



DATE	REVISION	BY

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR150530	TRAFFIC MAINTENANCE	L.S.	1	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	S.Y.	1,004	
AR501910	REMOVE & REPLACE PCC PAVEMENT	S.Y.	91	
AR620520	PAVEMENT MARKING - WATERBORNE	S.F.	500	
AR701830	TRENCH BACKFILL	C.Y.	2,475	
AR760608	8" PVC WATER MAIN	L.F.	1,855	
AR760718	18" STEEL CASING	L.F.	45	
AR760800	FIRE HYDRANT	EA.	4	
AR760830	WATER VALVE	EA.	3	
AR760840	IRON FITTINGS	LBS.	250	
AR760905	REMOVE FIRE HYDRANT	EA.	2	
AR760907	REMOVE WATER VALVE	EA.	3	
AR800460	12" X 8" TAPPING VALVE & SLEEVE	EA.	2	
AR800461	1" RPZ BACKFLOW PREVENTER	EA.	8	
AR800462	WATER SERVICE-LONG	EA.	4	
AR800463	WATER SERVICE-SHORT	EA.	4	
AR800464	RECONNECT WATER SERVICE	EA.	8	
AR800465	FILL EXISTING WATER MAIN	C.Y.	15	
AR901510	SEEDING	AC.	1	
AR908510	MULCHING	AC.	1	

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS
3	PROPOSED SAFETY PLAN
4	PROPOSED CONSTRUCTION PLAN - GA RAMP AREA
5	PROPOSED CONSTRUCTION PLAN - GA RAMP AREA
6	PROPOSED CONSTRUCTION PLAN - NORTHWEST QUADRANT AREA
7	SOUTH LEG PLAN AND PROFILE - STA. 0+00 TO STA. 5+00
8	NORTH-SOUTH LEG PLAN AND PROFILE - STA. 5+00 TO STA. 9+60
9	NORTH-SOUTH LEG PLAN AND PROFILE - STA. 9+60 TO STA. 14+60
10	NORTH LEG PLAN AND PROFILE - STA. 0+00 TO STA. 5+00
11	PROPOSED WATER MAIN DETAIL SHEET 1
12	PROPOSED WATER MAIN DETAIL SHEET 2
13	PROPOSED WATER MAIN DETAIL SHEET 3
14	PROPOSED WATER MAIN DETAIL SHEET 4



DECATUR, ILLINOIS

IL PROJ.: DEC-3801 A.I.P. PROJ.: 3-17-0033-XX

HEI Project No. 07A0060D_0800	RAW	03/12/08
Filename R-002FLP.DWG	DRAWN MLH	06/19/09
Scale NOT TO SCALE	REVIEWED RAW	06/19/09
Date 06/19/2009		



Hanson Professional Services Inc.  
 1625 South Main Street  
 Springfield, IL 62703-2886  
 Offices Nationwide

CONSTRUCT  
 WATER MAIN  
 SUMMARY OF QUANTITIES  
 AND  
 INDEX TO SHEETS

**SCOPE OF WORK**

THIS PROJECT CONSISTS OF INSTALLING AN 8-INCH WATER MAIN LOOP AND THE CONSTRUCTION OF INDIVIDUAL WATER SERVICES TO MULTIPLE AIRPORT OWNED STRUCTURES. ASSOCIATED WORK INCLUDES EXCAVATION, BACKFILL, TESTS, BENDS, VALVES, FIRE HYDRANTS, SEEDING, MULCHING, AND OTHER INCIDENTAL ITEMS.

**AIRPORT SECURITY NOTE**

AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE THE CONTRACTOR ENTRANCE GATE WHEN CONTINUOUS HAULING OPERATIONS ARE NOT IN PROGRESS AND WILL ENSURE THE GATE IS LOCKED AT THE END OF EACH WORKING DAY, AS APPLICABLE, AND WILL COORDINATE REMAINING ACCESS WITH ARMY NATIONAL GUARD SECURITY AT THE GATE.

**UTILITY NOTE**

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY EXCAVATION BEGINS. THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO ACCOMPLISH THE ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-JULIE UTILITIES LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND IMPROVEMENTS WILL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

**HEIGHT OF CONSTRUCTION EQUIPMENT**

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

**EQUIPMENT PARKING AND STORAGE AREA**

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

**CONTRACTOR RESPONSIBILITIES**

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE LOCATED AS SHOWN. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR PERSONAL VEHICLES IN THIS AREA. ONLY CONTRACTOR VEHICLES NEEDED FOR CONSTRUCTION WILL BE ALLOWED OUTSIDE THE EQUIPMENT PARKING AREA. ALL MATERIAL STORAGE (PIPE, FITTINGS, ETC.) SHALL BE STORED IN THIS AREA AS WELL. ALL BACKFILL MATERIAL WILL REMAIN OFFSITE UNTIL NEEDED, UNLESS OTHERWISE AUTHORIZED AT THE TIME OF CONSTRUCTION BY THE AIRPORT DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE.

THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM.

THE CONTRACTOR SHALL MINIMIZE THE CLOSURE OF TAXILANES LEADING TO THE VARIOUS HANGARS ALONG THE PROPOSED WATER MAIN LOOP, AND SHALL PROVIDE THE AIRPORT DIRECTOR A PROPOSED WORK SCHEDULE DEFINITELY LISTING HIS ANTICIPATED CLOSURE DATES SO THAT THE AIRPORT CAN COMMUNICATE THE CLOSURES TO THEIR TENANTS. THIS SCHEDULE SHALL BE PROVIDED A MINIMUM OF TWO WEEKS PRIOR TO THE START OF WORK, AND SHALL BE UPDATED WEEKLY TO ACCOUNT FOR ANY ACCELERATION OR DELAYS THAT MAY OCCUR DURING CONSTRUCTION.

**BARRICADES AND TRAFFIC CONES**

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES SHOWN, AND AS DIRECTED BY THE AIRPORT DIRECTOR, OR HIS AUTHORIZED REPRESENTATIVE. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR RED STEADY-BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE PAID FOR AS PART OF ITEM AR150530, TRAFFIC MAINTENANCE, PER L.S.

TRAFFIC MAINTENANCE OFF THE AIRPORT WILL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IDOT STD. 701201-03 AND THE CITY OF DECATUR. THIS ELEMENT OF TRAFFIC MAINTENANCE SHALL ALSO BE CONSIDERED INCIDENTAL TO ITEM AR150530 TRAFFIC MAINTENANCE, PER L.S.

**150-ENGINEER'S FIELD OFFICE**

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE" OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS. THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE DETERMINED AT THE PRE-CONSTRUCTION MEETING.

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

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

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE PAID FOR UNDER ITEMS:  
AR150510 ENGINEER'S FIELD OFFICE \_\_\_\_ 1 L.S.

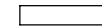



THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

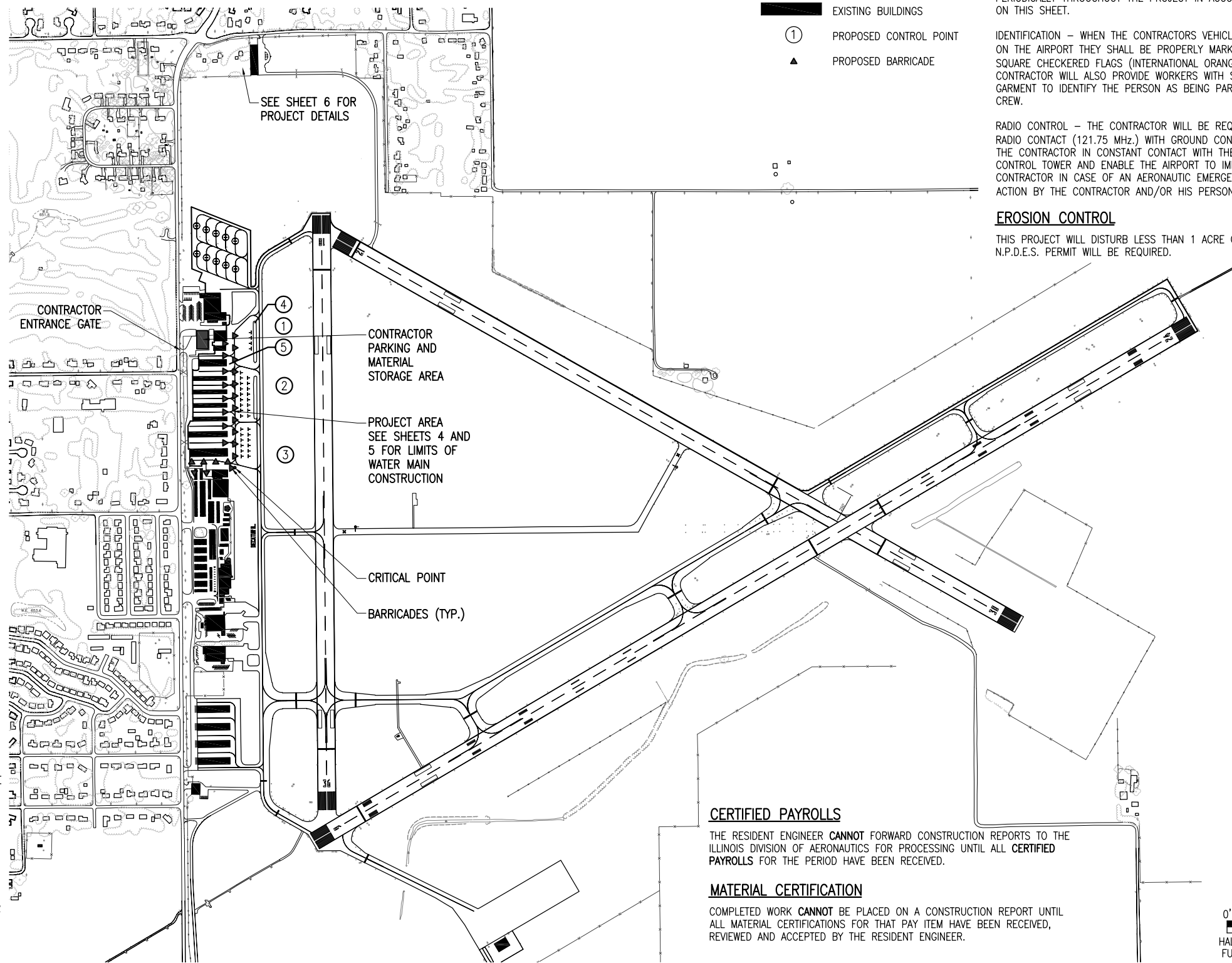
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

**CONTROL POINT DATA**

NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	IRON PIN	1,155,678.10	832,009.63	N/A
2	IRON PIN	1,155,181.53	832,015.69	N/A
3	IRON PIN	1,154,608.02	832,024.81	N/A
4	CHSLD BOX ON SOUTH SIDE, CONCRETE LID, DROP INLET			672.91
5	CHSLD "X" ON EAST RIM OF MANHOLE, EAST OF T-HANGAR "A"			675.18

**LEGEND**

-  EXISTING IMPROVEMENTS
-  EXISTING BUILDINGS
-  PROPOSED CONTROL POINT
-  PROPOSED BARRICADE



**J.U.L.I.E. INFORMATION**

COUNTY \_\_\_\_\_ MACON  
 CITY \_\_\_\_\_ DECATUR  
 TOWNSHIP \_\_\_\_\_ LONG CREEK  
 SECTION NO. \_\_\_\_\_ 20 & 21  
 ADDRESS \_\_\_\_\_ DECATUR AIRPORT  
 AIRPORT ROAD  
 DECATUR, ILLINOIS 62524

**CRITICAL POINT DATA**

LATITUDE: 39° 50' 08.29"  
 LONGITUDE: 88° 52' 36.80"  
 ELEVATION: 678' M.S.L.

**PROPOSED SAFETY PLAN**

GENERAL - THE DECATUR AIRPORT IS COMPRISED OF THREE RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT NECESSITATE CLOSING ANY RUNWAYS. ACCESS TAXIWAYS/TAXILANES WILL REQUIRE CLOSURE PERIODICALLY THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE NOTES ON THIS SHEET.

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

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (121.75 MHz.) WITH GROUND CONTROL. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE DECATUR AIRPORT CONTROL TOWER AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

**EROSION CONTROL**

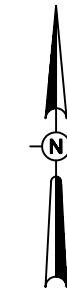
THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF LAND, THEREFORE NO N.P.D.E.S. PERMIT WILL BE REQUIRED.

**CERTIFIED PAYROLLS**

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

**MATERIAL CERTIFICATION**

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



0' 250' 500' 1000'  
 HALF SIZE SCALE: 1"= 1000'  
 FULL SIZE SCALE: 1"= 500'

JUN 25, 2009 10:34 AM HARR01115  
 I:\AIRPORTS\DECATUR\07A0060\CAD\SHEETS-REVISED\R-0035FY.DWG - SAFETY PLAN

BY	DATE	REVISION

**DECATUR AIRPORT**  
 DECATUR, ILLINOIS

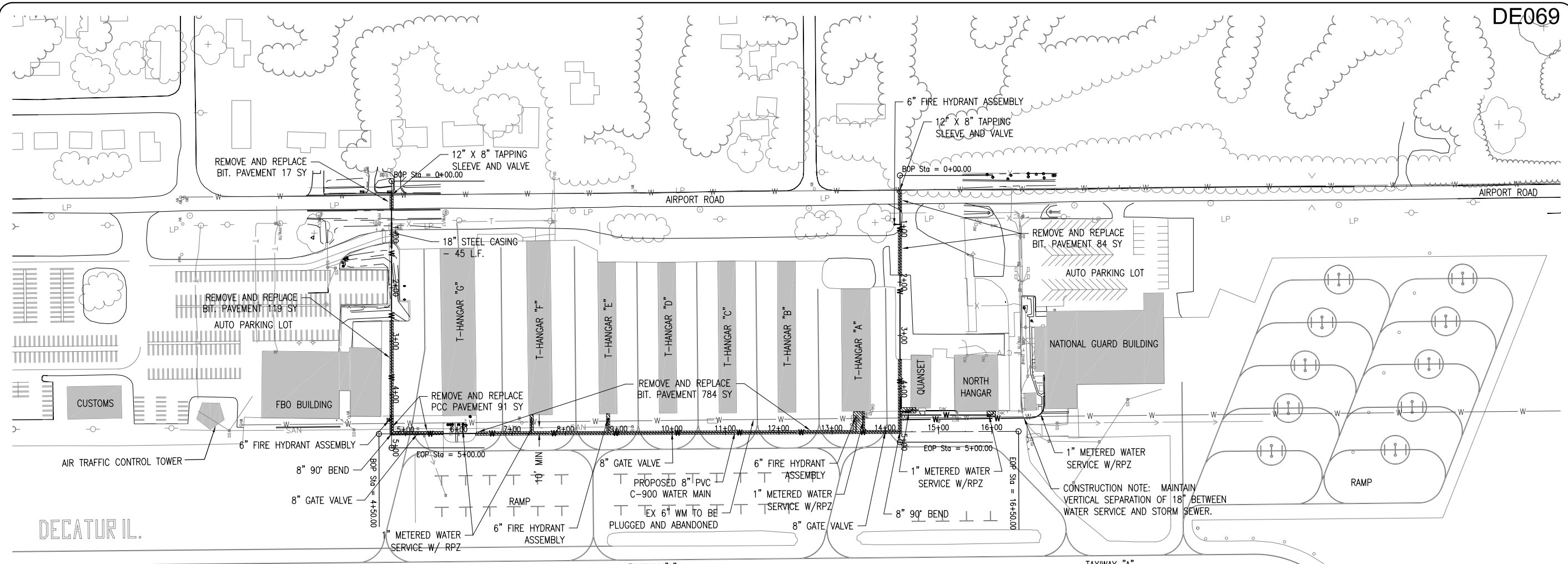
A.I.P. PROJ.: 3-17-0033-XX  
 IL PROJ.: DEC-3801

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File Name R-0035FY.DWG	06/19/09
Scale 1" = 500'	06/19/09
Date 06/19/2009	06/19/09
LAYOUT RAW	RAW
DRAWN MLH	MLH
REVIEWED RAW	RAW

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CONSTRUCT WATER MAIN

PROPOSED SAFETY PLAN



**GENERAL NOTES**

ALL PAVEMENT MARKINGS DISTURBED BY THE REMOVAL AND REPLACEMENT OF THE PAVEMENTS SHOWN WITHIN THE PLANS SHALL BE REMARKED IN ACCORDANCE WITH AR620520 PAVEMENT MARKING-WATERBORNE, PER S.F.

AN AMOUNT OF 500 S.F. OF PAVEMENT MARKING HAS BEEN INCLUDED TO PAY FOR THE REMARKING. THE AMOUNT OF PAVEMENT MARKING PAID FOR SHALL BE THE AMOUNT MEASURED AND ACCEPTED BY THE RESIDENT ENGINEER.

ALL TAXIWAY CENTERLINE MARKING SHALL BE 1' IN WIDTH AND YELLOW IN COLOR. PAVEMENT MARKINGS ON PCC PAVEMENT SHALL INCLUDE A 6" BLACK BORDER, AND PAID FOR UNDER ITEM AR620520. NO PAVEMENT MARKING SHALL BE APPLIED TO PCC PAVEMENT UNTIL SUCH TIME THAT THE CURING COMPOUND IS NO LONGER NECESSARY, AND HAS BEEN REMOVED.

ALL PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH ITEMS;

AR401910 REMOVE AND REPLACE BIT. PAVEMENT, PER S.Y.  
AR501910 REMOVE AND REPLACE PCC PAVEMENT, PER S.Y.

SEE SPECIAL PROVISION FOR THESE ITEMS.

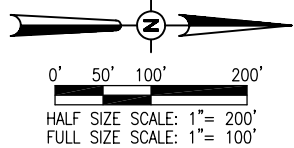
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CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.


**COORDINATE DATA - 8-INCH WATER MAIN BASELINE**

ALIGNMENT	STATION	OFFSET	NORTHING	EASTING
SOUTH	0+00	℄	1154500.23	831104.61
SOUTH	5+00	℄	1154500.23	831604.61
NORTH SOUTH	4+50	℄	1154476.48	831578.45
NORTH SOUTH	16+50	℄	1155676.48	831573.67
NORTH	0+00	℄	1155453.97	831093.94
NORTH	5+00	℄	1155453.97	831593.94


- LEGEND**
- X — EXISTING FENCE
  - W — PROPOSED WATERLINE
  - W — EXISTING WATERLINE
  - SAN — EXISTING SANITARY
  - T — EXISTING TELEPHONE
  - G — EXISTING GAS LINE
  - > — EXISTING STORM SEWER



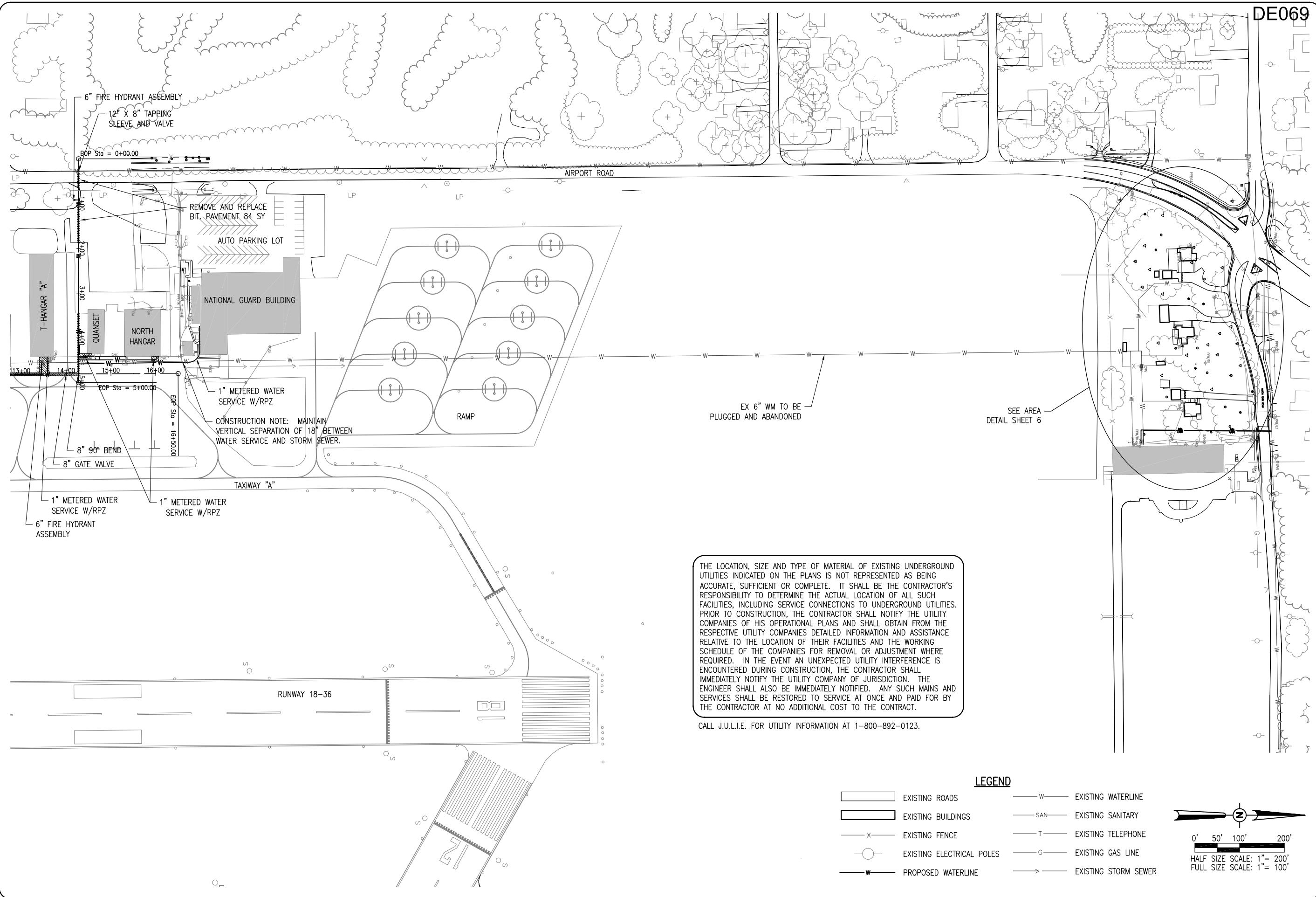
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**DECATUR, ILLINOIS**  
 A.I.P. PROJ.: 3-17-0033-XX  
 IL PROJ.: DEC-3801

HEI Project No. 07A0060D_0800	FILENAME R-121CON.DWG	DATE 06/19/2009
Scale 1" = 100'	LAYOUT RAW	03/12/08
	DRAWN MLH	06/19/09
	REVIEWED RAW	06/19/09


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CONSTRUCT WATER MAIN  
 PROPOSED CONSTRUCTION PLAN - GA RAMP AREA



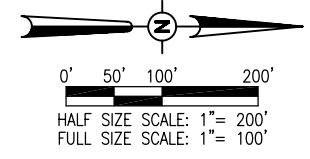
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THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND 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 1-800-892-0123.

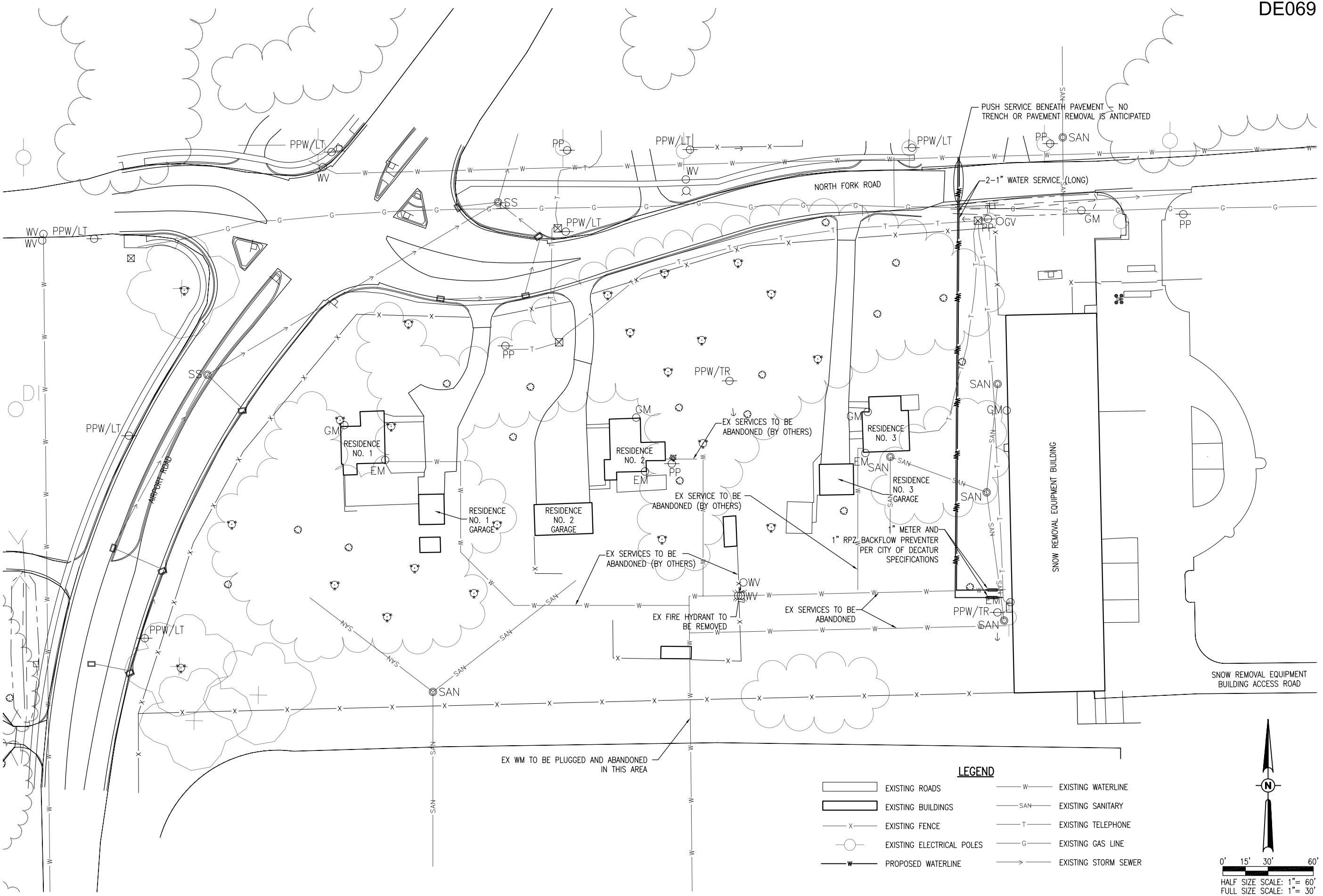
**LEGEND**

- EXISTING ROADS
- EXISTING BUILDINGS
- EXISTING FENCE
- EXISTING ELECTRICAL POLES
- PROPOSED WATERLINE
- EXISTING WATERLINE
- EXISTING SANITARY
- EXISTING TELEPHONE
- EXISTING GAS LINE
- EXISTING STORM SEWER



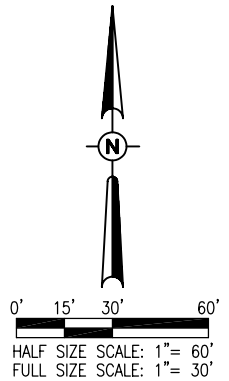
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<b>DECATUR, ILLINOIS</b>			
<b>HANSON</b> Hanson Professional Services Inc. 1625 South Main Street Springfield, IL 62703-2886 Offices Nationwide		IL PROJ.: DEC-3801 A.I.P. PROJ.: 3-17-0033-XX	
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DRAWN	MLH	06/19/09	
REVIEWED	RAW	06/19/09	
CONSTRUCT WATER MAIN	PROPOSED CONSTRUCTION PLAN - GA RAMP AREA		
5			
5 of 14 sheets			

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**LEGEND**

	EXISTING ROADS		EXISTING WATERLINE
	EXISTING BUILDINGS		EXISTING SANITARY
	EXISTING FENCE		EXISTING TELEPHONE
	EXISTING ELECTRICAL POLES		EXISTING GAS LINE
	PROPOSED WATERLINE		EXISTING STORM SEWER



DATE	REVISION	BY

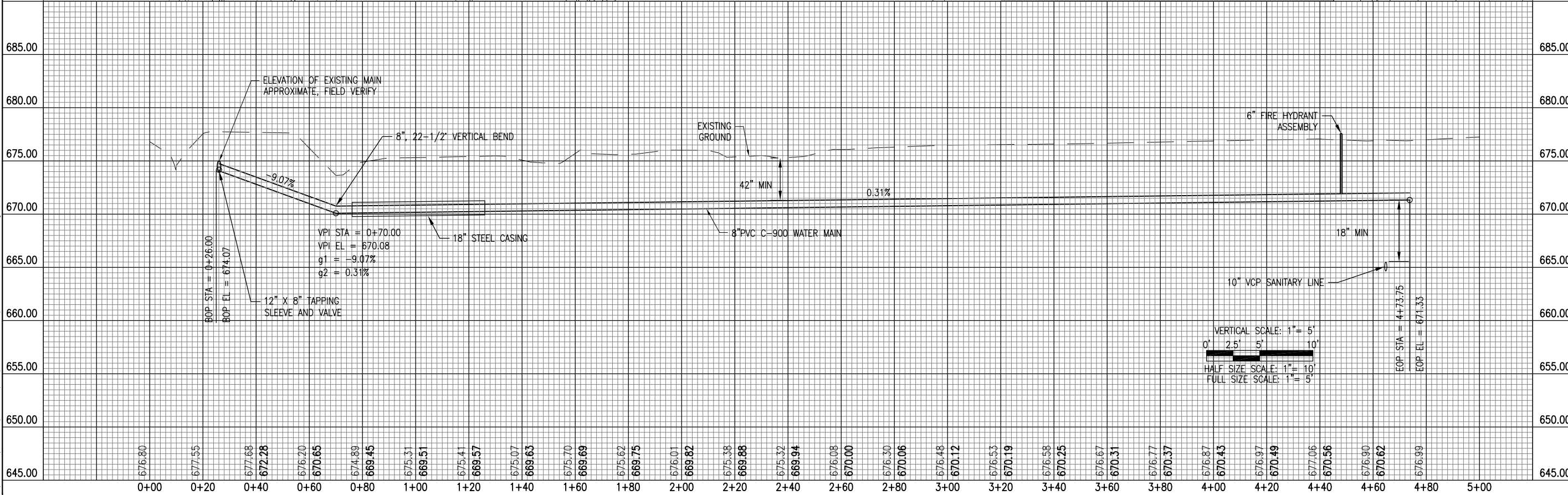
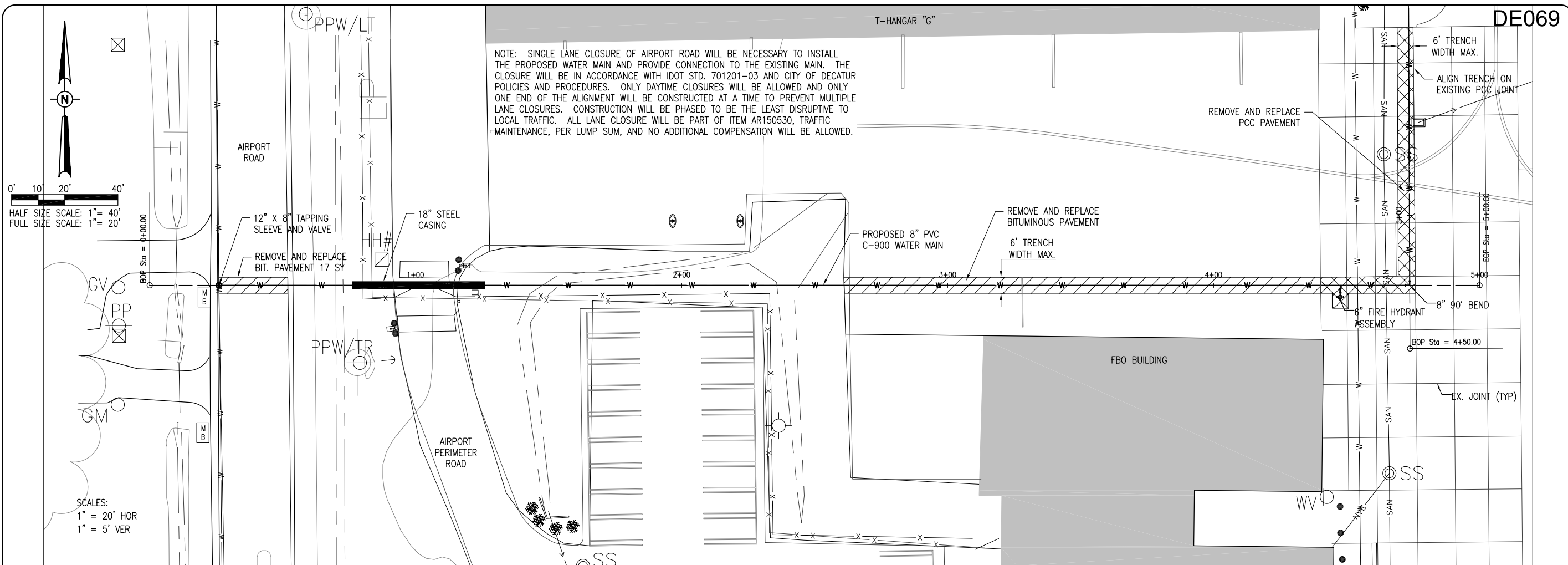
**DECATUR, ILLINOIS**
  
 IL PROJ.: DEC-3801

HEI Project No. 07A0060D\_0800  
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 Scale: 1" = 30'  
 Date: 06/19/2009

LAYOUT	RAW	03/14/08
DRAWN	MLH	06/23/09
REVIEWED	RAW	06/19/09

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CONSTRUCT WATER MAIN  
 PROPOSED CONSTRUCTION PLAN - NORTH WEST QUADRANT AREA



DATE	REVISION	BY

DECATUR AIRPORT  
**DECATUR, ILLINOIS**  
 IL PROJ.: DEC-3801 A.I.P. PROJ.: 3-17-0033-XX

HEI Project No. 07A0060D_0800	FILENAME R-701PNP.DWG	SCALE 1" = 20'	DATE 06/19/2009
LAYOUT	RAW	03/14/08	
DRAWN	MLH	06/19/09	
REVIEWED	RAW	06/19/09	

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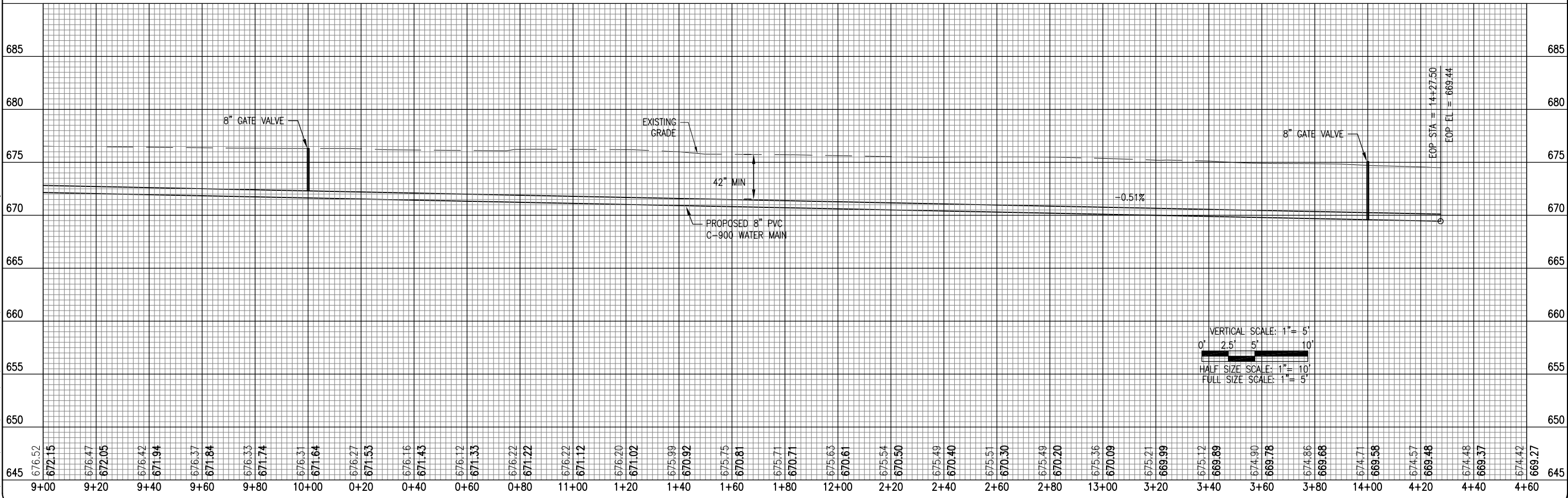
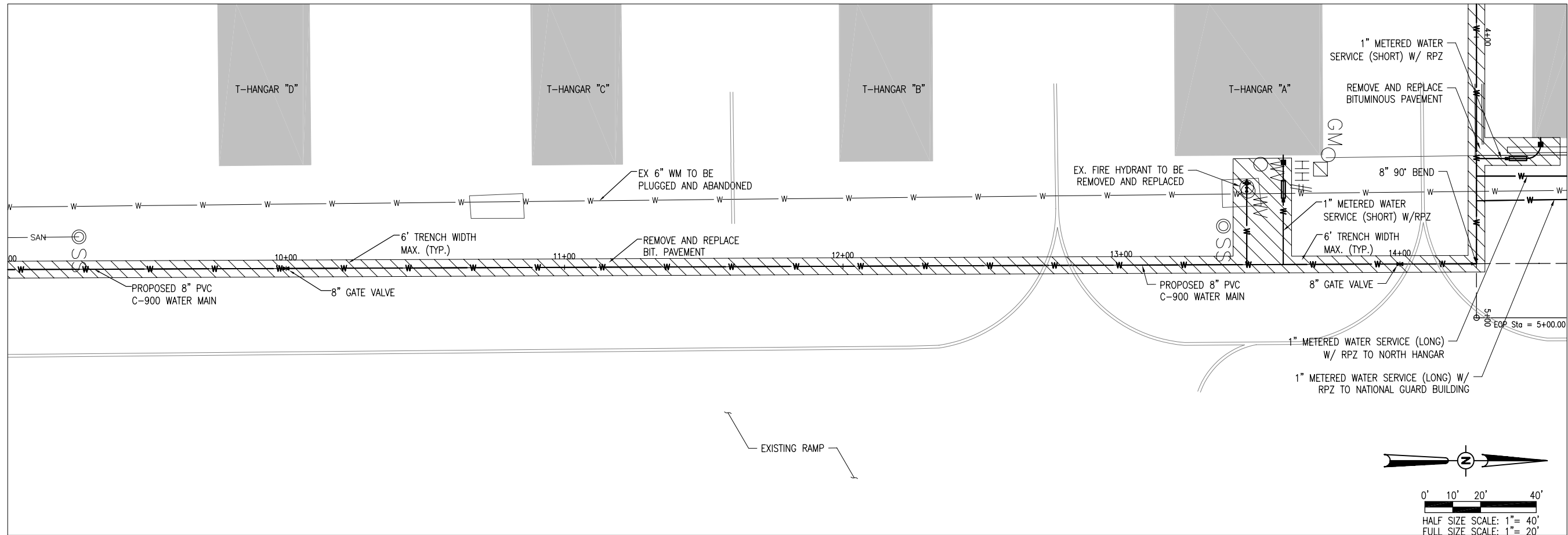
**CONSTRUCT WATER MAIN**  
 SOUTH LEG  
 PLAN AND PROFILE -  
 STA. 0+00 to STA. 5+00

**7**  
 7 of 14 sheets





DE069



JUN 25, 2009 7:44 AM HARR01115  
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DATE	REVISION	BY

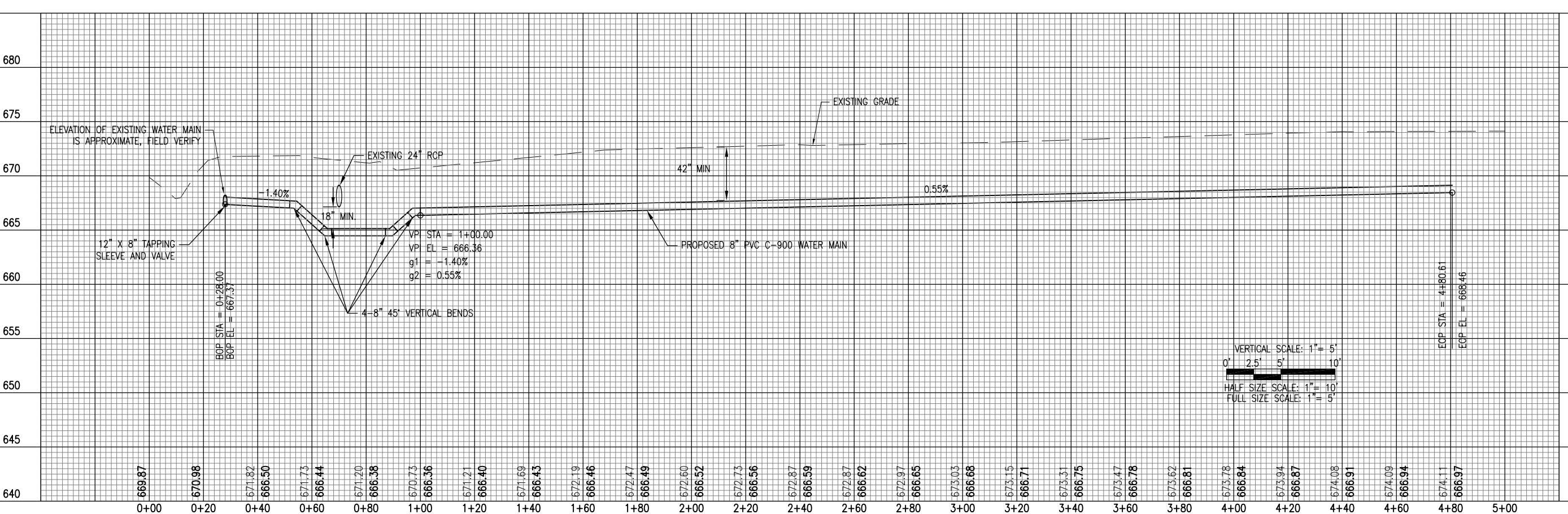
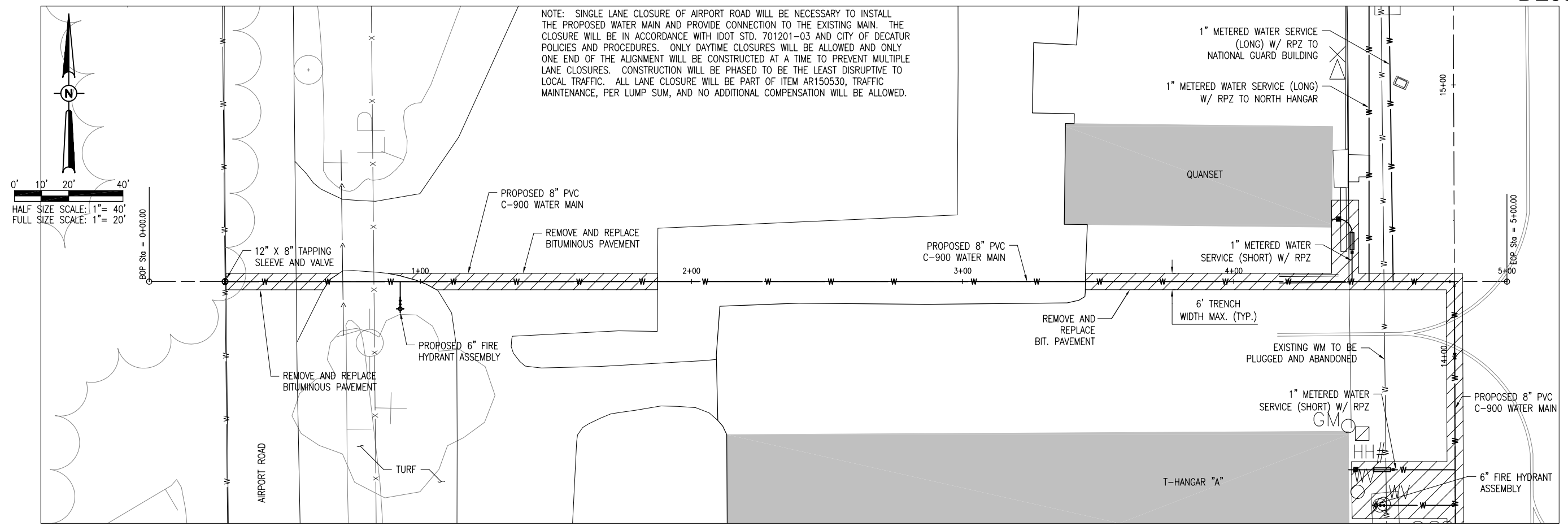
**DECATUR, ILLINOIS**  
 IL PROJ.: DEC-3801 A.I.P. PROJ.: 3-17-0033-XX

HEI Project No. 07A0060D_0800	RAW	03/14/08
Filename R-703PNP.DWG	MLH	06/19/09
Scale 1" = 20'	RAW	06/19/09
Date 06/19/2009	REVIEWED	RAW

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 Offices Nationwide

**CONSTRUCT WATER MAIN**  
 NORTH-SOUTH LEG  
 PLAN AND PROFILE -  
 STA. 9+60 to STA. 14+60

NOTE: SINGLE LANE CLOSURE OF AIRPORT ROAD WILL BE NECESSARY TO INSTALL THE PROPOSED WATER MAIN AND PROVIDE CONNECTION TO THE EXISTING MAIN. THE CLOSURE WILL BE IN ACCORDANCE WITH IDOT STD. 701201-03 AND CITY OF DECATUR POLICIES AND PROCEDURES. ONLY DAYTIME CLOSURES WILL BE ALLOWED AND ONLY ONE END OF THE ALIGNMENT WILL BE CONSTRUCTED AT A TIME TO PREVENT MULTIPLE LANE CLOSURES. CONSTRUCTION WILL BE PHASED TO BE THE LEAST DISRUPTIVE TO LOCAL TRAFFIC. ALL LANE CLOSURE WILL BE PART OF ITEM AR150530, TRAFFIC MAINTENANCE, PER LUMP SUM, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

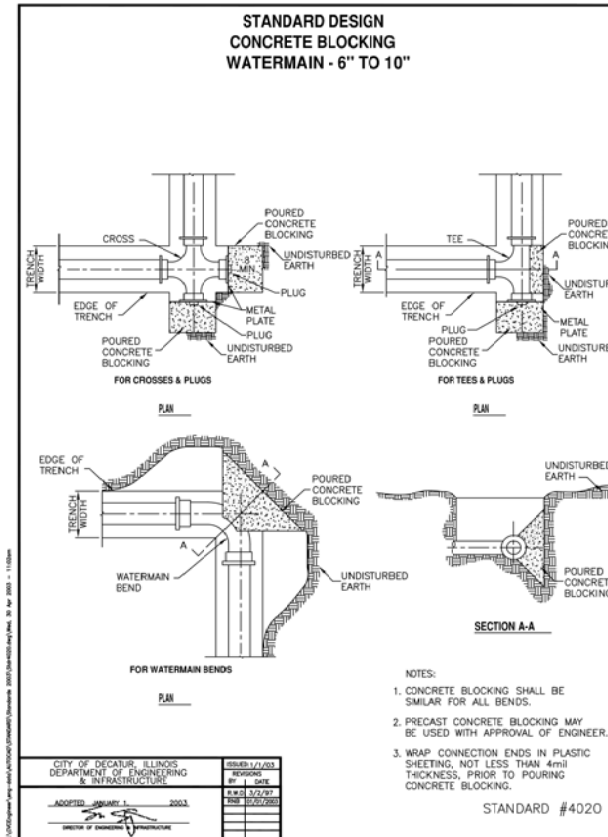
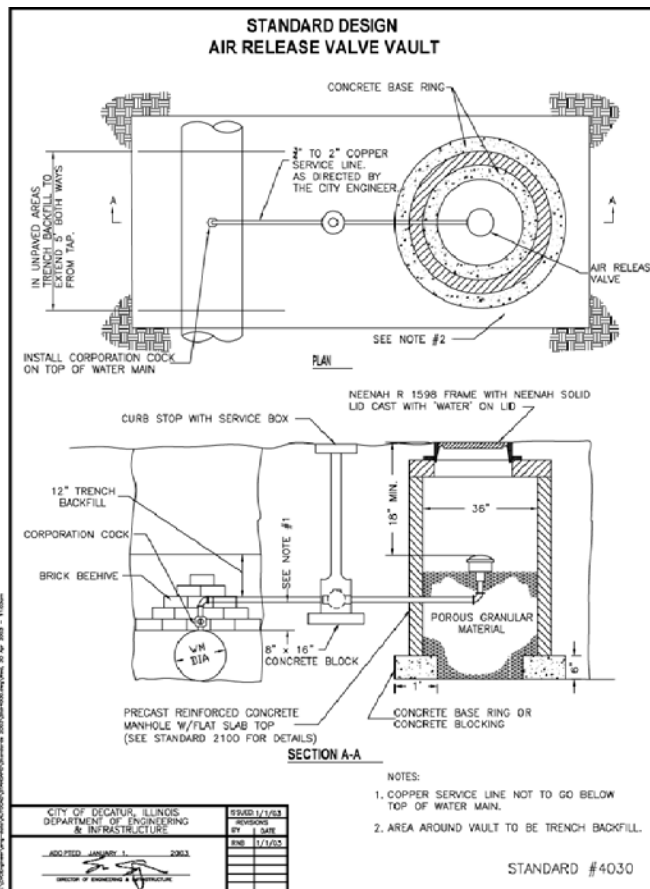
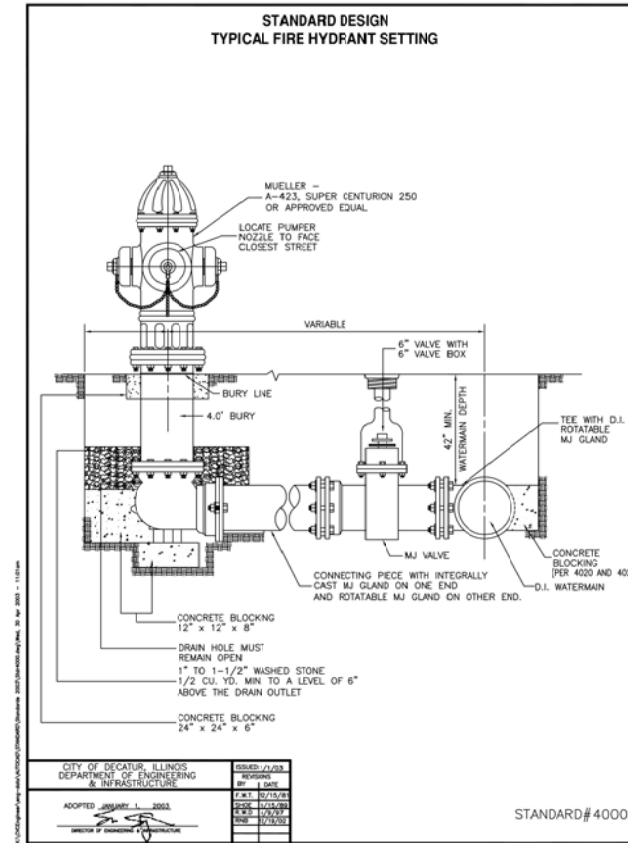
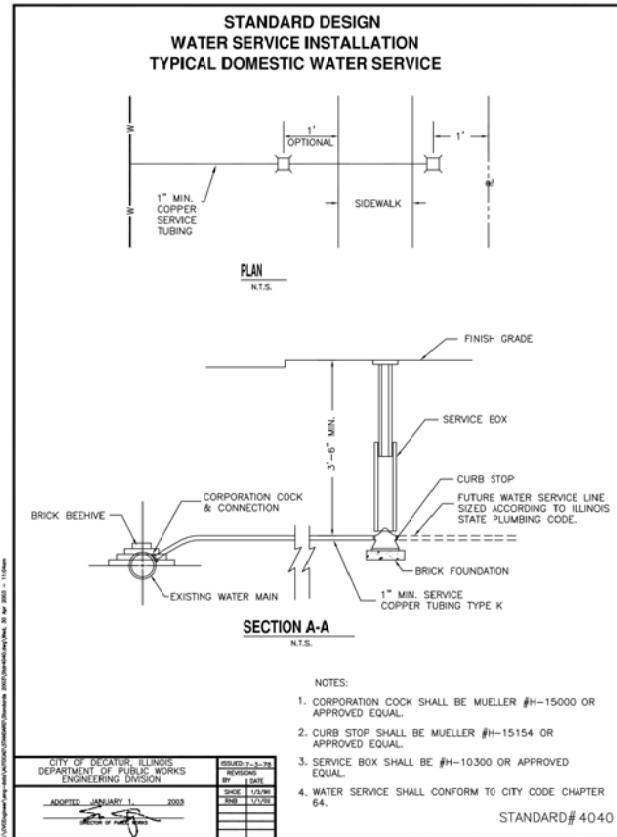


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DATE	REVISION	BY
<p><b>HANSON</b>          Hanson Professional Services Inc.          1626 South Street          Springfield, IL 62703-2886          Offices Nationwide</p>		
<p>CONSTRUCT WATER MAIN          NORTH LEG          PLAN AND PROFILE -          STA. 0+00 to STA. 5+00</p>		
<p>10          10 of 14 sheets</p>		

HEI Project No.	07A00600_0800
File Name	R-705PNP.DWG
Scale	1" = 20'
Date	06/19/2009
LAYOUT	RAW
DRAWN	MLH
REVIEWED	RAW
	06/19/09
	06/19/09
	06/19/09

IL PROJ.: DEC-3801  
 A.I.P. PROJ.: 3-17-0033-XX  
**DECATUR, ILLINOIS**



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DATE	REVISION	BY

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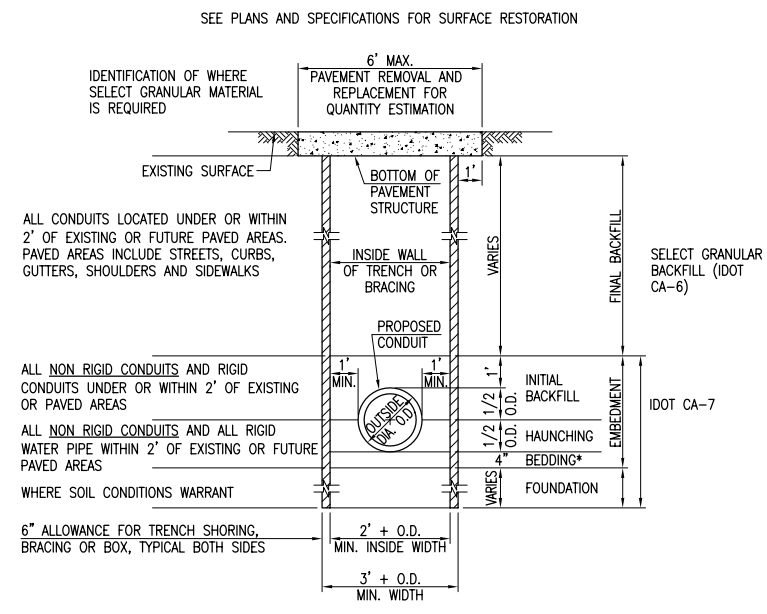
IL PROJ.: DEC-3801 A.I.P. PROJ.: 3-17-0033-XX

HEI Project No. 07A0060D\_0800  
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 Date 06/19/2009

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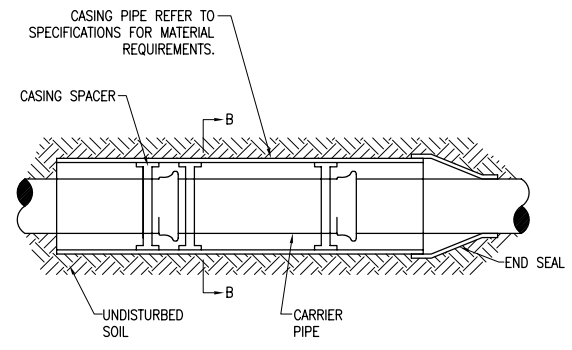
HANSON Professional Services Inc.  
 1426 S. Main Street  
 Springfield, IL 62703-2886  
 Offices Nationwide

CONSTRUCT WATER MAIN  
 PROPOSED WATER MAIN  
 DETAIL SHEET 1



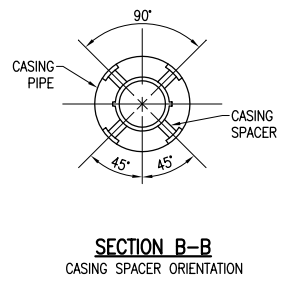
\*BEDDING REQUIRED FOR PVC PIPE AND FOR DUCTILE IRON PIPE WITH RESTRAINED JOINTS.  
NON RIGID CONDUITS ARE DEFINED AS FLEXIBLE THERMOPLASTIC PIPE AND/OR CORRUGATED METAL PIPE.  
 NOTE: TRENCH BOX SHALL NOT EXTEND BELOW TOP OF PIPE, HOWEVER, IT SHALL NOT EXCEED 2 FEET FROM THE BOTTOM OF THE TRENCH.

**TRENCH DETAIL UNDER PAVEMENT**

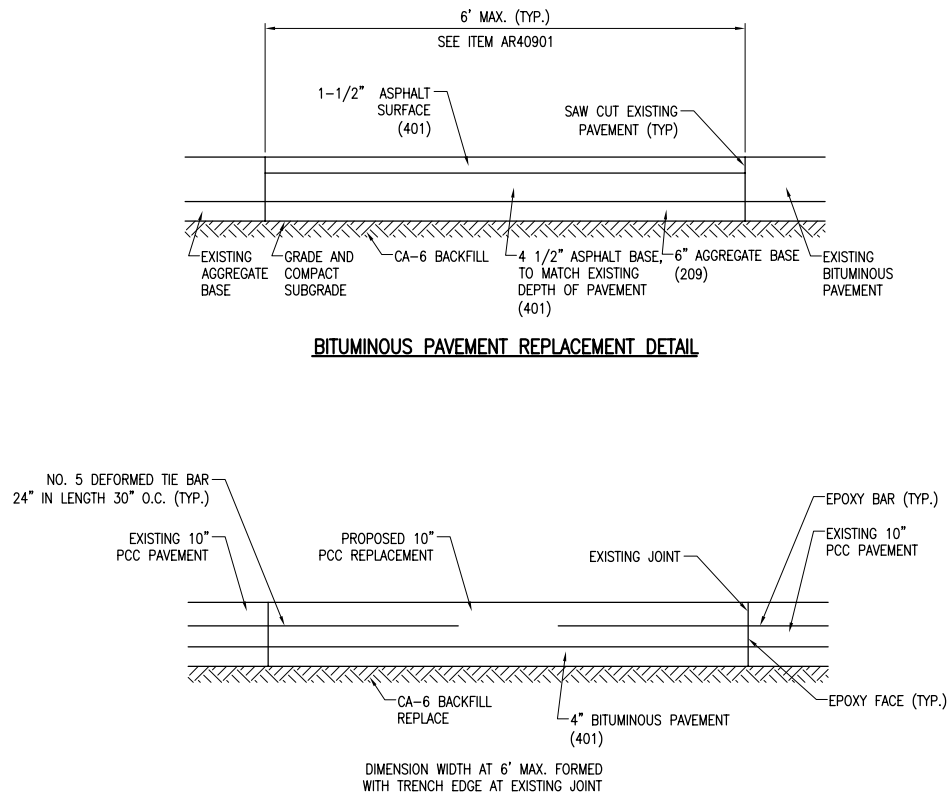


**CASED PIPE**

- NOTES:
- CASING PIPE SIZE SHOWN IN PLANS ACCOMMODATES PUSH-ON JOINT. LARGER DIAMETER MAY BE REQUIRED FOR MECHANICAL JOINTS. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4" LARGER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE (JOINTS OR COUPLINGS).
  - ESTIMATED CASING LENGTH IS SHOWN ON PLANS. CASING LENGTH MAY BE ADJUSTED WITH APPROVAL OF ENGINEER.
  - THE TOP OF THE CASING PIPE SHALL BE A MINIMUM OF 3.5' BELOW THE TOP OF PAVEMENT.
  - USE CASING SPACERS (SEE DETAIL) TO MOVE CARRIER PIPE INTO CASING PIPE. SPACING OF CASING SPACERS WILL BE DICTATED BY THE MANUFACTURER.
  - MINIMUM OF 2 SPACERS PER JOINT OF PIPE.

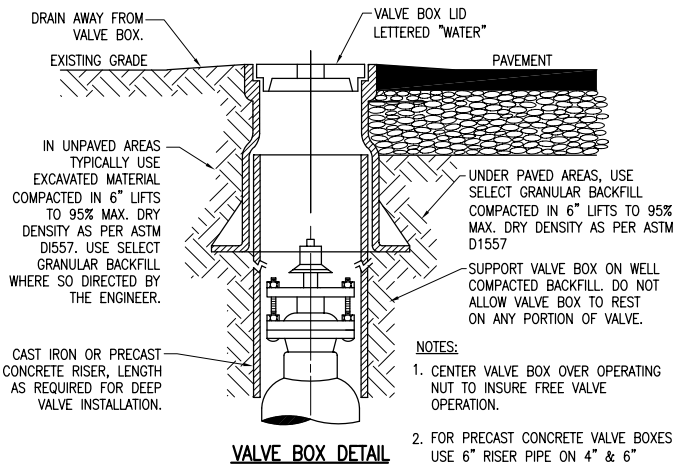


**SECTION B-B**  
CASING SPACER ORIENTATION



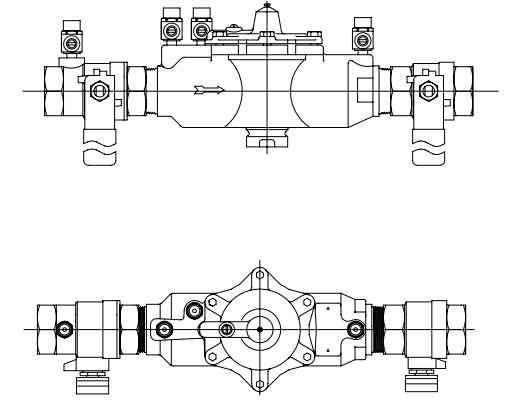
**BITUMINOUS PAVEMENT REPLACEMENT DETAIL**

**PCC PAVEMENT REPLACEMENT DETAIL**



**VALVE BOX DETAIL**

- NOTES:
- CENTER VALVE BOX OVER OPERATING NUT TO INSURE FREE VALVE OPERATION.
  - FOR PRECAST CONCRETE VALVE BOXES USE 6" RISER PIPE ON 4" & 6" VALVES. USE 8" RISER PIPE ON 8" VALVES AND LARGER.



**RPZ BACKFLOW PREVENTER**

NOTE: RPZ BACKFLOW PREVENTION DEVICE AND METER PER CITY OF DECATUR SPECIFICATIONS

DATE	REVISION	BY

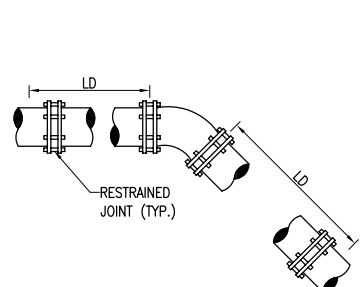
**DECATUR, ILLINOIS**  
 A.I.P. PROJ.: 3-17-0033-XX  
 IL PROJ.: DEC-3801

HEI Project No. 07A0060D_0800	FILENAME R-522CON.DWG	SCALE 1" = 100'	DATE 06/19/2009
LAYOUT	RAW	03/12/08	
DRAWN	MLH	06/19/09	
REVIEWED	RAW	06/19/09	

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CONSTRUCT WATER MAIN  
 PROPOSED WATER MAIN  
 DETAIL SHEET 2

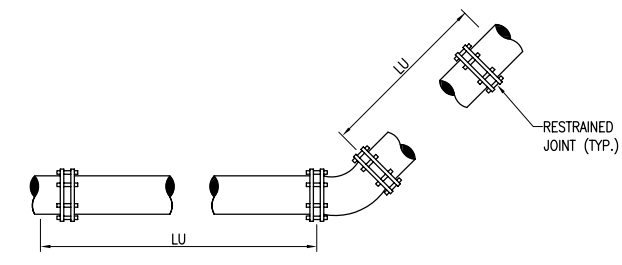
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**RESTRAINED JOINT FITTING DETAIL  
VERTICAL DOWN BEND**  
LD = LENGTH OF RESTRAINED PIPE REQUIRED IN L.F. ON EACH SIDE OF BEND

PIPE SIZE	LD		
	11.25'	22.5'	45'
4" D.I.	3	5	11
6" D.I.	4	8	16
8" D.I.	5	10	21
10" D.I.	6	12	25
4" PVC	5	10	21
6" PVC	7	15	31
8" PVC	9	19	40
10" PVC	12	23	49

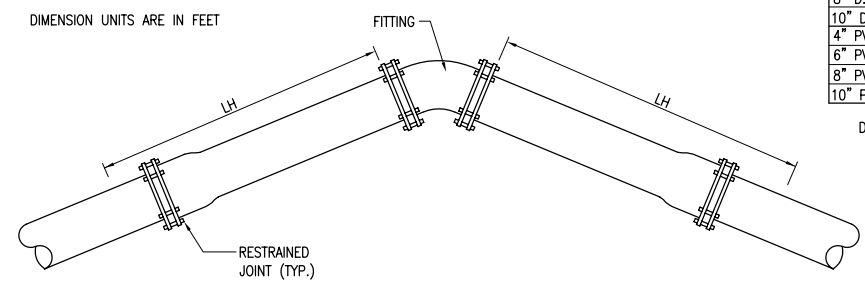
DIMENSION UNITS ARE IN FEET



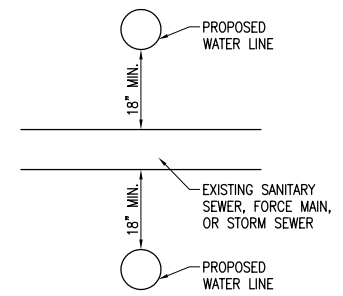
**RESTRAINED JOINT FITTING DETAIL  
VERTICAL UP BEND**  
LU=LH (SEE HORIZONTAL BEND TABLE). FOR VERTICAL OFFSETS, IF PIPE LENGTH BETWEEN DOWN BEND AND UP BEND IS LESS THAN LD+LH, RESTRAIN ENTIRE LENGTH BETWEEN FITTINGS AND PROVIDE LD AND LH ON HORIZONTAL RUNS BEYOND DOWN BEND AND UP BEND FITTINGS, RESPECTIVELY.

PIPE SIZE	LH			
	11.25'	22.5'	45'	90'
4" D.I.	2	3	6	14
6" D.I.	3	5	10	22
8" D.I.	3	6	12	28
10" D.I.	4	7	15	34
4" PVC	2	4	7	16
6" PVC	3	5	10	22
8" PVC	3	6	12	28
10" PVC	4	7	15	34

DIMENSION UNITS ARE IN FEET

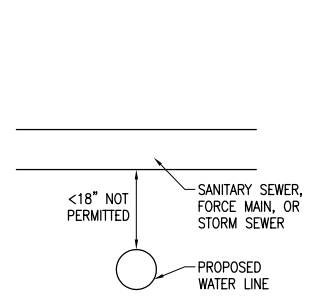


**RESTRAINED JOINT FITTING DETAIL  
HORIZONTAL BENDS**

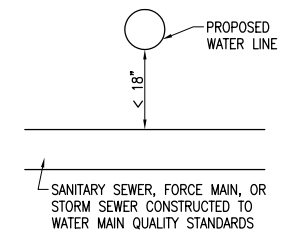


CASE I - VERTICAL SEPERATION ≥ 18"

- SEWER PIPE SHALL BE SUPPORTED TO PREVENT SETTLING AND BREAKING THE WATER MAIN.
- BOTH WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST IRON OR DUCTILE IRON PIPE, PRESTRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN WATER PASSES UNDER SEWER OR DRAINS.



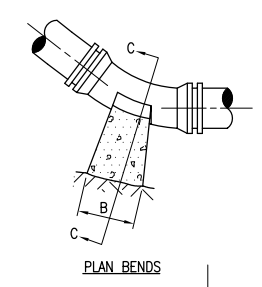
CASE II - WATER LINE < 18" BELOW SEWER NOT PERMITTED



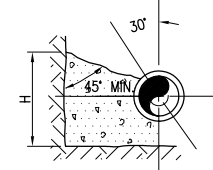
CASE III - WATER LINE < 18" ABOVE SEWER

- BOTH WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST IRON OR DUCTILE IRON PIPE, PRESTRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN VERTICAL SEPERATION IS LESS THAN 18" AND ABOVE SEWER

**VERTICAL SEPERATION REQUIREMENTS**



PLAN BENDS

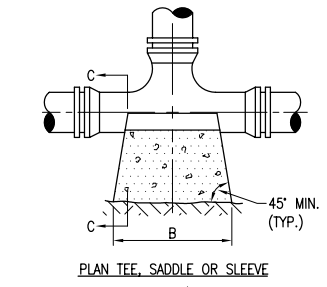


SECTION C-C BENDS & TEES

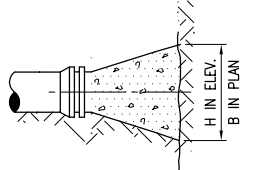
PIPE SIZE	11.25'			22.5'			45'			90'			TEE OR PLUG		
	A SF	B FT	H FT	A SF	B FT	H FT	A SF	B FT	H FT	A SF	B FT	H FT	A SF	B FT	H FT
4"	0.35	0.8	0.4	0.71	1.2	0.6	1.38	1.7	0.8	2.56	2.3	1.1	1.81	1.9	1.0
6"	0.73	1.2	0.6	1.46	1.7	0.9	2.86	2.4	1.2	5.29	3.3	1.6	3.74	2.7	1.4
8"	1.26	1.6	0.8	2.51	2.2	1.1	4.92	3.1	1.6	9.10	4.3	2.1	6.43	3.6	1.8
10"	1.90	1.9	1.0	3.78	2.7	1.4	7.41	3.8	1.9	13.69	5.2	2.6	9.68	4.4	2.2

DIMENSION UNITS ARE FEET  
AREA UNITS ARE SQUARE FEET  
PIPE SIZE = BRANCH SIZE FOR TEE.  
DESIGN PRESSURE = 200 PSI.  
ALLOWABLE SOIL BEARING CAPACITY = 2000 PSF

**HORIZONTAL THRUST BLOCK DETAILS**

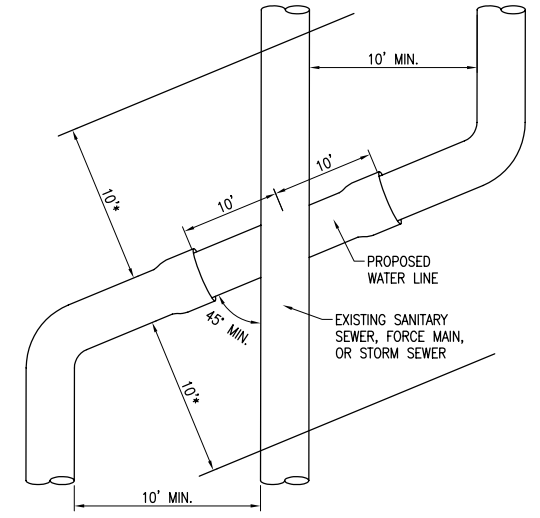


PLAN TEE, SADDLE OR SLEEVE



PLAN & ELEV. PLUGS

- NOTES:
- DEPTH FROM GROUND SURFACE TO TOP OF BLOCKING SHALL BE GREATER THAN HEIGHT OF BLOCKING (H).
  - BLOCKING HEIGHT (H) SHALL BE NO LESS THAN THE PIPE DIAMETER.
  - BLOCKING WIDTH (B) SHALL BE APPROXIMATELY TWICE THE BLOCKING HEIGHT (H).
  - BLOCKING SHALL NOT ENCR OACH ON FITTING JOINT.



**HORIZONTAL SEPERATION REQUIREMENTS**

\*ALL SEWER PIPE JOINTS WITHIN 10' OF WATER LINE MUST BE COMPRESSION TYPE JOINTS.

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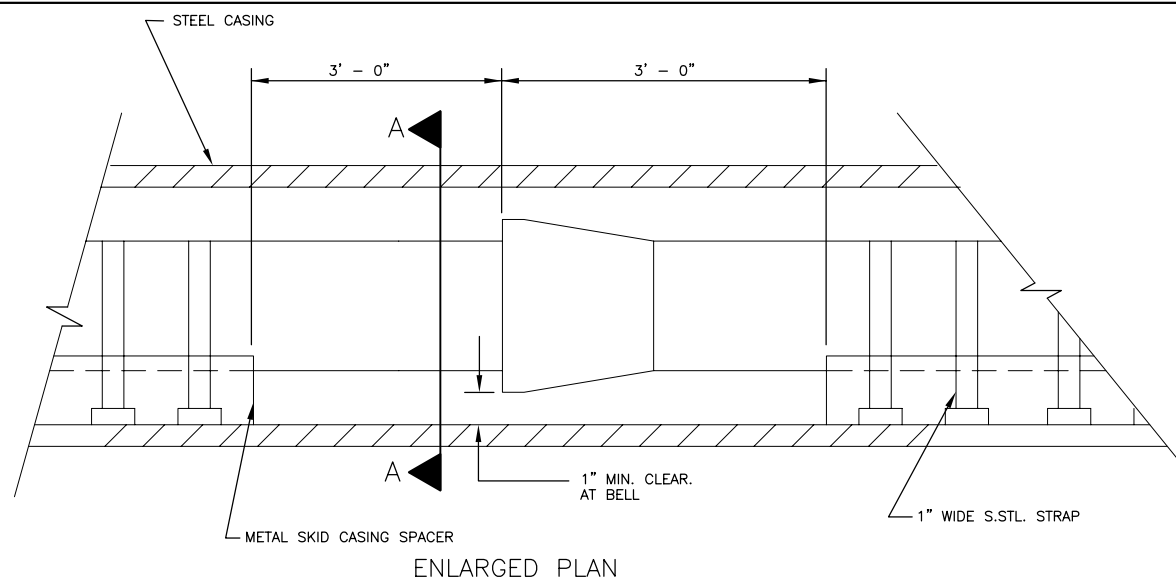


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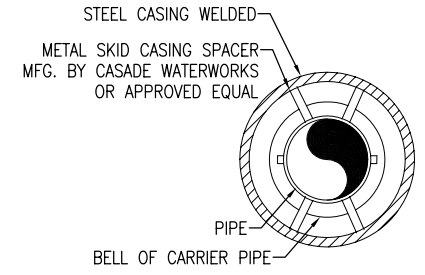
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File Name R-522CON.DWG	MILH	06/19/09
Scale 1" = 100'	RAW	06/19/09
Date 06/19/2009	RAW	06/19/09



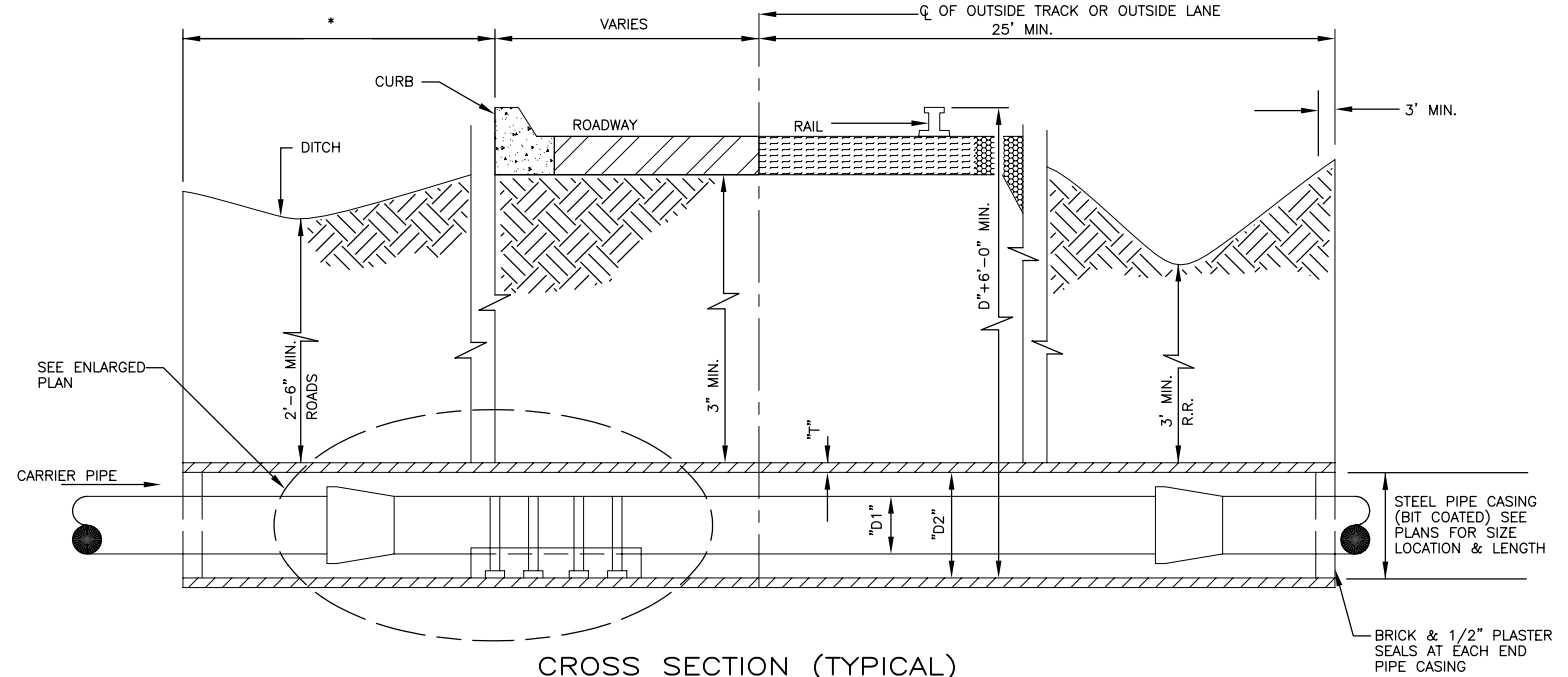
CONSTRUCT WATER MAIN  
PROPOSED WATER MAIN  
DETAIL SHEET 3



ENLARGED PLAN



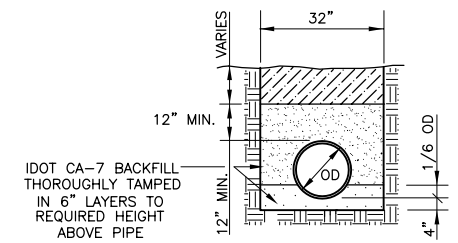
SECTION A-A



CROSS SECTION (TYPICAL)

CARRIER & CASING PIPE SIZE (MINIMUM)								
CI, (DI) - M.J.			4"	6"	8"	10"	12"	
CI, (DI) - P.O.	4"		6"		8"	10"	12"	
PVC (DI)	4"	6"		8"		10"	12"	
STEEL CASING PIPE (D2)	10"	12"	14"	16"	18"	20"	22"	24"
WALL THICKNESS (T)	1/4"	1/4"	1/4"	5/16"	5/16"	5/16"	3/8"	3/8"

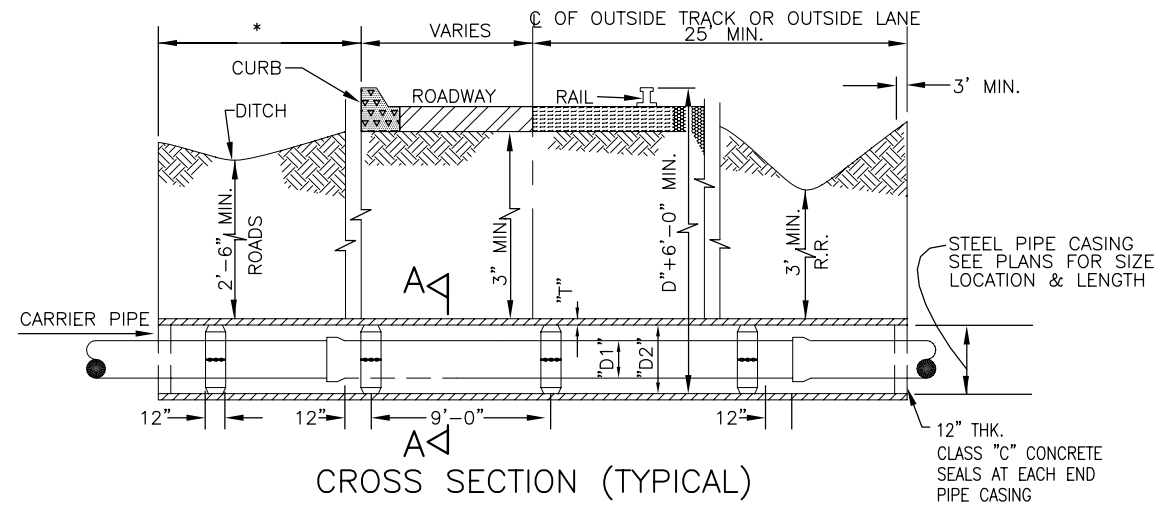
JACK & BORE DETAILS



GRANULAR BEDDING

NOTES:  
 SEE AR701830, BOTH CA-7 TRENCH BACKFILL FOR COMPLETE SPECIFICATION  
 IF ANY UNSUITABLE SUBGRADE CONDITIONS ARE ENCOUNTERED, THE TRENCH SHOULD BE OVER EXCAVATED A MINIMUM OF 6" & REFILLED WITH GRANULAR MATERIAL.  
 OD = OUTSIDE DIAMETER  
 METALLIC ID TAPE SHALL BE PLACED 18" ABOVE PIPE  
 PROVIDE SHEETING AND SHORING AS NECESSARY FOR SAFETY.  
 BACKFILL MATERIALS SHALL BE APPROVED BY THE ENGINEER WHERE THE PIPE IS UNDERCUT.  
 WATERMANS TO BE INSTALLED W/A MIN. OF 42" COVER.

TYPICAL TRENCH SECTION DETAIL IN TURF AREAS



CROSS SECTION (TYPICAL)  
 JACK AND BORE DETAILS

- NOTE:
- METAL SKIDS TO POSITION CARRIER PIPE IN THE CENTER POSITION OF CASING. 2 METAL SKIDS REQUIRED FOR DUCTILE IRON PIPE. LOCATED ADJACENT TO THE BELL END AND AT THE MID POINT OF EACH LENGTH OF CARRIER PIPE FOR SUPPORT. 3 METAL SKIDS REQUIRED FOR P.V.C. PIPE. LOCATED ADJACENT TO THE MID POINT AND TAIL END OF EACH LENGTH OF CARRIER PIPE FOR SUPPORT.
  - METAL SKID SHELL TO BE STAINLESS STEEL WITH P.V.C. LINER AND 18-8 STAINLESS STEEL NUTS AND BOLTS
  - ROTATION OF CARRIER PIPE INSIDE THE CASING PIPE WILL NOT BE PERMITTED. MECHANICAL OR FLANGED JOINT PIPE SHALL BE USED TO HELP PREVENT SUCH ROTATION.
  - THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF CASING, METAL SKIDS AND CARRIER PIPE INSTALLATION FOR DESIGN CONSULTANT REVIEW PRIOR TO FABRICATION OF PIPING, CASTING AND APPURTENANCES.

DATE	REVISION	BY

**DECATUR, ILLINOIS**  
 I.L. PROJ.: DEC-3801  
 A.I.P. PROJ.: 3-17-0033-XX

HEI Project No. 07A0060D_0800	RAW	03/12/08
File Name R-522CON.DWG	BAK	03/12/08
Scale 1" = 100'	RAW	06/19/09
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CONSTRUCT WATER MAIN
PROPOSED WATER MAIN
DETAIL SHEET 4

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