AND VERTICAL SEPARATION IN ACCORDANCE WITH THE TECHNICAL POLICY STATEMENTS OR THE REQUIREMENTS OF MWRDGC, WHICHEVER APPLIES. FURTHER, NO WATER MAIN SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
- DEPTH OF PIPE COVER

A MINIMUM DEPTH OF FIVE FEET SIX INCHES SHALL BE MAINTAINED FOR ALL WATER MAIN. THE FIVE FEET SIX INCHES DEPTH SHALL BE FROM PROPOSED FINAL GRADE ELEVATION TO THE CROWN OF THE MAIN. MAXIMUM DEPTH OF COVER SHALL BE SEVEN FEET.

MINIMUM BEARING AREA IN SQUARE FEET

PIPE SIZE	BENDS (DEGREES)					TEE	DEAD END
	11-1/4	22-1/2	45	90	180		
6"	1.0	2.5	4.5	8.0	5.5	5.5	
8"	2.0	4.0	7.5	14.0	10.0	10.0	
10"	3.0	6.0	11.0	20.5	14.5	14.5	
12"	4.0	8.0	16.0	29.0	20.5	20.5	

BEARING AREAS ARE BASED ON SOIL HAVING AN ALLOWABLE SAFE LATERAL BEARING OF ONE TON PER SQUARE FOOT. AREAS MUST BE REVISOR FOR SOILS WITH A LOWER BEARING CAPACITY.

- CORROSION PROTECTION

ALL PIPE, FITTINGS, FIRE HYDRANT LEADS, SLEEVES AND VALVES ARE TO BE ENCASED IN POLYETHYLENE IN ACCORDANCE WITH AWWA C-105, UNLESS A SOIL SURVEY HAS BEEN PERFORMED AND NON-CORROSIVE SOILS ARE SHOWN TO EXIST.
- LAYING OF PIPE ON CURVES
 - LONG RADIUS CURVES, EITHER HORIZONTAL OR VERTICAL, MAY BE LAID WITH STANDARD PIPE BY DEFLECTIONS AT THE JOINTS. IF THE PIPE IS SHOWN CURVED ON THE PLANS AND NO SPECIAL FITTINGS ARE SHOWN IT MAY BE ASSUMED THAT THE CURVES CAN BE MADE BY DEFLECTION OF THE JOINTS WITH STANDARD LENGTHS OF PIPE. IN APPROVED SITUATIONS, SHORTER LENGTHS OF PIPE MAY BE USED TO AVOID THE USE OF FITTINGS.
 - MAXIMUM DEFLECTIONS AT PIPE JOINTS AND LAYING RADIUS FOR VARIOUS PIPE LENGTHS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BASED ON THE SIZE OF PIPE AND TYPE OF JOINT. WHEN RUBBER GASKETED PIPE IS LAID ON A CURVE, THE PIPE SHALL BE JOINTED IN A STRAIGHT ALIGNMENT, THEN DEFLECTED. TRENCHES SHALL BE MADE WIDER ON CURVES FOR THIS PURPOSE.
- THRUST RESTRAINT

ALL FITTINGS, BENDS AND HYDRANTS SHALL BE PROPERLY BRACED BY MEANS OF RESTRAINED JOINT ASSEMBLIES AS SHOWN IN THE STANDARD DETAIL OR USING METHODS AS DESCRIBED BELOW.

 - MECHANICAL JOINT FITTINGS, BENDS AND HYDRANTS SHALL BE PROPERLY ANCHORED BY MEANS OF "MEGALUG" (AS MANUFACTURED BY EBBA IRON SALES, INC.) RETAINER GLANDS. ALL SET SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS.
 - ALL PUSH-ON JOINT FITTINGS AND BENDS SHALL BE PROPERLY ANCHORED BY MEANS OF A U.S. PIPE FIELD LOCK GASKET OR APPROVED EQUAL.
 - ALL PUSH-ON OR MECHANICAL JOINT FITTINGS, BENDS, AND HYDRANTS SHALL BE PROPERLY ANCHORED BY MEANS OF A CONCRETE THRUST BLOCK AS OUTLINED IN THE STANDARD DETAIL. THE MINIMUM BEARING AREA SPECIFICATIONS TO BE UTILIZED ARE OUTLINED AS FOLLOWS:
 - REACTION BLOCKING SHALL BE DESIGNED FOR A MINIMUM INTERNAL PIPE PRESSURE OF 300 PSI. THE BLOCKING SHALL BE KEPT CLEAR OF THE ENTIRE BELL CONFIGURATION OF ANY ADJACENT JOINT AND SHALL BE AT LEAST AS LARGE AS IS NECESSARY TO RESTRAIN THE FITTINGS FROM MOVEMENT. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE END OF 28 DAYS.
 - FIRE HYDRANT SHALL BE POSITIVELY ANCHORED DIRECTLY TO THE TEE ON THE MAIN USING MECHANICAL JOINT ANCHORING FITTINGS, OR OTHER APPROVED RESTRAINING SYSTEM.
 - VALVES AT TEES AND CROSSES, WHERE REQUIRED, SHALL BE ANCHORED DIRECTLY TO THE FITTING USING CLOW (OR EQUAL) MECHANICAL JOINT ANCHORING FITTINGS, OR OTHER APPROVED RESTRAINING SYSTEM.
- BEDDING
 - TYPE I BACKFILL IN ACCORDANCE WITH ANSI/AWWA C900-87 AS ILLUSTRATED IN THE STANDARD DETAIL SHALL BE USED UNLESS THE MAIN IS BEING LAID UNDER PAVEMENT OR WITHIN RIGHT-OF-WAY.
 - IF SOIL CONDITIONS ARE ENCOUNTERED WHICH REQUIRE REMOVAL OF UNSUITABLE MATERIAL BELOW THE DEPTH OF THE STANDARD BEDDING, THE MATERIAL REMOVED SHALL BE REPLACED WITH GRANULAR MATERIAL OF THE GRADATION APPROVED BY ILLINOIS-AMERICAN.

- CONNECTION TO ILLINOIS-AMERICAN WATER SYSTEM WILL NOT BE PERMITTED UNLESS THE INSTALLATION HAS BEEN CONSTRUCTED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS AND HAS BEEN SATISFACTORILY PRESSURE TESTED IN THE PRESENCE OF AN ILLINOIS-AMERICAN DESIGNATED REPRESENTATIVE. DURING THE TEST, THE ENTIRE LENGTH OF MAIN BEING TESTED, ALONG WITH ALL APPURTENANCES, WILL BE CAREFULLY INSPECTED BY AN ILLINOIS-AMERICAN REPRESENTATIVE.
- LEAKAGE TEST

IN CONJUNCTION WITH THE PRESSURE TEST, A LEAKAGE TEST SHALL BE CONDUCTED TO DETERMINE THE QUANTITY OF WATER LOST BY LEAKAGE UNDER THE SPECIFIED TEST PRESSURE. THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR PER PIPELINE SHALL NOT BE GREATER THAN THAT DETERMINED BY THE FORMULA:

$$L = \frac{ND\sqrt{P}}{7400}$$

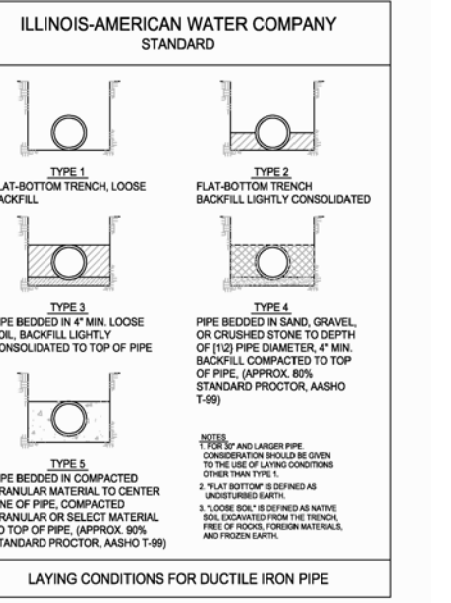
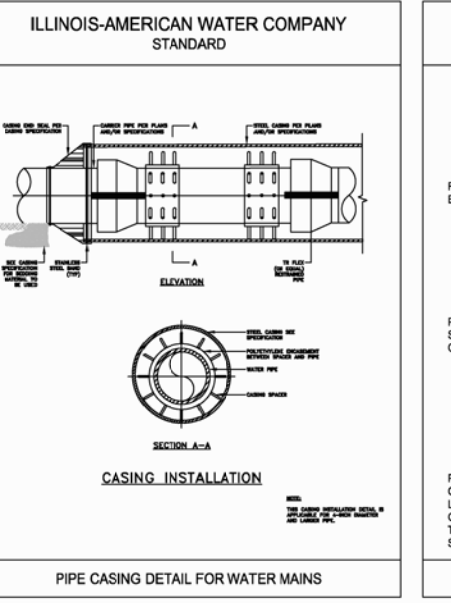
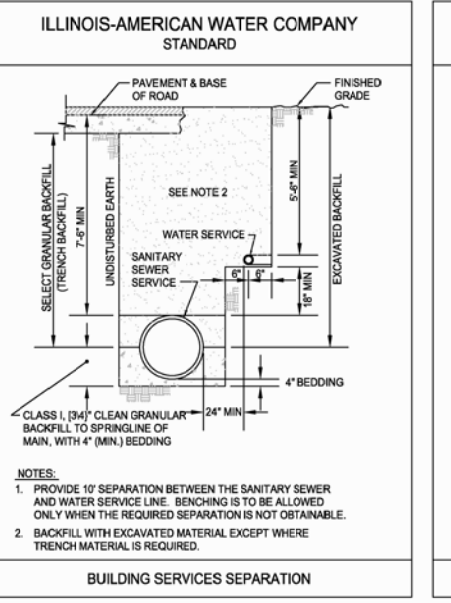
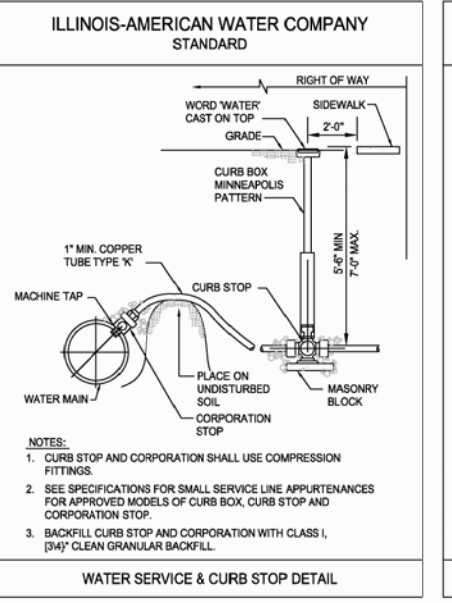
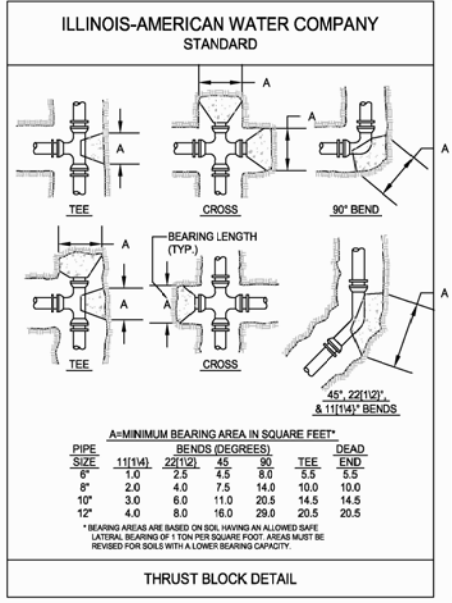
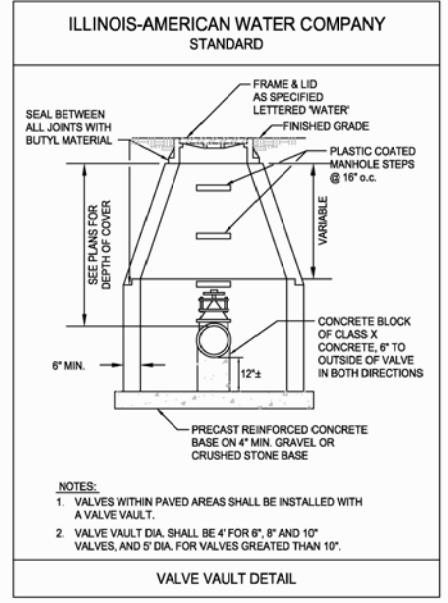
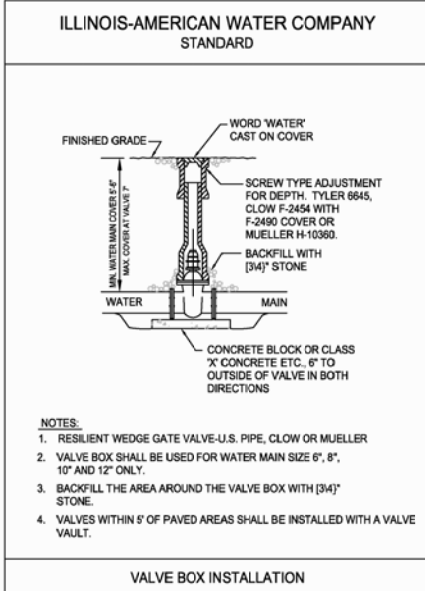
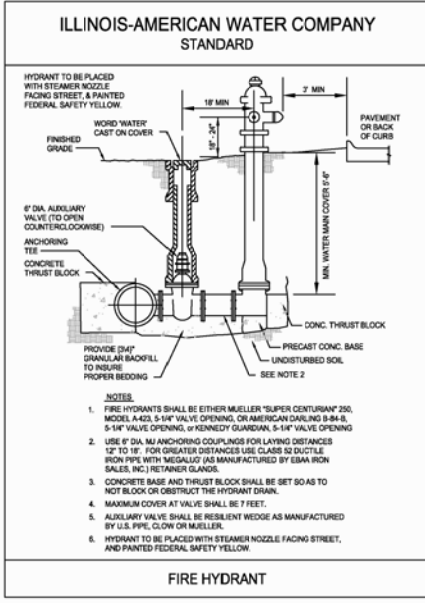
L = ALLOWABLE LEAKAGE IN GALLONS PER HOUR
 N = NUMBER OF JOINTS FOR LENGTH OF PIPELINE TESTED
 D = NOMINAL DIAMETER OF THE PIPE IN INCHES
 P = AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST IN POUNDS PER SQUARE INCH GAUGE

THE TEST WILL BE CONDUCTED AT AN AVERAGE PRESSURE OF NOT LESS THAN 200 PSI AT THE HIGH POINT OF THE MAIN AND FOR A PERIOD OF NOT LESS THAN TWO HOURS.
- DISINFECTION OF WATER
 - THE SECTION OF MAIN TO BE DISINFECTED SHALL FIRST BE FLUSHED TO REMOVE ANY SOILS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LOGGED IN THE MAIN. ALL FLUSHING IS TO BE DONE UNDER CONTINUOUS SUPERVISION OF AN ILLINOIS-AMERICAN REPRESENTATIVE.
 - NO VALVES OR FIRE HYDRANTS OR OTHER APPURTENANCES ARE TO BE PURGED OR FLUSHED UNLESS AN ILLINOIS-AMERICAN REPRESENTATIVE IS PRESENT. ILLINOIS-AMERICAN MUST BE PROVIDED WITH A MINIMUM OF 48 HOURS ADVANCE NOTICE (630/739-8849 TOM CHINSKI) SO THAT INSPECTION BY AN ILLINOIS-AMERICAN REPRESENTATIVE CAN BE SCHEDULED.
 - ALL CHLORINATION, FLUSHING, AND TESTING IS TO BE DONE IN STRICT ACCORD WITH STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS, DIVISION IV, SECTION 41-2.14. ALL NEW MAINS SHALL BE CHLORINATED SO THAT THE INITIAL CHLORINE RESIDUAL OF NOT LESS THAN 25 MG/L AND THAT A CHLORINE RESIDUAL OF NOT LESS THAN 10 MG/L REMAINS IN THE WATER AFTER STANDING 24 HOURS IN THE PIPE. WATERMAIN DISINFECTION IS PER AWWA STANDARD C651. ALL CHLORINE CONCENTRATIONS LISTED ARE FREE CHLORINE. WATER TEST SAMPLES ARE TO BE COLLECTED ON TWO CONSECUTIVE DAYS AFTER CHLORINATION AND FINAL FLUSHING. THE FIRST SAMPLE IS TO BE COLLECTED 24 HOURS AFTER THE FINAL FLUSHING. CHLORINE SHALL BE APPLIED IN LIQUID OR GAS FORM.

OPERATION OF WATER SYSTEM

THE OPERATION OF MAIN VALVES AND FIRE HYDRANTS ON THE WATER SYSTEM IN SERVICE OFTEN RESULTS IN DISTURBANCE OF THE NATURAL SEDIMENTS AND MINERAL DEPOSITS IN MAINS, CAUSING PROBLEMS FOR ILLINOIS-AMERICAN'S CUSTOMERS. ILLINOIS-AMERICAN HAS A RESPONSIBILITY TO PROVIDE ITS CUSTOMERS THE HIGHEST LEVEL OF SERVICE POSSIBLE. THEREFORE, ILLINOIS-AMERICAN HAS ADOPTED A STRICT POLICY THAT NO ONE, OTHER THAN AN EMPLOYEE OF ILLINOIS-AMERICAN, UNLESS EXPRESSLY AUTHORIZED, IS TO OPERATE ANY VALVE, FIRE HYDRANT, OR OTHER APPURTENANCE OF WATER SYSTEM THAT IS IN SERVICE OR WHICH WILL AFFECT THE SYSTEM THAT IS IN SERVICE. THIS OPERATION IS TO BE PERFORMED BY AN EMPLOYEE OF ILLINOIS-AMERICAN OR UNDER HIS DIRECT SUPERVISION. ILLINOIS-AMERICAN MUST BE PROVIDED WITH A MINIMUM OF 48 HOURS ADVANCE NOTICE (630/739-8831) SO THAT THE FILLING/FLUSHING OPERATIONS CAN BE SCHEDULED.

CONTRACTOR WILL BE REQUIRED TO INSTALL, TEST AND PERFORM PRESSURE CUTS ON NEW WATERMAIN PRIOR TO REMOVING EXISTING WATERMAIN. A MINIMAL SERVICE INTERRUPTION AS APPROVED BY ILAWC SHALL BE ALLOWED IN ORDER TO SWITCH OVER FROM THE OLD WATERMAIN TO THE NEW WATERMAIN.



IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE

CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

DRAINAGE AND UTILITY DETAILS
 SHEET 2

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CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

FINAL

SHEET 17 OF 31 SHEETS

DATE: Thursday, July 10, 2014, 2:09:58 PM
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 SHEET: 2 OF 2
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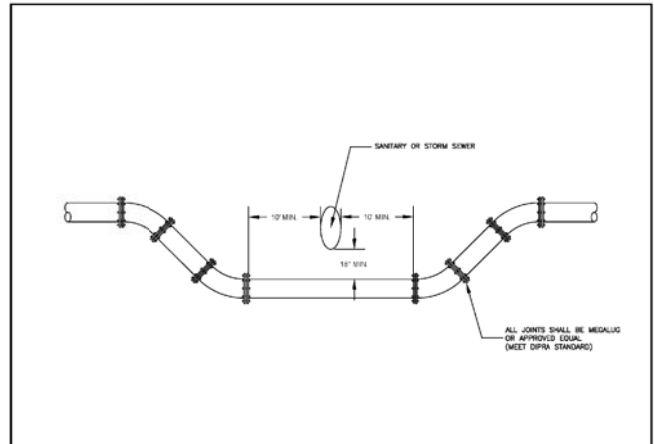
VILLAGE OF WHEELING WATERMAIN DETAILS

IL. CONTRACT: PA057
 IL. LETTING ITEM: 7A
 IL. PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

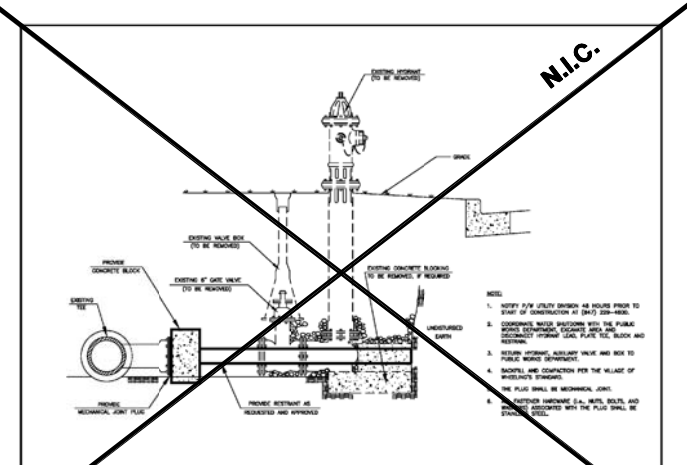
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REVISIONS		
NUMBER	BY	DATE

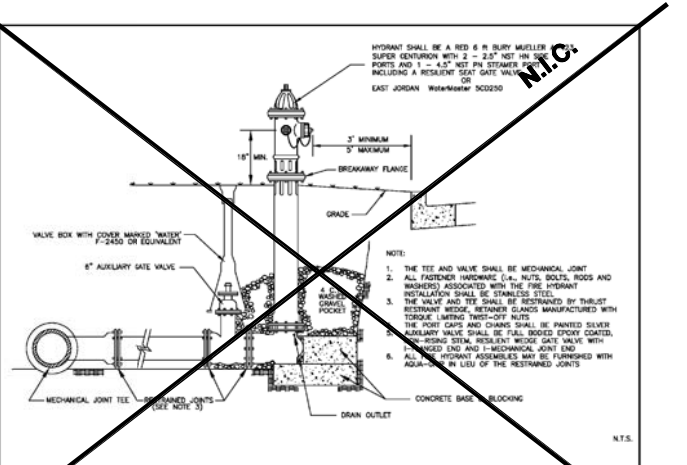
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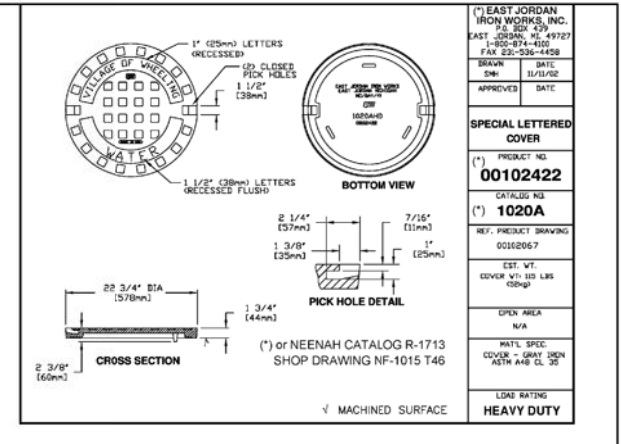
WATER MAIN DEPRESSION STANDARD



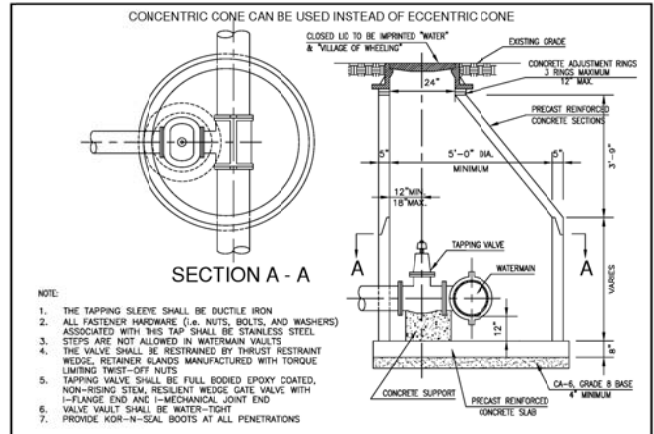
FIRE HYDRANT ABANDONMENT STANDARD



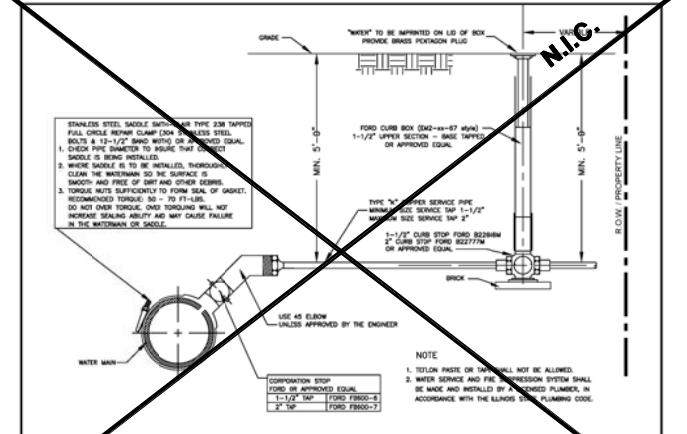
FIRE HYDRANT INSTALLATION STANDARD



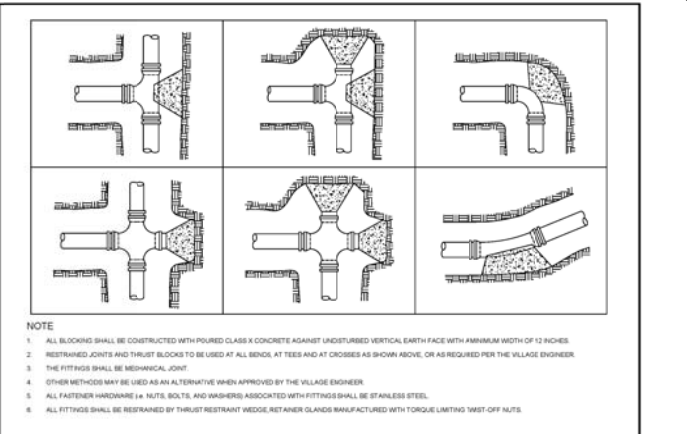
FRAME AND CLOSED LID WATER MANHOLE STANDARD



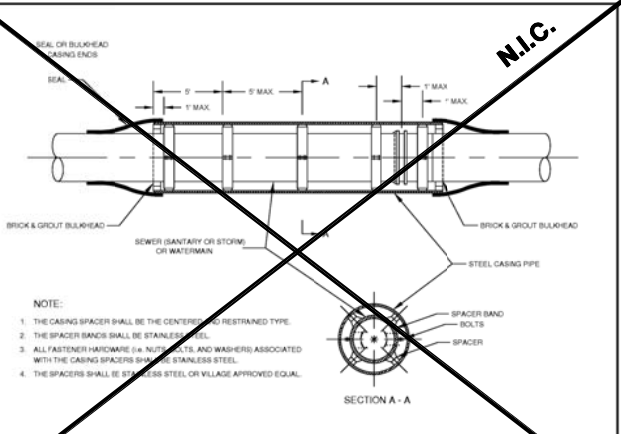
VALVE & TAPPING VAULT STANDARD



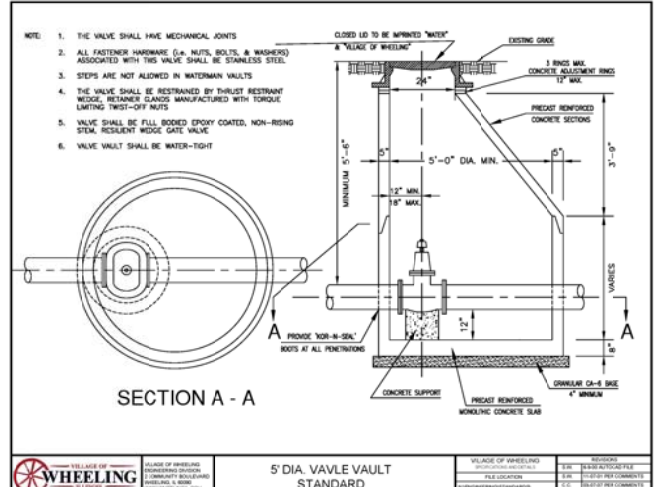
TYPICAL SERVICE TAP STANDARD



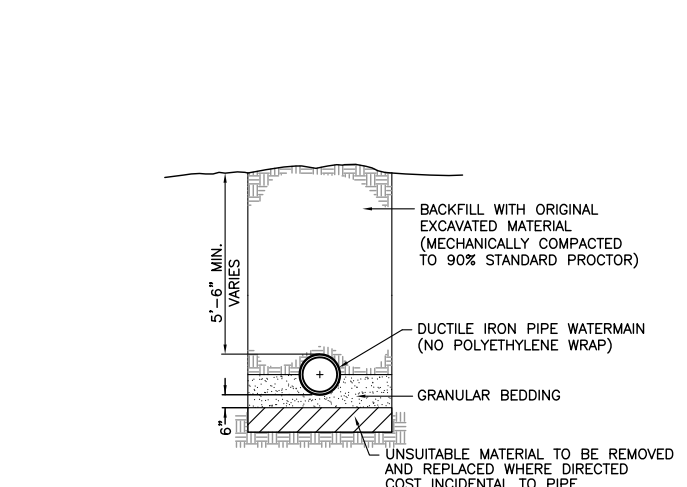
THRUST BLOCK STANDARD



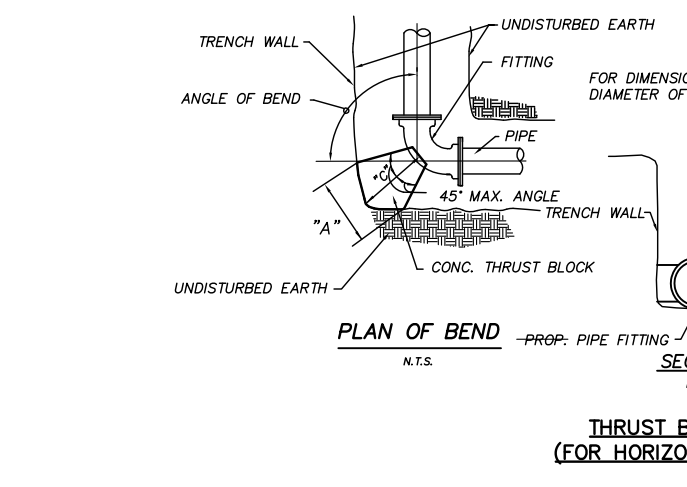
UNDERGROUND UTILITY CASING PIPE STANDARD



5\"/>



NON-PAVED AREAS TRENCH DETAILS - WATERMAIN



THRUST BLOCK DETAILS (FOR HORIZONTAL ALIGNMENT)

100 P.S.I. TABLE

SIZE	90° BEND			45° BEND			22-1/2° BEND			11-1/4° BEND			TEE OR PLUG		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
4\"/>															
6\"/>															
8\"/>															
10\"/>															
12\"/>															
14\"/>															
16\"/>															
18\"/>															
20\"/>															
24\"/>															

NOTES:

- ALL BENDS, TEES, PLUGS, FITTINGS OR OTHER SIGNIFICANT CHANGES IN ALIGNMENT SHALL BE BRACED WITH POURED CONCRETE THRUST BLOCKS. FITTINGS WITH RETAINING GLANDS WILL NOT BE ALLOWED.
- "C" DIMENSION SHALL BE AS REQUIRED TO REACH UNDISTURBED EARTH BUT NOT LESS THAN VALUE LISTED IN TABLE.
- DIMENSIONS "A" AND "B" ARE BASED ON INTERNAL PIPE PRESSURE OF 100 P.S.I. AND BEARING ON THE UNDISTURBED SOIL OF 1500 P.S.F.
- "B" = HEIGHT OF THRUST BLOCK
- ALL PLUGS SHALL BE SEPARATED FROM THE CONCRETE THRUST BLOCK BY A LAYER OF 5 MIL PLASTIC SHEET
- ALL POURED CONCRETE SHALL BE 3000 psi @ 28 DAYS.

CONTRACTOR WILL BE REQUIRED TO INSTALL, TEST AND PERFORM PRESSURE CUTS ON NEW WATERMAIN PRIOR TO REMOVING EXISTING WATERMAIN. A MINIMAL SERVICE INTERRUPTION AS APPROVED BY VOW SHALL BE ALLOWED IN ORDER TO SWITCH OVER FROM THE OLD WATERMAIN TO THE NEW WATERMAIN

CHICAGO EXECUTIVE AIRPORT
 WHEELING PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

DRAINAGE AND UTILITY DETAILS
 SHEET 3

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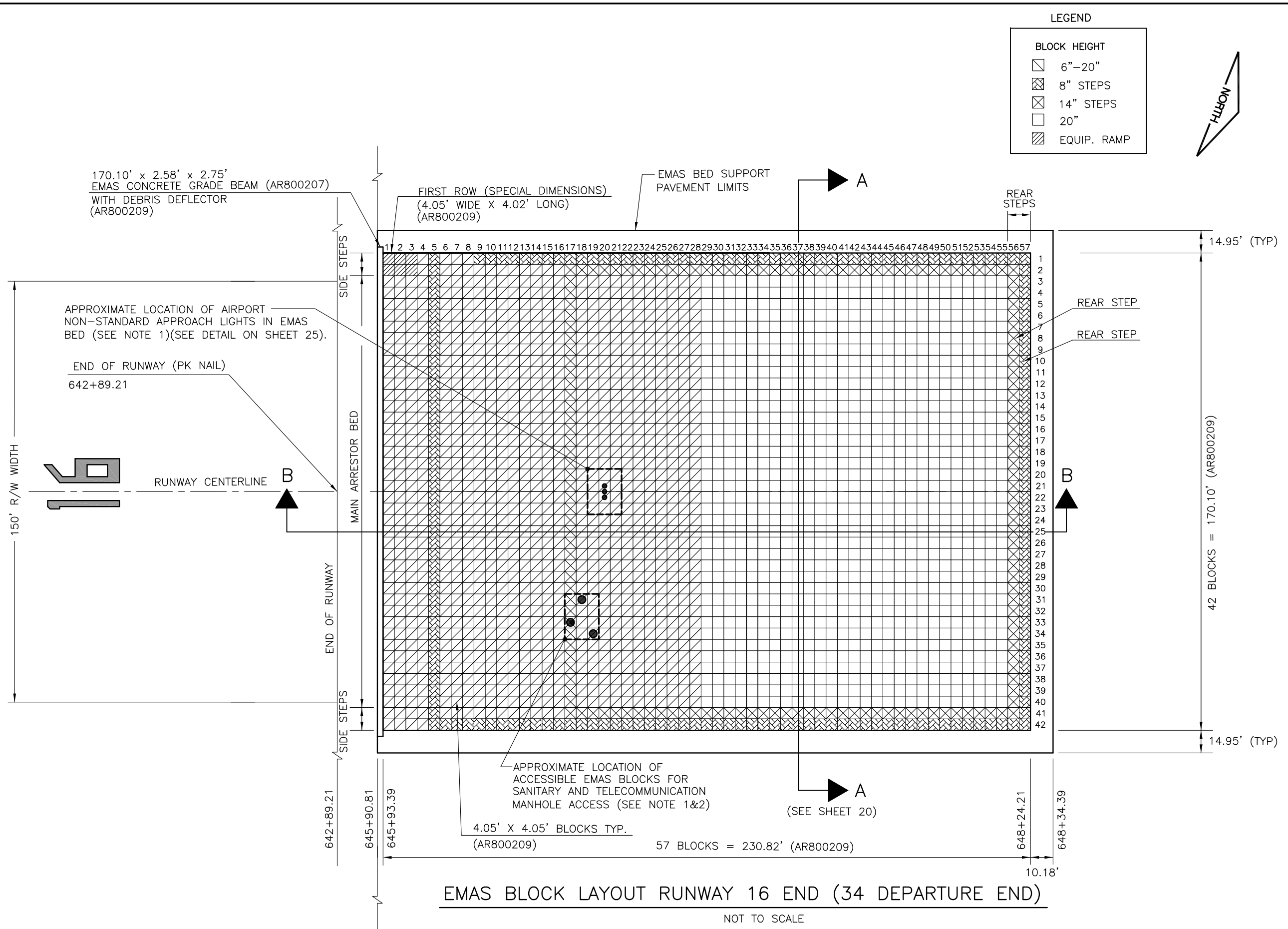
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CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02
FINAL	

REF: DWG: 16 emas.dwg
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 UPDATE BY: Jeremy Linke
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 WAT_FireHydrantAbandonment_2010.tif
 WAT_FireHydrantInstallation_2010.tif
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DATE: Thursday, July 10, 2014 2:10:33 PM
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 UPDATE BY: Jeremy Linke
 LAYOUT: 19 EMAS BLOCK LAYOUT PLAN
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EMAS BLOCK LAYOUT RUNWAY 16 END (34 DEPARTURE END)

NOT TO SCALE

- NOTES
- 1) EXACT LOCATION TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
 - 2) CONTRACTOR TO PERMANENTLY IDENTIFY ACCESSIBLE EMAS BLOCKS PER MANUFACTURER'S REQUIREMENTS.

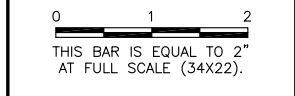


ENGINEERED ARRESTING SYSTEMS CORPORATION
 2239 High Hill Road
 Logan Township, New Jersey, USA 08085
 Phone 856.241.8620 Fax 856.241.8621

IL. CONTRACT: **PA057**
 IL. LETTING ITEM: **7A**
 IL. PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
EMAS BLOCK LAYOUT PLAN

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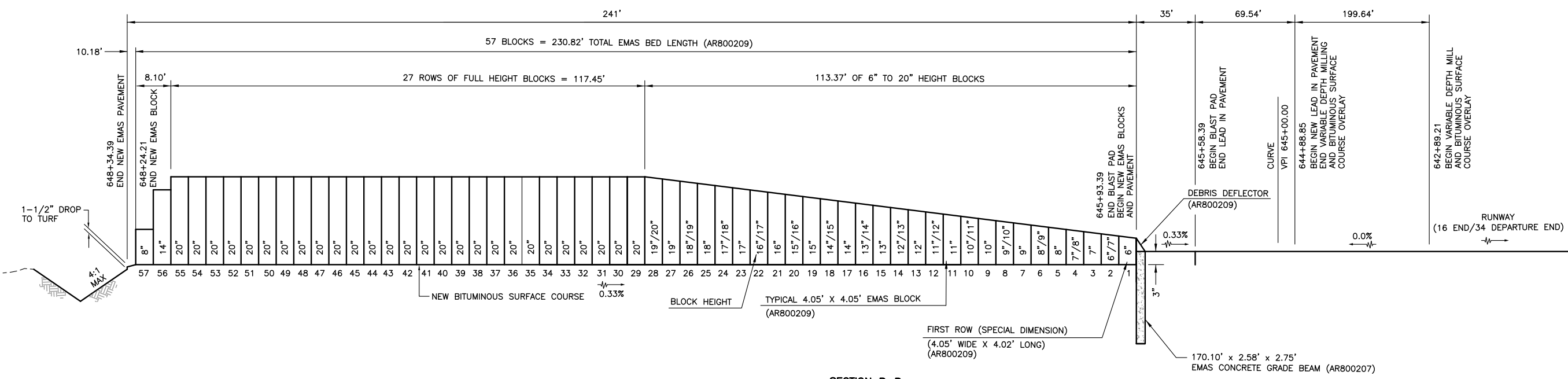
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DESIGN BY:	ESCO
DRAWN BY:	JRO
CHECKED BY:	ESCO
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

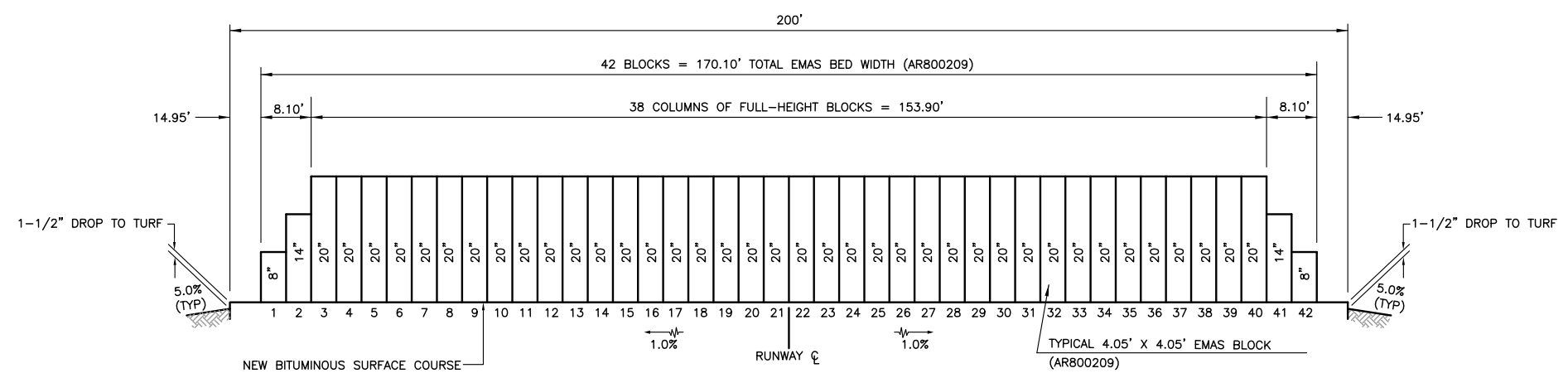
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SHEET 19 OF 31 SHEETS

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 Pdf(Z) \\pwworking\OCC_GEA_4_Color_Smcl_Plot
 Pdf(Z) \\pwworking\OCC_GEA_4_Color_Smcl_Plot



SECTION B-B
FROM EMAS BLOCK LAYOUT SHEET 19



SECTION A-A
FROM EMAS BLOCK LAYOUT SHEET 19

NOTE: ALL BLOCKS ARE 4.05' X 4.05' X THICKNESS SHOWN

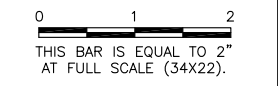
EMAS BLOCK SECTIONS – RUNWAY 16 END (34 DEPARTURE END)

NOT TO SCALE

IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

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CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

EMAS SECTIONS

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CHICAGO EXECUTIVE AIRPORT

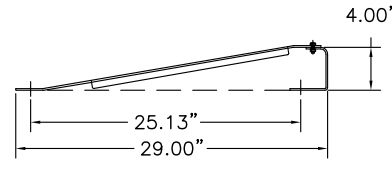
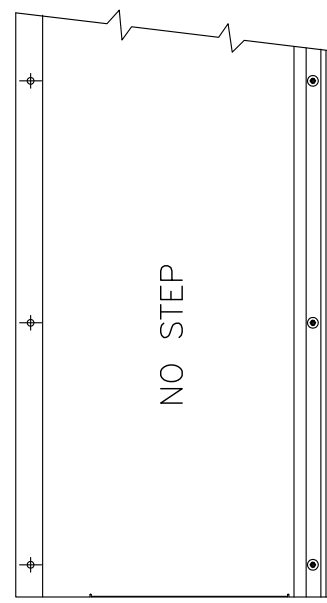
DESIGN BY:	ESCO
DRAWN BY:	JRO
CHECKED BY:	JRL
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

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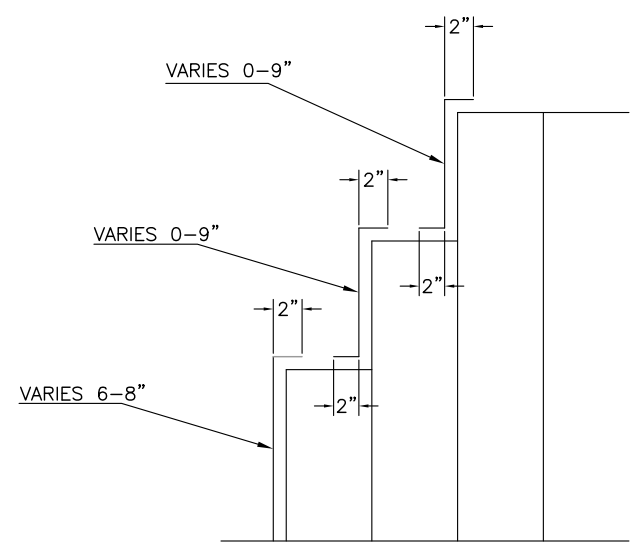


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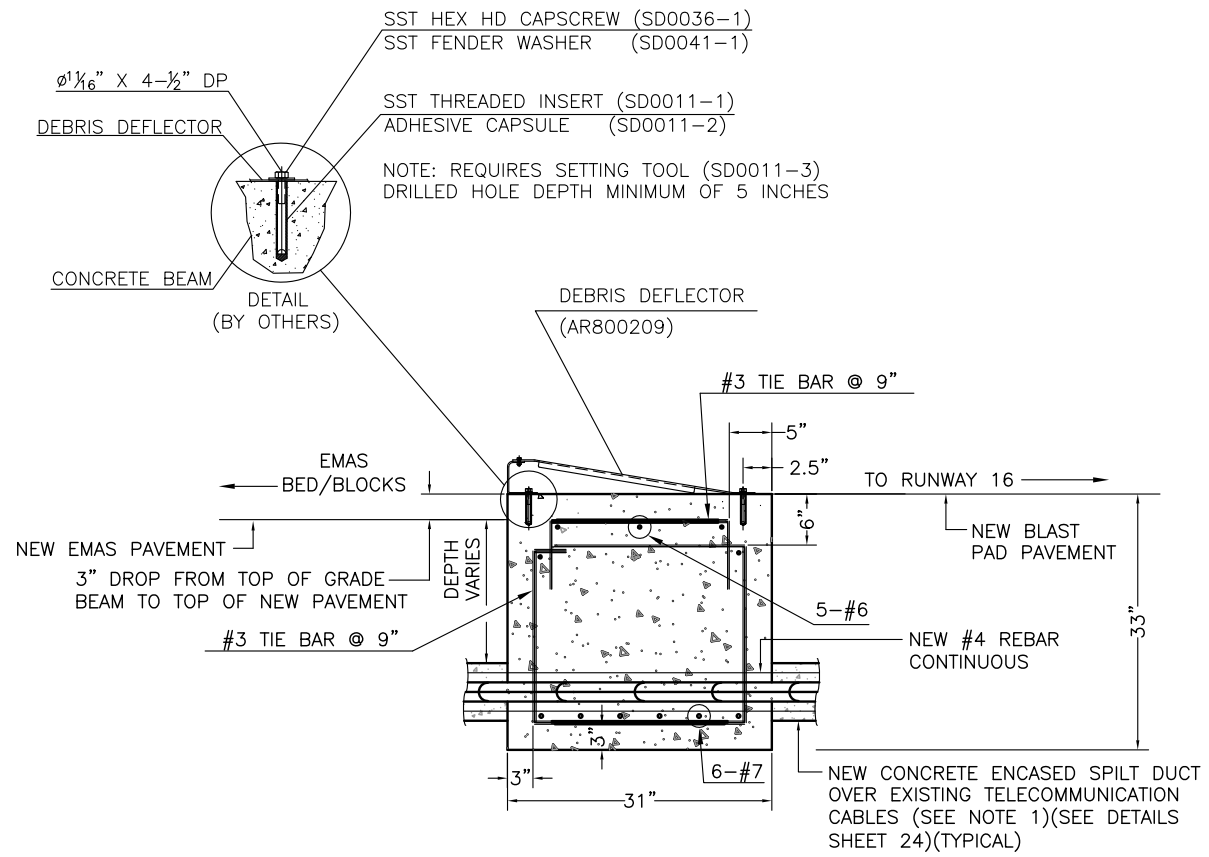
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TYPICAL DEBRIS DEFLECTOR ASSEMBLY (AR800209)
SCALE: N.T.S.

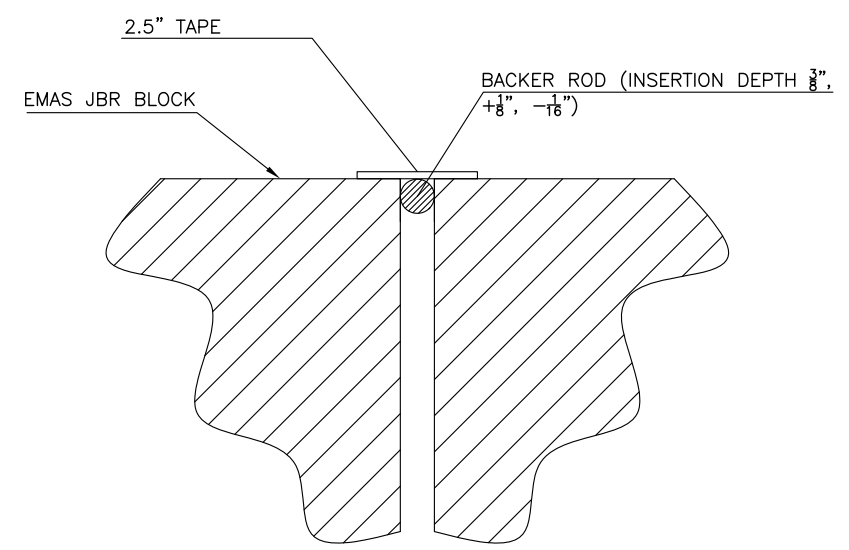


SIDE COATING (AR800209)
APPROXIMATELY 2,000 NET SQ. FT. OF EXTRUDED SILICONE SIDE COATING
APPLIED TO VERTICAL SURFACES
SCALE: N.T.S.



ALL BARS SHALL BE ASTM-A706, GRADE 60 (TYP.)
CONCRETE GRADE BEAM DETAIL SECTION (AR800207)
SCALE: N.T.S.

NOTE: 1) LOCATIONS SHOWN ON SHEET 14 AND AS REQUIRED
DUE TO FIELD LOCATIONS OF EXISTING CABLES.

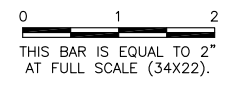


TYPICAL TAPE JOINT (AR800209)
ESCO WILL SUPPLY SPECIALTY TAPE.
SCALE: N.T.S.

IL. CONTRACT: **PA057**
IL. LETTING ITEM: **7A**
IL. PROJECT: **PWK-4407**
A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
EMAS DETAILS

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DESIGN BY:	ESCO
DRAWN BY:	JRO
CHECKED BY:	JRL
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

FINAL

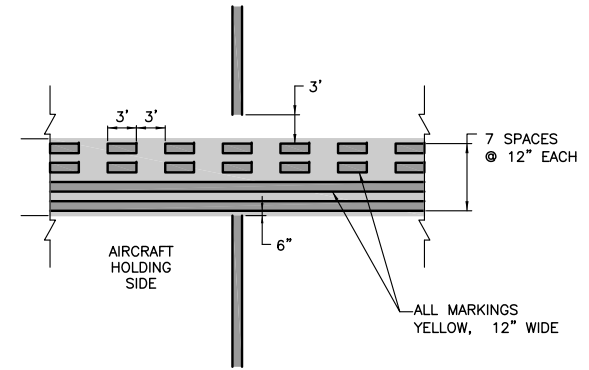


ENGINEERED ARRESTING SYSTEMS CORPORATION
2239 High Hill Road
Logan Township, New Jersey, USA 08085
Phone 856.241.8620 Fax 856.241.8621

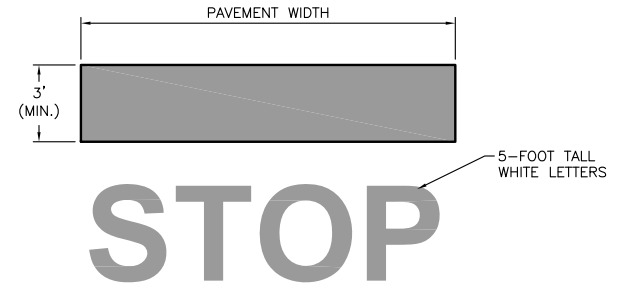
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PAVEMENT MARKING NOTES

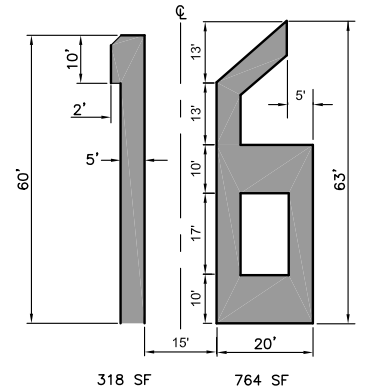
1. ALL TAXIWAY MARKINGS ARE YELLOW (AR620520) WITH A 6" BLACK BORDER (AR620525) UNLESS NOTED.
2. ALL RUNWAY MARKINGS (AR620520) ARE WHITE WITH A 6" BLACK BORDER (AR620525) UNLESS NOTED.
3. THE PAVEMENT SURFACE SHALL BE CLEAN AND DRY PRIOR TO MARKING.
4. WHEN YELLOW TAXIWAY STRIPING CROSSES ANY WHITE RUNWAY STRIPING, THE TAXIWAY STRIPE SHALL BE GAPPED 8" EACH SIDE OR RUNWAY STRIPE EXCEPT RUNWAY/RUNWAY HOLDLINES.
5. ALL LETTERS, NUMBERS AND SYMBOLS SHALL CONFORM TO FAA ADVISORY CIRCULAR 150/5340-1K (LATEST EDITION).



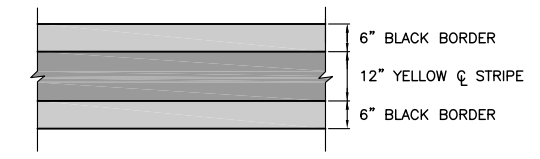
RUNWAY HOLDING POSITION MARKING
NOT TO SCALE



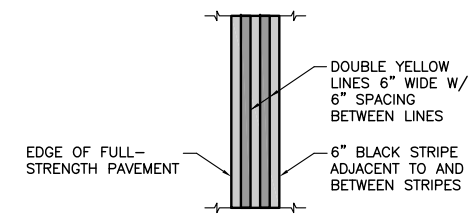
STOP BAR DETAIL
NOT TO SCALE



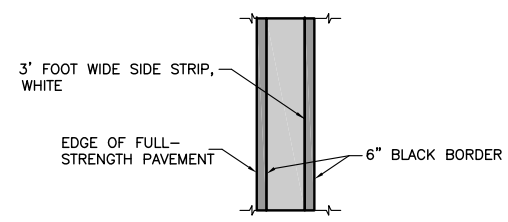
NUMERAL DETAILS
NO SCALE



TAXIWAY CENTERLINE DETAIL
NOT TO SCALE



TAXIWAY EDGE MARKINGS CONTINUOUS
NOT TO SCALE

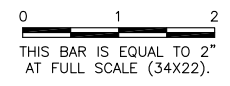


RUNWAY EDGE MARKINGS CONTINUOUS
NOT TO SCALE

IL. CONTRACT: **PA057**
 IL. LETTING ITEM: **7A**
 IL. PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
MARKING AND MISCELLANEOUS DETAILS

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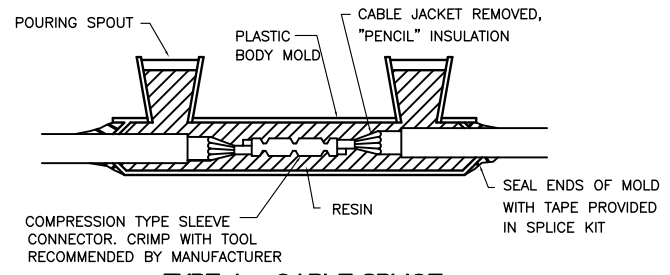
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CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

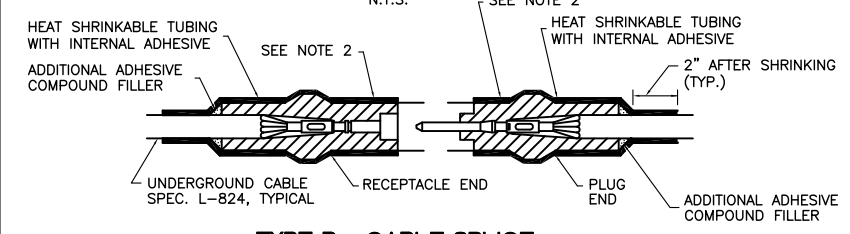
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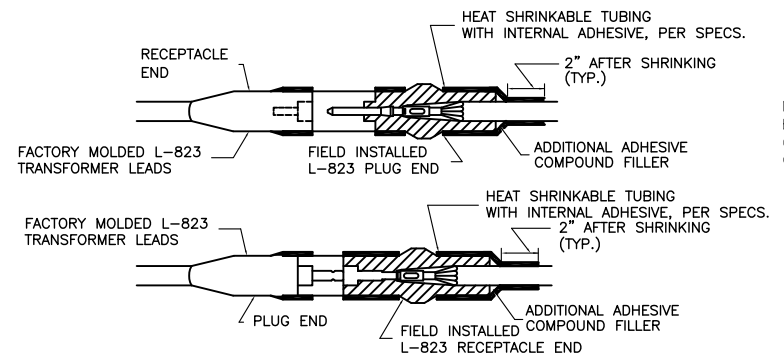
TYPE A - CABLE SPLICE

FOR SPLICES IN HOMERUNS AND FOR EXTENSIONS TO EXISTING CABLES ONLY
N.T.S.



TYPE B - CABLE SPLICE

FOR SPLICES FOR USE AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT
N.T.S.

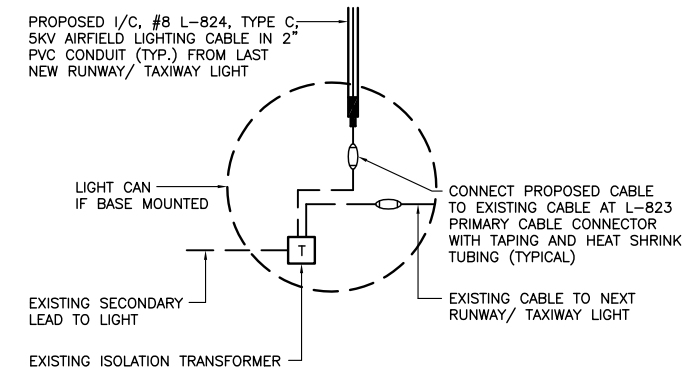


TYPE C AND D - CABLE SPLICE

FOR SPLICES AT RUNWAY/TAXIWAY LIGHTS AND SIGNS
N.T.S.

NOTES

- INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.
- WRAP 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 JOINT.
- THE COST OF FURNISHING AND INSTALLING ALL SPLICE MATERIALS SHALL BE INCIDENTAL TO THE ASSOCIATED CABLE ITEMS.
- THE CONTRACTOR SHALL HAVE A MINIMUM OF TWO (2) TYPE A SPLICE KITS ON THE JOB SITE AT ALL TIMES FOR EMERGENCY REPAIRS.
- THE CONTRACTOR MAY ELECT TO USE AN FAA APPROVED PRIMARY CONNECTOR KIT IN LIEU OF HEAT SHRINK KIT AT NO ADDITIONAL COST.

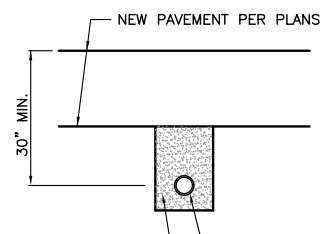


RUNWAY/TAXIWAY LIGHTING CIRCUIT CONNECTION DETAIL

NOT TO SCALE

GENERAL NOTES

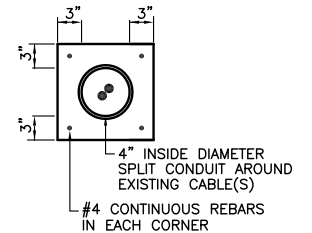
- TRANSFORMER HOLDER MAY BE ANY COMMERCIALY AVAILABLE BRICK.
- BREAKING GROOVE COUPLINGS SHALL NOT BE OVER 1" ABOVE GROUND LINE.
- ISOLATION TRANSFORMERS COME WITH A FACTORY INSTALLED PLUG (TYPE 1, CLASS A, STYLE 2) AND RECEPTACLE (TYPE 1, CLASS A, STYLE 9). A TYPE 1, CLASS B, STYLE 3 PLUG AND TYPE 1, CLASS B, STYLE 10 RECEPTACLE SHALL BE INSTALLED ON THE 1/C, No. 8, 5000 V., L-824 TYPE C CABLES FOR CONNECTION TO EACH TRANSFORMER.
- TO FURTHER REDUCE THE POSSIBILITY OF WATER/MOISTURE ENTRANCE INTO THE CONNECTOR BETWEEN THE CABLE AND THE FIELD ATTACHED CONNECTOR, IT IS REQUIRED THAT A HEAT SHRINKABLE TUBING WITH INTERNAL ADHESIVE BE APPLIED OVER THE ENTIRE CABLE CONNECTOR.
- ALL LIGHTS, CABLES AND TRANSFORMERS TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE AIRPORT. AT THE DISCRETION OF THE AIRPORT MANAGER THE CONTRACTOR MAY BE REQUIRED TO DISPOSE OF THESE MATERIALS OFFSITE.
- DUCT MARKERS SHALL BE INSTALLED AT EVERY NEW DUCT AND AT EVERY EXISTING DUCT USED FOR THIS PROJECT.



GRS CONDUIT UNDER PAVEMENT DETAIL

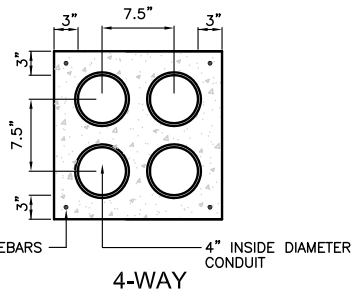
NOT TO SCALE

NOTE: NEW CONDUIT SHALL BE INSTALLED AT AN ELEVATION THAT WILL NOT CONFLICT WITH EXISTING OR NEW UTILITIES INCLUDING STORM SEWER, UNDERDRAIN, CONDUIT, DUCT, GAS, WATERMAIN, PHONE, ELECTRICAL AT NO ADDITIONAL COST TO THE CONTRACT.



CONCRETE ENCASED SPLIT DUCT DETAIL

NOT TO SCALE - AR110550

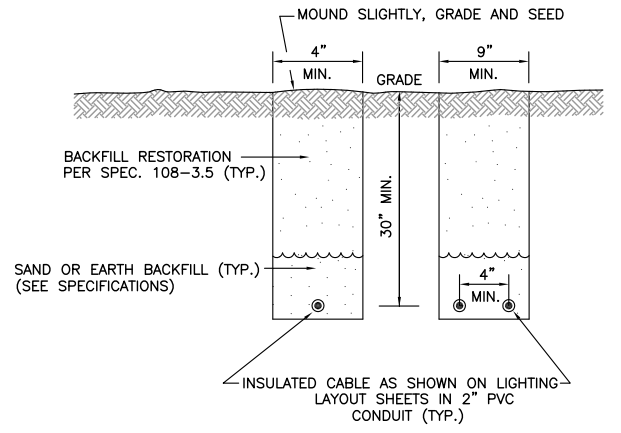


CONCRETE ENCASED DUCT BANKS

NOT TO SCALE

NOTES:

- DIMENSIONS ARE MINIMUM.
- CONCRETE SHALL CONFORM TO ITEM 610.
- ALL CONDUIT SHALL BE SCHEDULE 40 PVC.
- TOP OF CONCRETE ENCASEMENT IN TURF AREAS SHALL NOT BE LESS THAN 24" BELOW SUBGRADE.
- 4" SPLIT DUCT SHALL BE CONCRETE ENCASED WITH 3" MINIMUM CONCRETE SURROUNDING 4" CONDUIT. COST INCIDENTAL TO SPLIT DUCT.

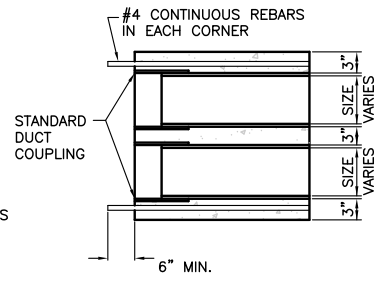


TURF AREA CABLE TRENCH DETAIL

NOT TO SCALE

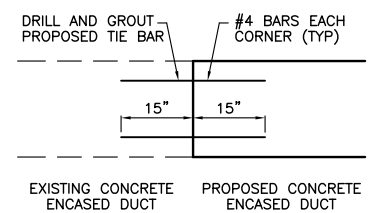
NOTES

- TRENCHES WITH MORE THAN 2 CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE. IF SPECIFIED ON PLANS, TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
- DEPTH OF TRENCHES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- SAND BACKFILL SHALL BE USED IF THE EXISTING SOIL DOES NOT MEET THE BACKFILL REQUIREMENTS.
- ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL.



CONCRETE ENCASED DUCT END DETAIL

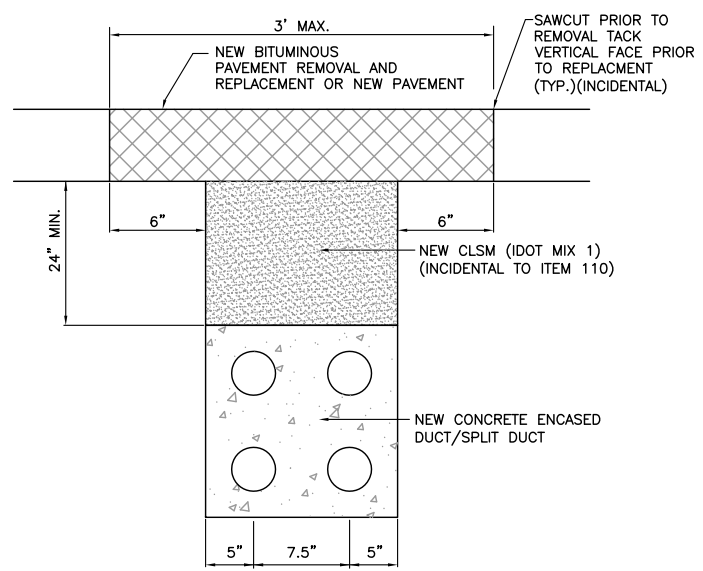
NO SCALE



EXTENSION OF EXISTING DUCT

NO SCALE

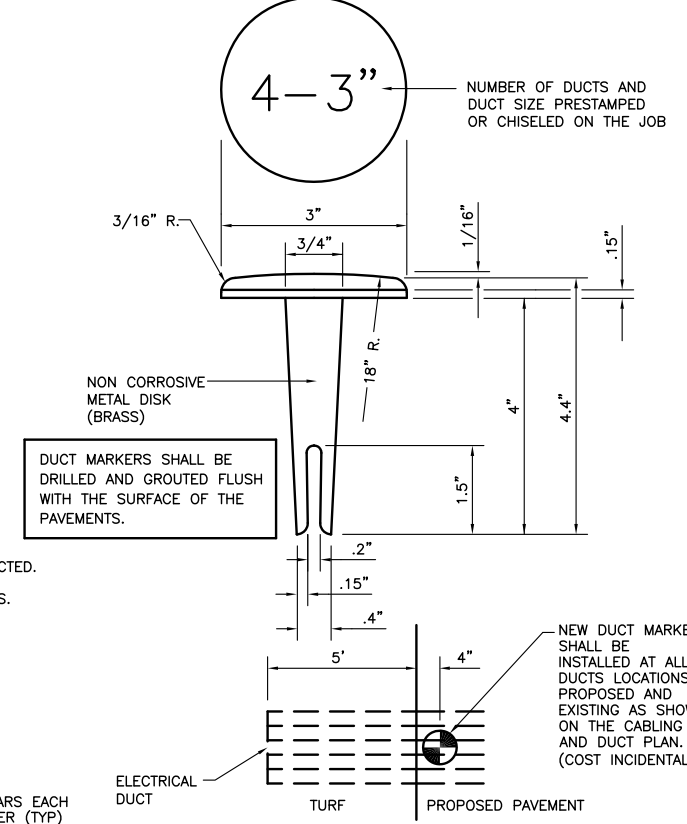
NOTE: COST OF CONNECTION SHALL BE CONSIDERED INCIDENTAL TO PROPOSED DUCT.



DUCT BANK INSTALLATION UNDER EXISTING OR NEW PAVEMENT

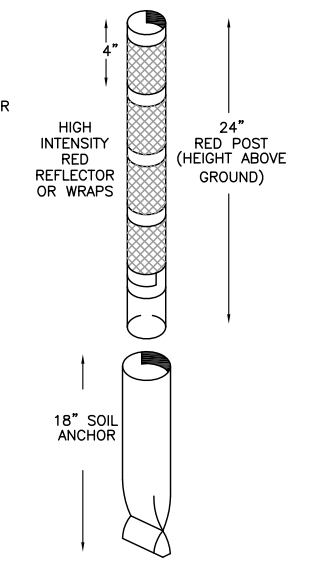
NOT TO SCALE

NOTE: THE CONTRACTOR SHALL VERIFY THE THICKNESS OF MATERIAL TO BE REMOVED. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR ANY VARIATION IN THE PAVEMENT SECTIONS ACTUALLY ENCOUNTERED.



DUCT MARKER DETAIL

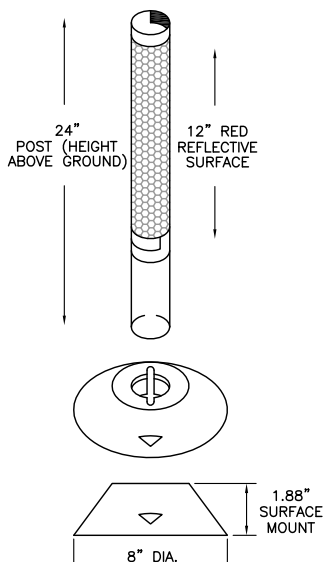
NOT TO SCALE



ELEVATED RETROREFLECTIVE MARKER TYPE 1 (SOIL ANCHOR MOUNT)

NOT TO SCALE - AR800205

NOTE: RETROREFLECTIVE MARKER SHALL BE CROUSE-HINDS OR APPROVED EQUAL.



ELEVATED RETROREFLECTIVE MARKER TYPE 2 (SURFACE MOUNT)

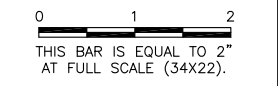
NOT TO SCALE - AR800206

NOTE: RETROREFLECTIVE MARKER SHALL BE CROUSE-HINDS OR APPROVED EQUAL.

IL CONTRACT: PA057
IL LETTING ITEM: 7A
IL PROJECT: PWK-4407
A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE



CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)

ELECTRICAL DETAILS
 SHEET 1

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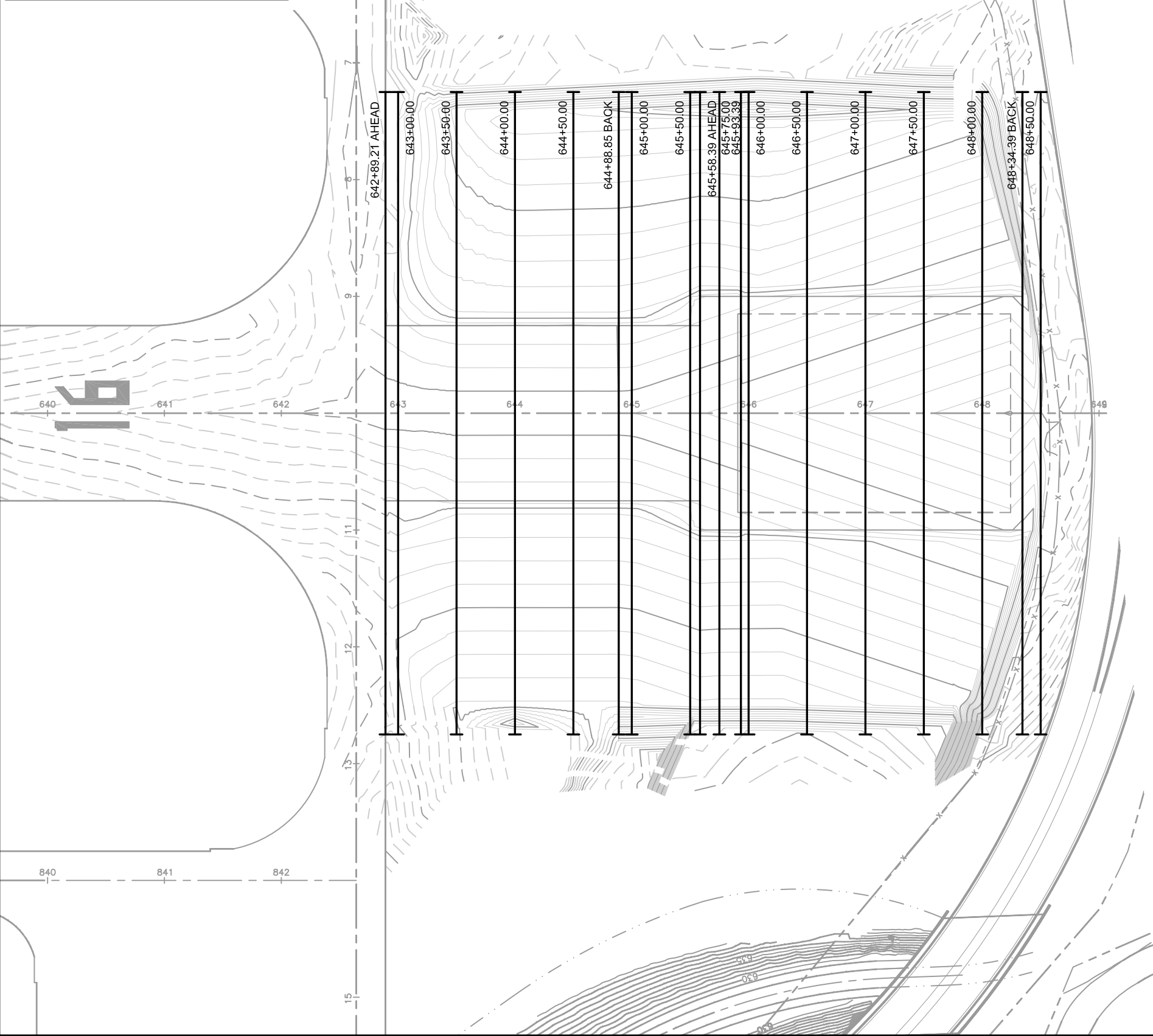
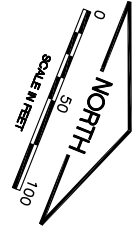
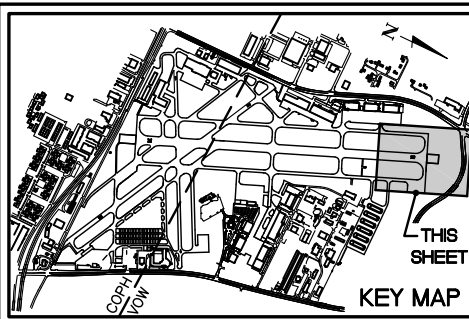
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 CHAMBERLAIN, MURPHY & TILLY, INC.
 CONSULTING ENGINEERS
 License No. 84-000613

CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	AB / JRL
DRAWN BY:	JRO
CHECKED BY:	DKP
APPROVED BY:	BW
DATE:	7/10/14
JOB No:	11290-02

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DATE: Thursday, July 10, 2014 2:11:07 PM
 FILE: K:\Chicago\Feedback\11290-02_Rwy16\EMAS\Draw\Sheet3\RWY 16 EMAS - INDEX TO EARTH.dwg
 UPDATE BY: Jeremy Linke
 LAYOUT: 26 INDEX TO CROSS SECTIONS - EARTHWORK
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 KREF: DWG: RWY16-emas-base.dwg
 H:\DWG\16-emas.dwg
 Grading and Staking Plan.dwg



EARTHWORK SUMMARY TABLE						
LOCATION	TOPSOIL STRIPPING (INITIAL POSITION) (CUBIC YARDS)	ESTIMATED UNSUITABLE UNDERCUT (INITIAL POSITION) (CUBIC YARDS) (AR152410)	UNCLASSIFIED EXCAVATION (INITIAL POSITION) (CUBIC YARDS)	EMBANKMENT FILL (FINAL POSITION) (CUBIC YARDS)	TOPSOIL PLACEMENT (FINAL POSITION) (CUBIC YARDS)	SHOULDER FILL (FINAL POSITION) (CUBIC YARDS)
16 EMAS SITE	6810	390	8706	0	2390	1610
TOTAL CUT (AR152410)			15906 CY	TOTAL FILL (SEE NOTE 4)		4000 CY

ADDITIONAL UNSUITABLE UNDERCUT ESTIMATED AT 5% OF THE NEW PAVEMENT AREA

EARTHWORK NOTES

- ALL EARTHWORK QUANTITIES ARE CALCULATED BASED ON THE MATERIAL IN ITS INITIAL OR FINAL POSITION AS SHOWN IN THE PLANS AND QUANTIFIED BY THE METHOD OF AVERAGE END AREAS.
- AREAS OF UNSUITABLE MATERIAL/UNDERCUT AREAS (PAID AS AR152410) SHALL BE AS DESIGNATED BY THE ENGINEER. THE QUANTITY OF UNSUITABLE MATERIAL/UNDERCUT AREAS SHALL NOT BE USED AS EMBANKMENT FILL MATERIAL UNLESS AUTHORIZED BY THE ENGINEER.
- PAYMENT FOR UNCLASSIFIED EXCAVATION IS THE SUM OF TOPSOIL STRIPPING, UNCLASSIFIED EXCAVATION AND UNDERCUT AREAS AND SHALL BE PAID FOR UNDER ITEM NO. AR152410.
- TOPSOIL PLACEMENT, EMBANKMENT FILL AND SHOULDER FILL SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR UNCLASSIFIED EXCAVATION (ITEM AR152410). NO SEPARATE PAYMENT WILL BE MADE FOR TOPSOIL PLACEMENT, EMBANKMENT FILL AND SHOULDER FILL.
- ALL HAUL ROADS TO BE CONSTRUCTED FOR THE PROJECT WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- ANY CONTRACTOR'S HAUL ROADS TO THE SITE SHALL BE RESTORED WITH 4" MINIMUM OF TOPSOIL PLACED. ALL HAUL ROAD RESTORATION SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ANY EXCESS MATERIAL INCLUDING CLAY, UNSUITABLE MATERIAL EXISTING AGGREGATE BASE, MILLINGS, AND TOPSOIL SHALL BE HAULED OFF AIRPORT PROPERTY AND DISPOSED OF BY THE CONTRACTOR.
- A 15% SHRINKAGE FACTOR WAS USED TO DETERMINE THE REQUIRED FILL IN ITS INITIAL POSITION. THE DIFFERENCE BETWEEN THE REQUIRED FILL AND REQUIRED CUT QUANTITY WAS USED TO DETERMINE THE NUMBER OF CUBIC YARDS OF MATERIAL TO BE DISPOSED OF OFF AIRPORT PROPERTY. NO ADJUSTMENTS IN EARTHWORK QUANTITIES WILL BE ALLOWED FOR VARIATIONS IN ACTUAL SHRINKAGE AND OR EXPANSION FACTORS ENCOUNTERED DURING CONSTRUCTION.
- ALL CDD AND ENVIRONMENTAL TESTING AND ANY TESTING AND HANDLING REQUIREMENT BY THE CONTRACTOR AND/OR CONTRACTORS DISPOSAL FACILITY(S) FOR ALL HAUL OFF MATERIALS, SHALL BE COMPLETED AT THE CONTRACTORS EXPENSE.
- IF THE CONTRACTOR ENCOUNTERS ANY SOIL FROM THIS SITE/PROJECT THAT IS POTENTIALLY CONTAMINATED, THE ENGINEER AND OWNER SHALL BE NOTIFIED PRIOR TO HAULING THE POTENTIALLY CONTAMINATED SOIL OFF SITE. CONTRACTOR SHALL PROVIDE P.I.D. METER RESULTS AND REQUIRED LAB TEST RESULTS TO DETERMINE POTENTIAL CONTAMINANT (INCIDENTAL).

IL CONTRACT: **PA057**
 IL LETTING ITEM: **7A**
 IL PROJECT: **PWK-4407**
 A.I.P. PROJECT: **3-17-SBGP-XX**

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
 THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

**CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
 CONSTRUCT EMAS - RUNWAY 16 END (34 DEPARTURE END)
 INDEX TO CROSS SECTIONS
 AND EARTHWORK SUMMARY**

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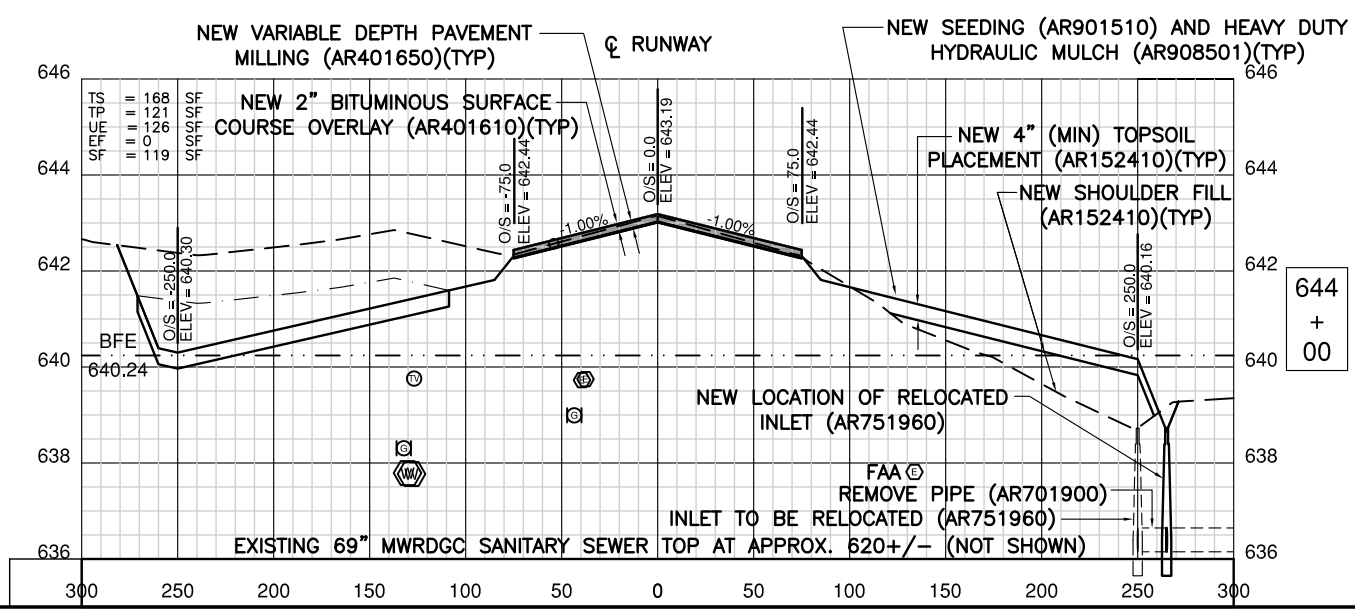
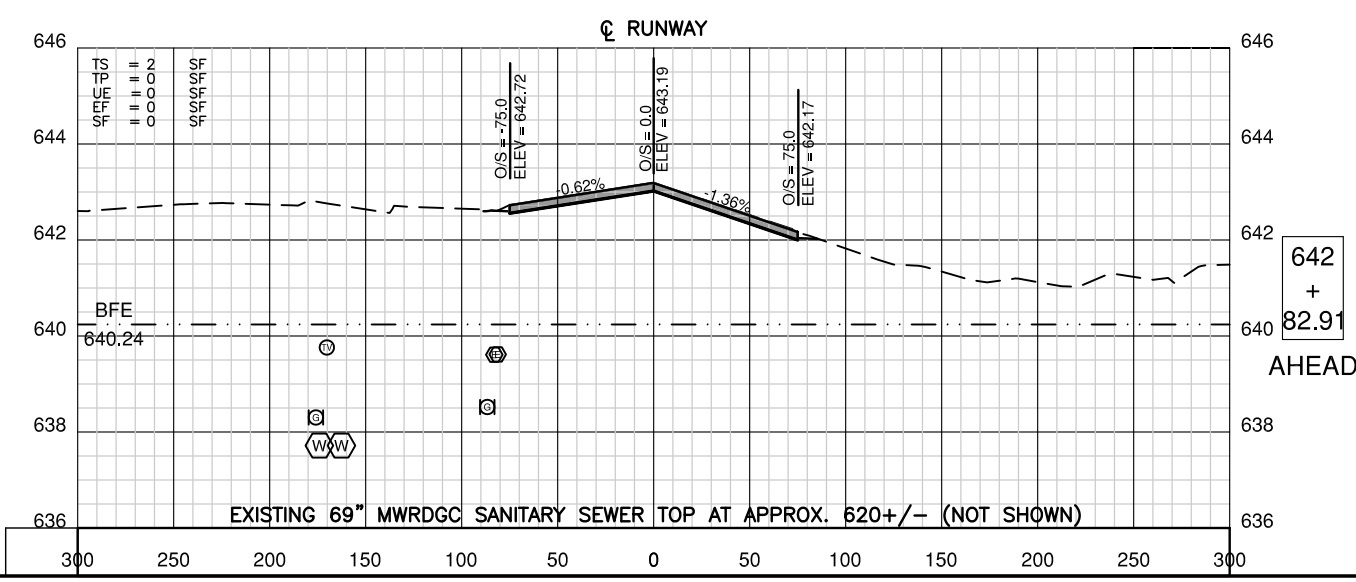
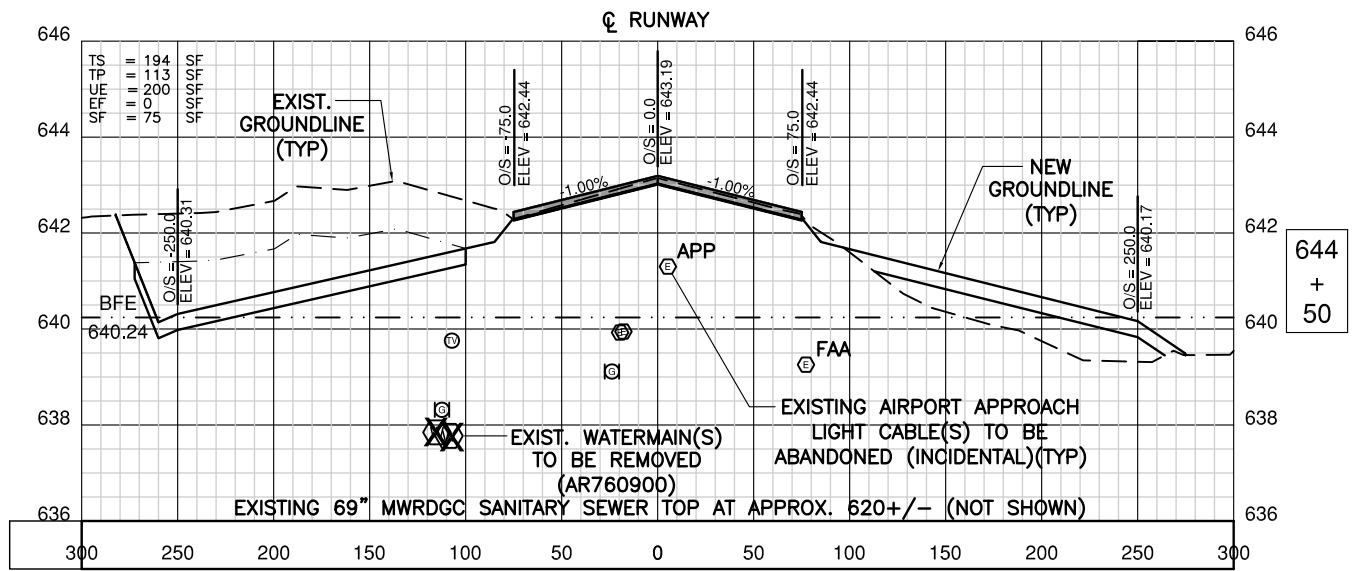
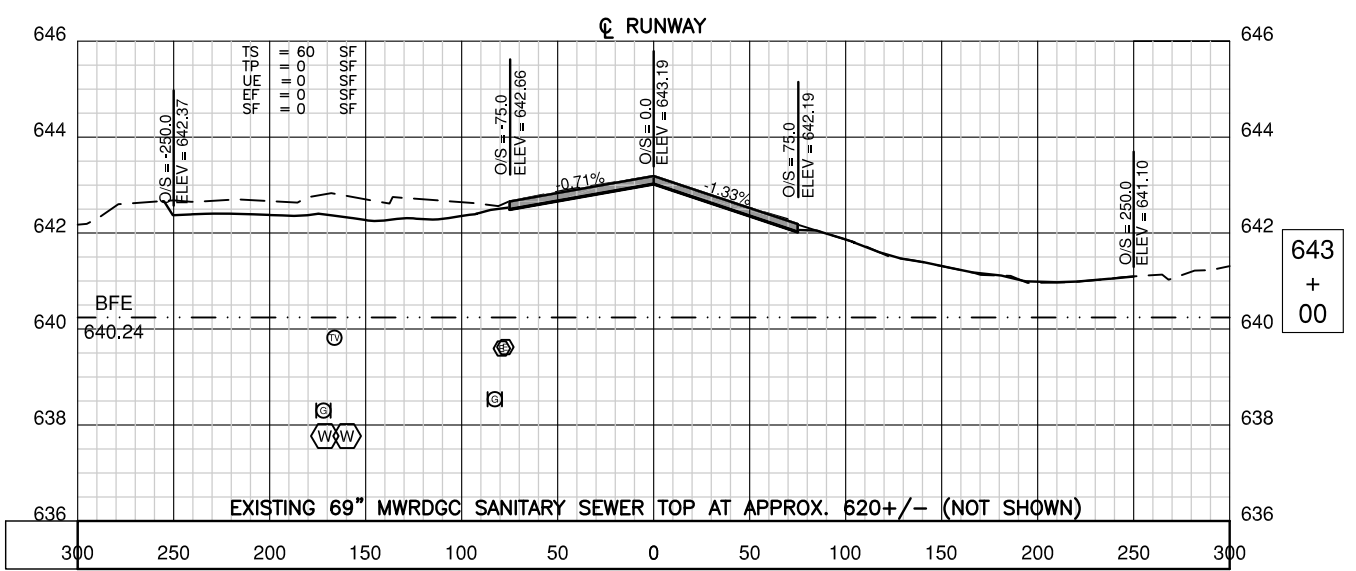
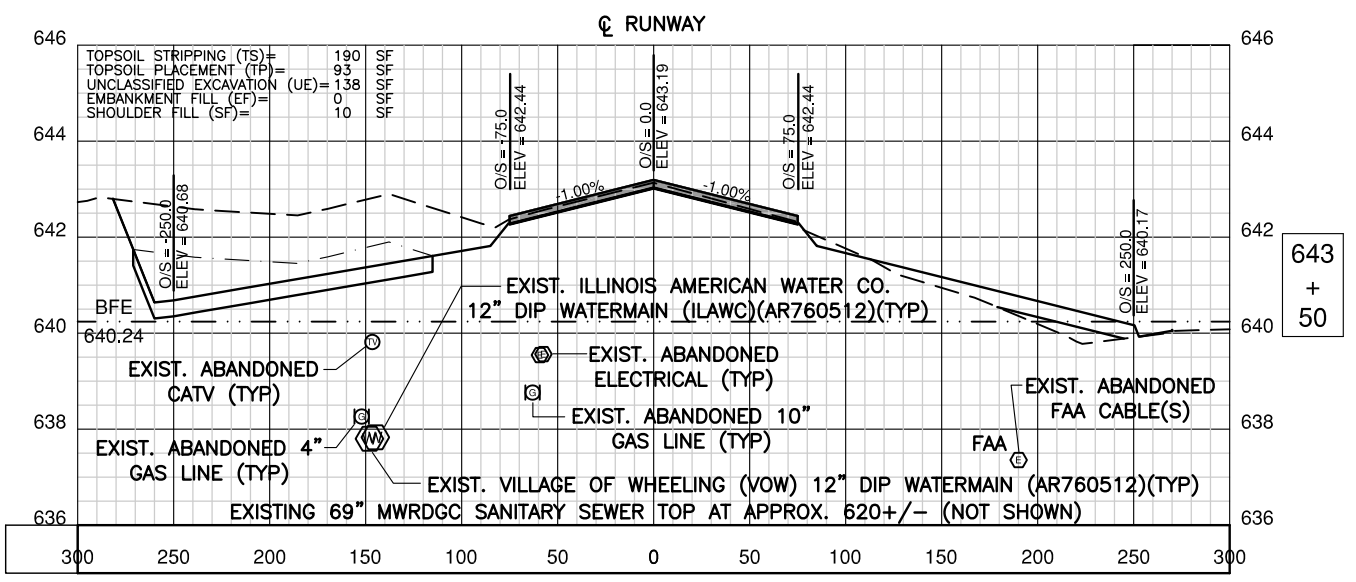
CHICAGO EXECUTIVE AIRPORT

DESIGN BY: JRL
 DRAWN BY: JRO
 CHECKED BY: DKP
 APPROVED BY: BW
 DATE: 7/10/14
 JOB No: 11290-02

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SHEET 26 OF 31 SHEETS

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 KREF DWG:



IL. CONTRACT: PA057
 IL. LETTING ITEM: 7A
 IL. PROJECT: PWK-4407
 S.B.G. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
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CHICAGO EXECUTIVE AIRPORT
 WHEELING/PROSPECT HEIGHTS, ILLINOIS
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 CROSS SECTIONS SHEET 1

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 CHECKED BY: DKP
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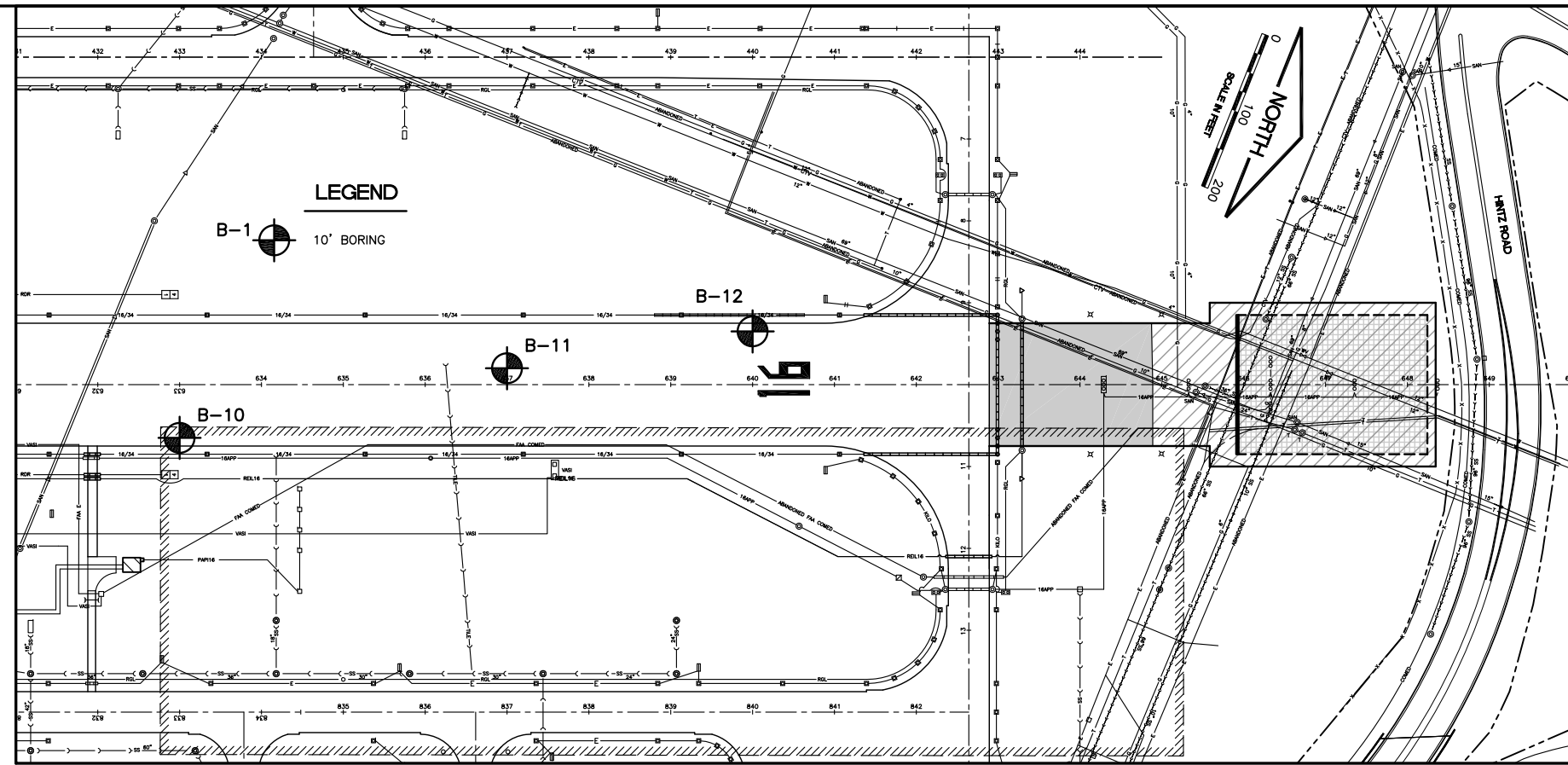
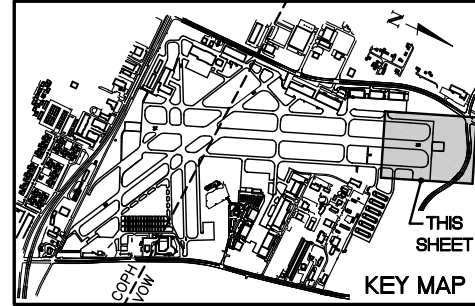
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SHEET 27 OF 31 SHEETS

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 6/25/2014 9:16 am

SOIL BORING TABLE

BORING/ CORE NO.	STATION/OFFSET	NORTHING (NAD 27)	EASTING (NAD 27)	ELEVATION (NAD 29)
B-10	STA. 633+00.00, 65.00' RT. Q RUNWAY 16/34	1986878.3876	616070.3669	641.5±
B-11	STA. 637+00.00, 20.00' LT. Q RUNWAY 16/34	1987218.6808	615843.5948	642±
B-12	STA. 640+00.00, 65.00' LT. Q RUNWAY 16/34	1987480.8281	615690.9391	643±



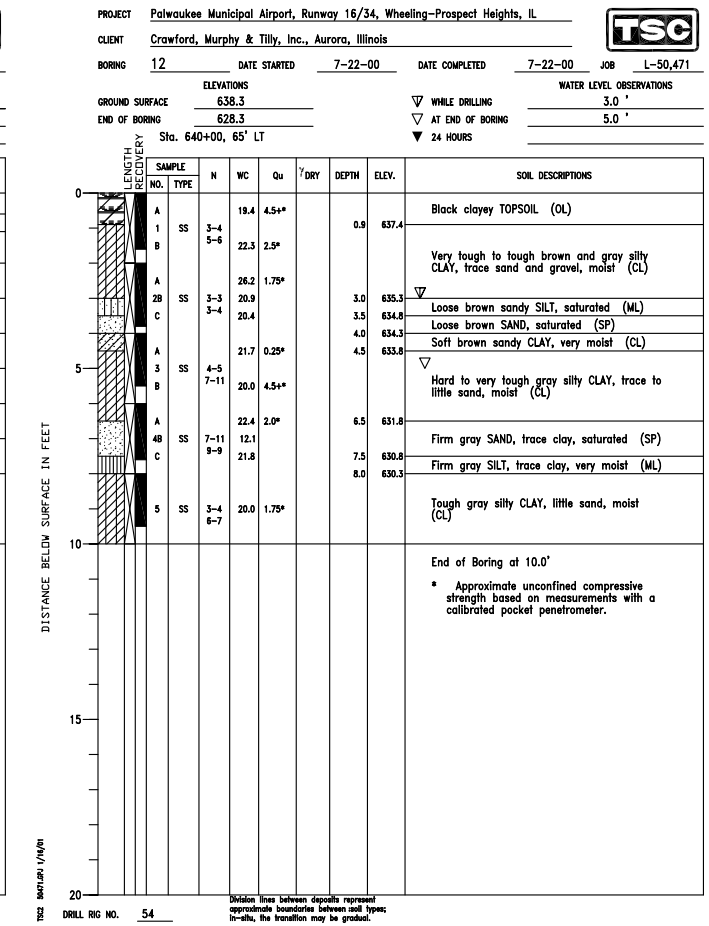
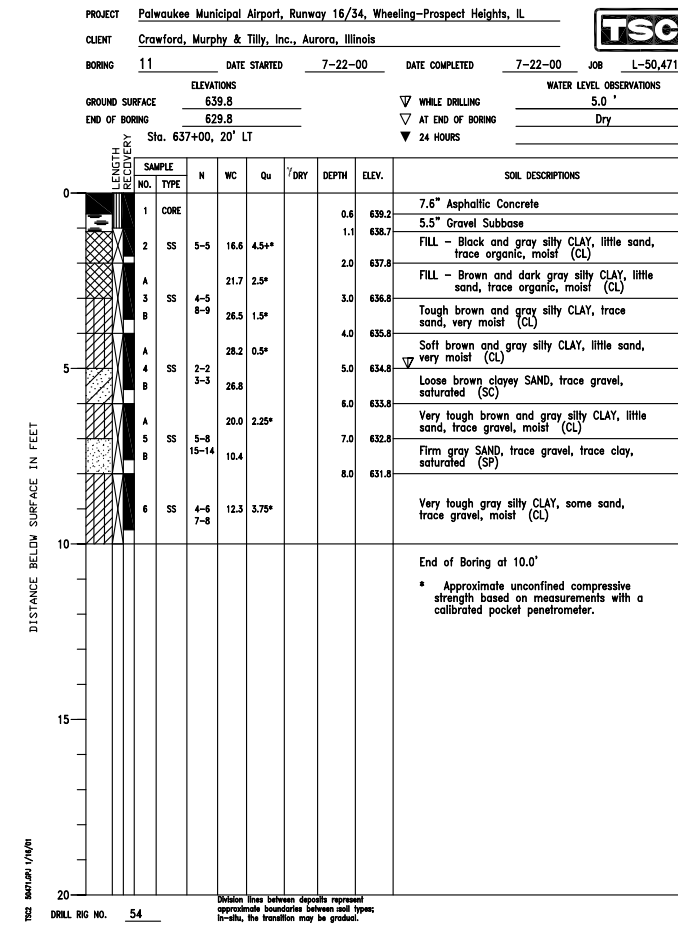
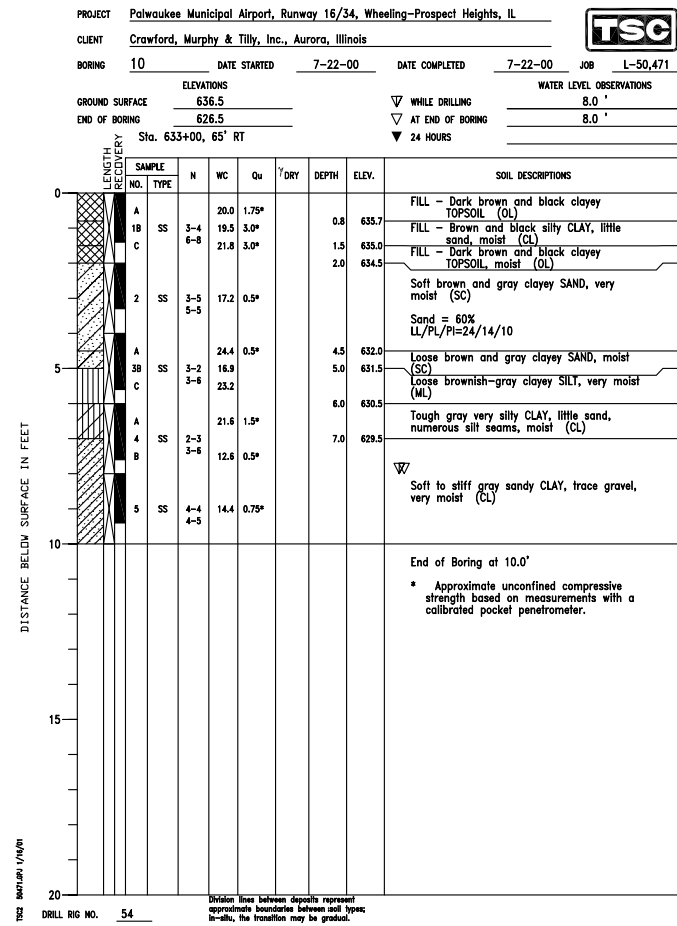
IL CONTRACT: PA057
 IL LETTING ITEM: 7A
 IL PROJECT: PWK-4407
 A.I.P. PROJECT: 3-17-SBGP-XX

SURVEY BOOK # BOOK #

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NOTE: FOR SUBGRADE INFORMATION ONLY



CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
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ENGINEERING INFORMATION

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SHEET 31 OF 31 SHEETS