# **CONSTRUCTION PLANS**

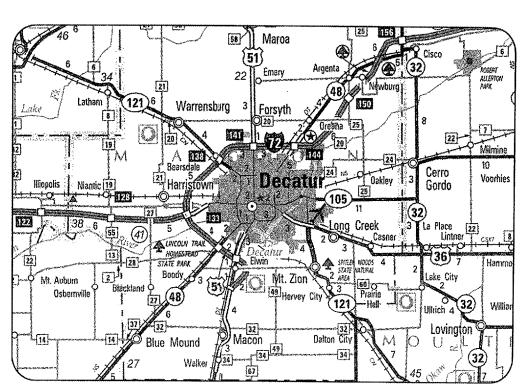
**FOR** 

# **DECATUR AIRPORT**

DECATUR, MACON COUNTY, ILLINOIS **CONSTRUCT WATER MAIN** 

#### 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.



## **LOCATION**

ILL. PROJ.: A.I.P. PROJ.:

DEC-3801 3-17-00xx-xx

LATITUDE: LONGITUDE: **ELEVATION:** 

DATE:

39° 50' 05" 88° 51' 59" 682.0' M.S.L. **APRIL 18, 2008** 

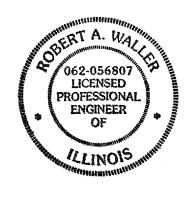
**DE069 TOTAL SHEETS - 15** 



HANSON

CONSTRUCT WATER MAIN

LOCATION OF COUNTY



**HANSON** APRIL 18, 2008 Date Submitted Lies. Exp. Date NOVEMBER 30, 2009

**DECATUR PARK DISTRICT** DECATUR, ILLINOIS

Date 15 an 08

DE069	BY	
	REVISION	
	DATE	

DECATUR, ILLINOIS

HANSON

CONSTRUCT
WATER MAIN
SUMMARY OF QUANTITIES
AND
INDEX TO SHEETS

2 2 of 15 sheets

	SUMMARY OF QUANTITIES								
ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUIL					
AR110014	4" DIRECTIONAL BORE	L.F.	172						
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1						
AR150530	TRAFFIC MAINTENANCE	LS,	1						
AR208910	REMOVE & REPLACE AGGREGATE BASE	S.Y.	88						
AR401910	REMOVE & REPLACE BIT, PAVEMENT	S.Y.	418						
AR501910	REMOVE & REPLACE PCC PAVEMENT	S.Y.	49						
AR620520	PAVEMENT MARKING — WATERBORNE	S.F.	100						
AR701830	TRENCH BACKFILL	C.Y.	1,085						
AR760508	8" DUCTILE IRON WATER MAIN	L.F.	2,049						
AR760718	18" STEEL CASING	L.F.	90						
AR760800	FIRE HYDRANT	EA.	2						
AR760830	WATER VALVE	EA.	4						
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.	2						
AR800462	WATER SERVICE-LONG	EA.	5						
AR800463	WATER SERVICE-SHORT	EA.	5						
AR800464	RECONNECT WATER SERVICE	EA.	10	***************************************					
AR800465	FILL EXISTING WATER MAIN	C.Y.	13						
AR901510	SEEDING	AC.	1						
AR908510	MULCHING	AC.	1						

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(	INDEX TO SHEETS	
SHEET NO.	DESCRIPTION	1
1	COVER SHEET	1
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS	1
3	PROPOSED SAFETY PLAN	1
4	PROPOSED CONSTRUCTION PLAN - GA RAMP AREA	1
5	PROPOSED CONSTRUCTION PLAN - GA RAMP AREA	1
6	PROPOSED CONSTRUCTION PLAN NORTHWEST QUADRANT AREA	1
7	PROPOSED PLAN AND PROFILE SOUTH LEG, STA. 0+00 TO STA. 5+00	1
8	PROPOSED PLAN AND PROFILE NORTH SOUTH LEG, STA. 5+00 TO STA. 9+60	1
9	PROPOSED PLAN AND PROFILE NORTH SOUTH LEG, STA. 9+60 TO STA. 14+60	۱,
10	PROPOSED PLAN AND PROFILE NORTH SOUTH LEG, STA. 14+60 TO STA. 16+60	1 7
11	PROPOSED PLAN AND PROFILE NORTH LEG, STA. 0+00 TO STA. 5+00	l I
12	PROPOSED WATER MAIN DETAIL SHEET 1	11
13	PROPOSED WATER MAIN DETAIL SHEET 2	<b>'</b>
14	PROPOSED WATER MAIN DETAIL SHEET 3	1
15	PROPOSED WATER MAIN DETAIL SHEET 4	

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 CONTACTOR ENTRANCE GATE WHEN CONTINOUS HAULING OPERATIONS ARE NOT IN PROGRESS AND WILL ENSURE THE GATE IS LOCKED AT THE END OF EACH WORKING DAY.

#### 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.LE. (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 DEFINITIVELY 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 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 NOTES

NO FIELD OFFICE WILL BE PROVIDED FOR THIS PROJECT, HOWEVER A WIRELESS PHONE SHALL BE IN ACCORDANCE TO ITEM AR150510. THE CONTRACTOR WILL FURNISH THE WIRELESS 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 WIRELESS PHONE.

THE PROPOSED ENGINEER'S FIELD OFFICE (WIRELESS PHONE) WILL BE PAID

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.

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-SEE SHEET 6

FOR PROJECT

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DETAILS

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

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CONTRACTOR-

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,	CONTROL P	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			672.91
5	CHSLD "X" ON EAST RIM OF MANHOLE,	EAST OF T-HANG	AR "A"	675.18
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CONTRACTOR

PARKING AND

STORAGE AREA

PROJECT AREA

SEE SHEETS 4

LIMITS OF WATER

CONSTRUCTION

-CRITICAL POINT

BARRICADE (TYP.)

AND 5 FOR

MAIN

MATERIAL

**LEGEND** 

DEXISTING IMPROVEMENTS EXISTING BUILDINGS

CERTIFIED PAYROLLS

MATERIAL CERTIFICATION

PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

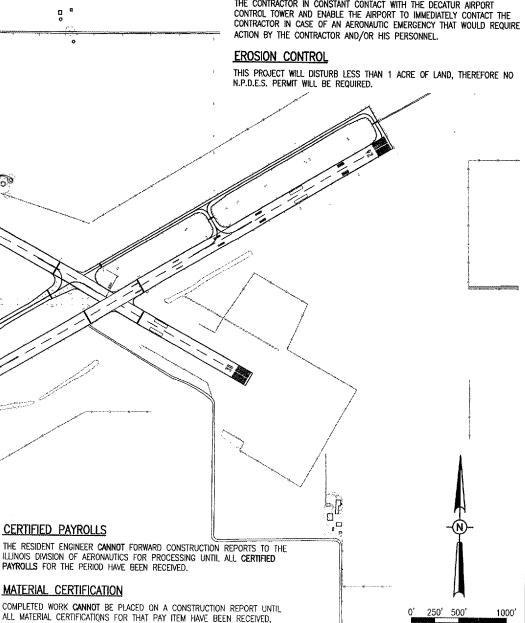
REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.

PROPOSED BARRICADE

PROPOSED CONTROL POINT

SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE

THE CONTRACTOR IN CONSTANT CONTACT WITH THE DECATUR AIRPORT



J.U.L.I.E. INFORMATION CRITICAL POINT DATA

**DE069** 

LATITUDE: 39' 50' 08.29"

LONGITUDE: 88' 52' 36.80"

ELEVATION: 678' M.S.L.

COUNTY MACON DECATUR \_LONG CREEK SECTION NO. \_20 & 21 ADDRESS DECATUR AIRPORT

> AIRPORT ROAD DECATUR, ILLINOIS 62524

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 CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (121.75 MHz.) WITH GROUND CONTROL. THIS WILL KEEP

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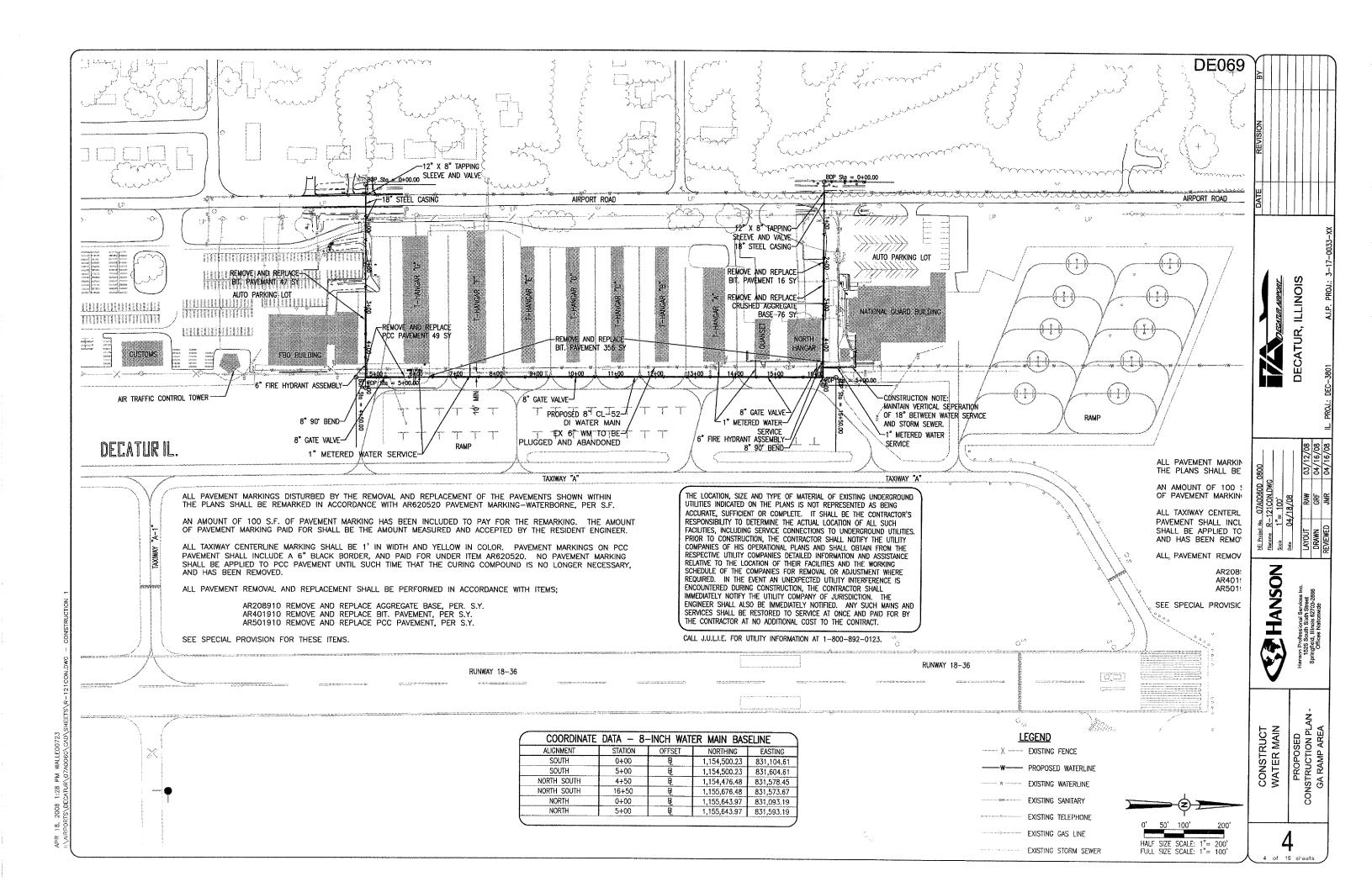
DECATUR,

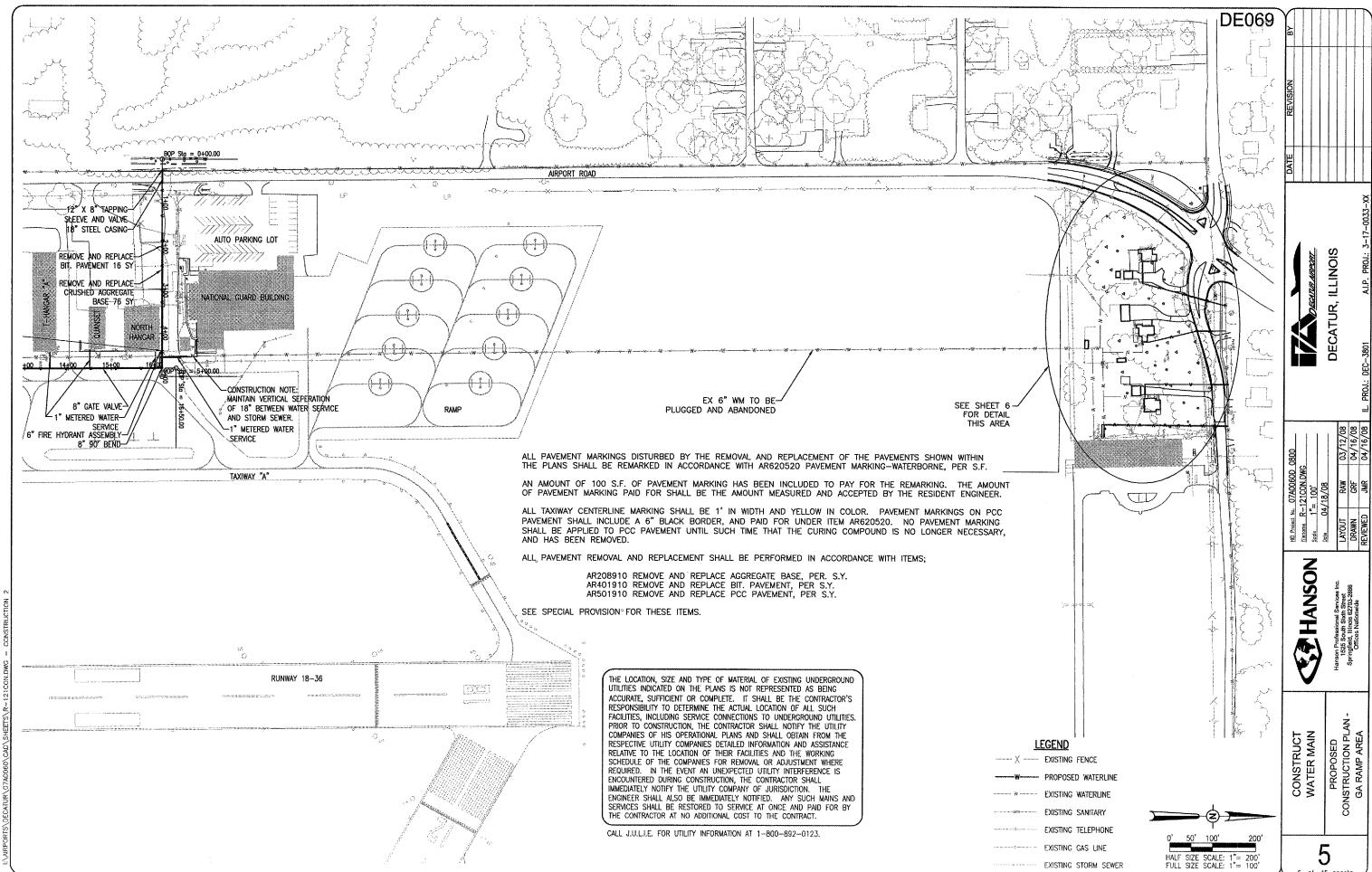
**HANSON** 

CONSTRUCT WATER MAIN

FULL SIZE SCALE: 1"= 500

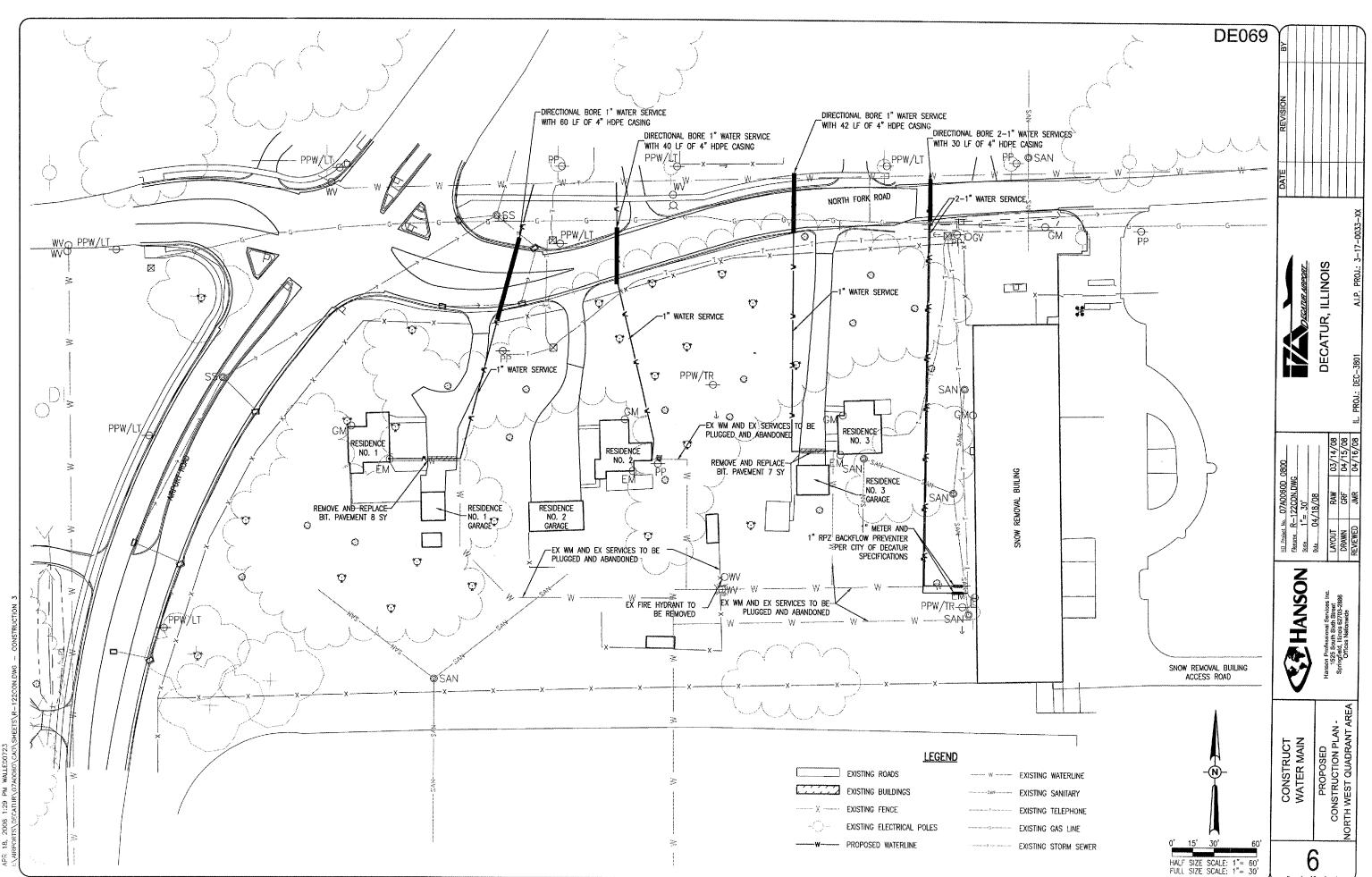
FOR UNDER ITEM:



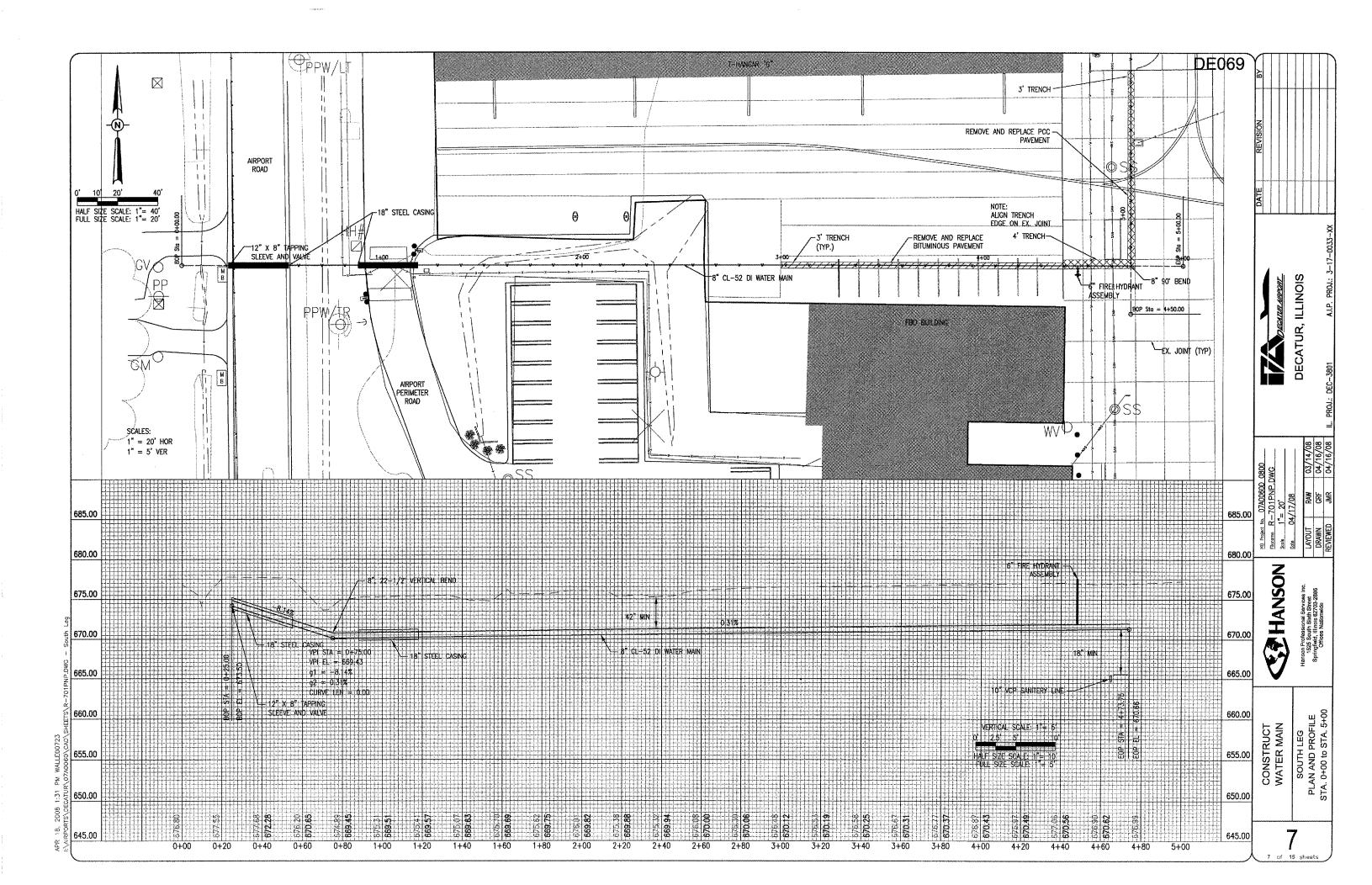


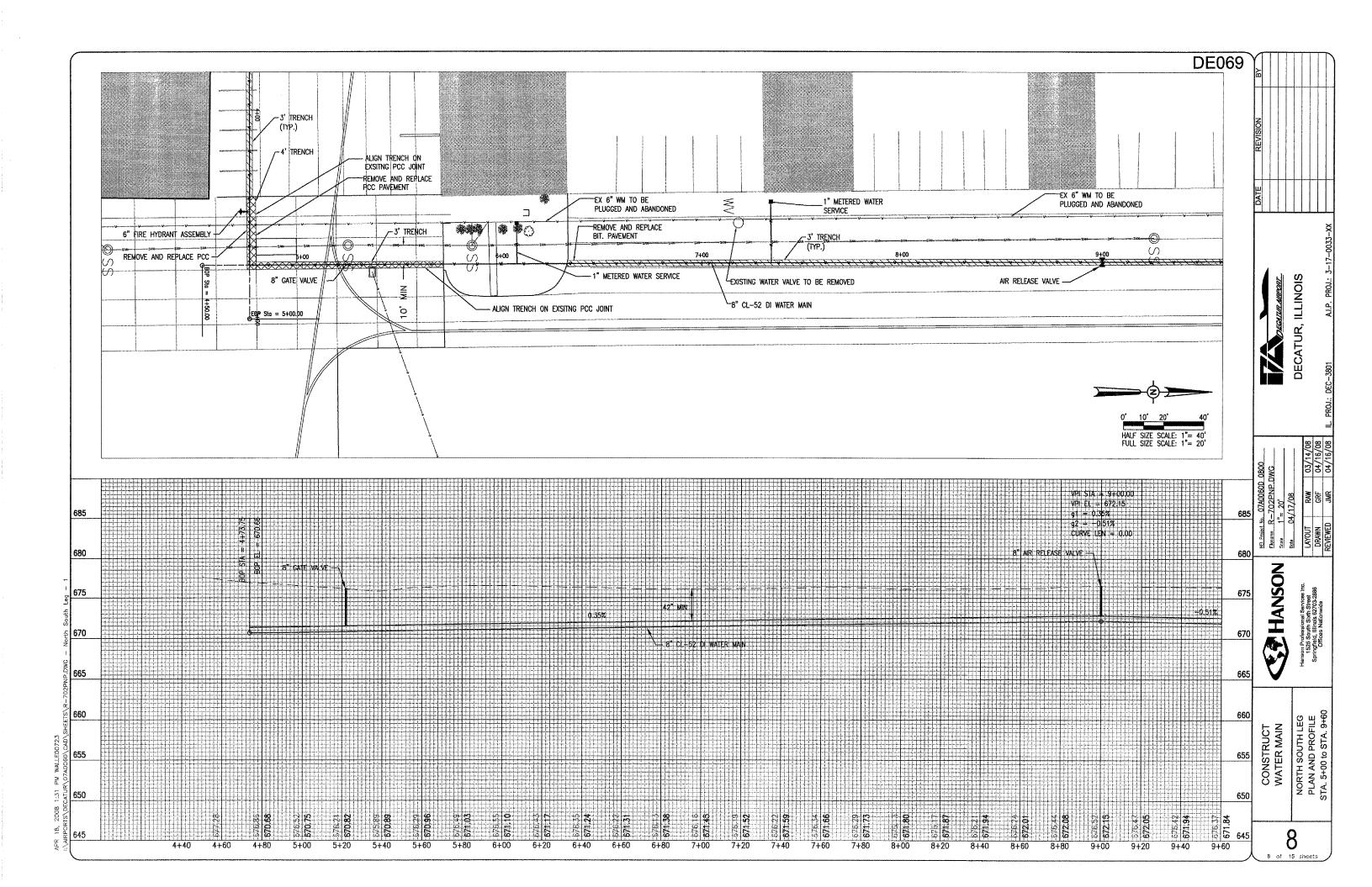
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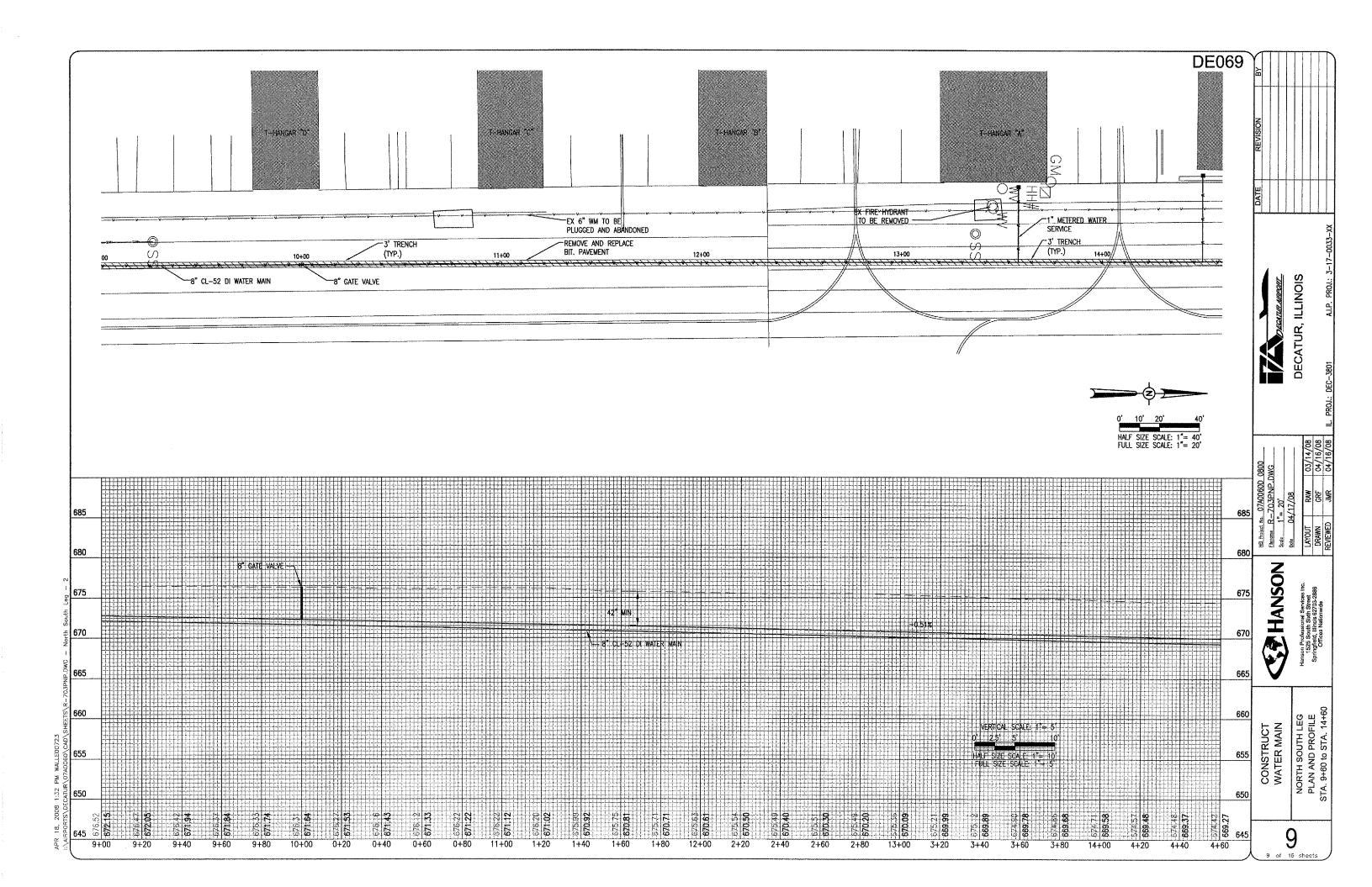
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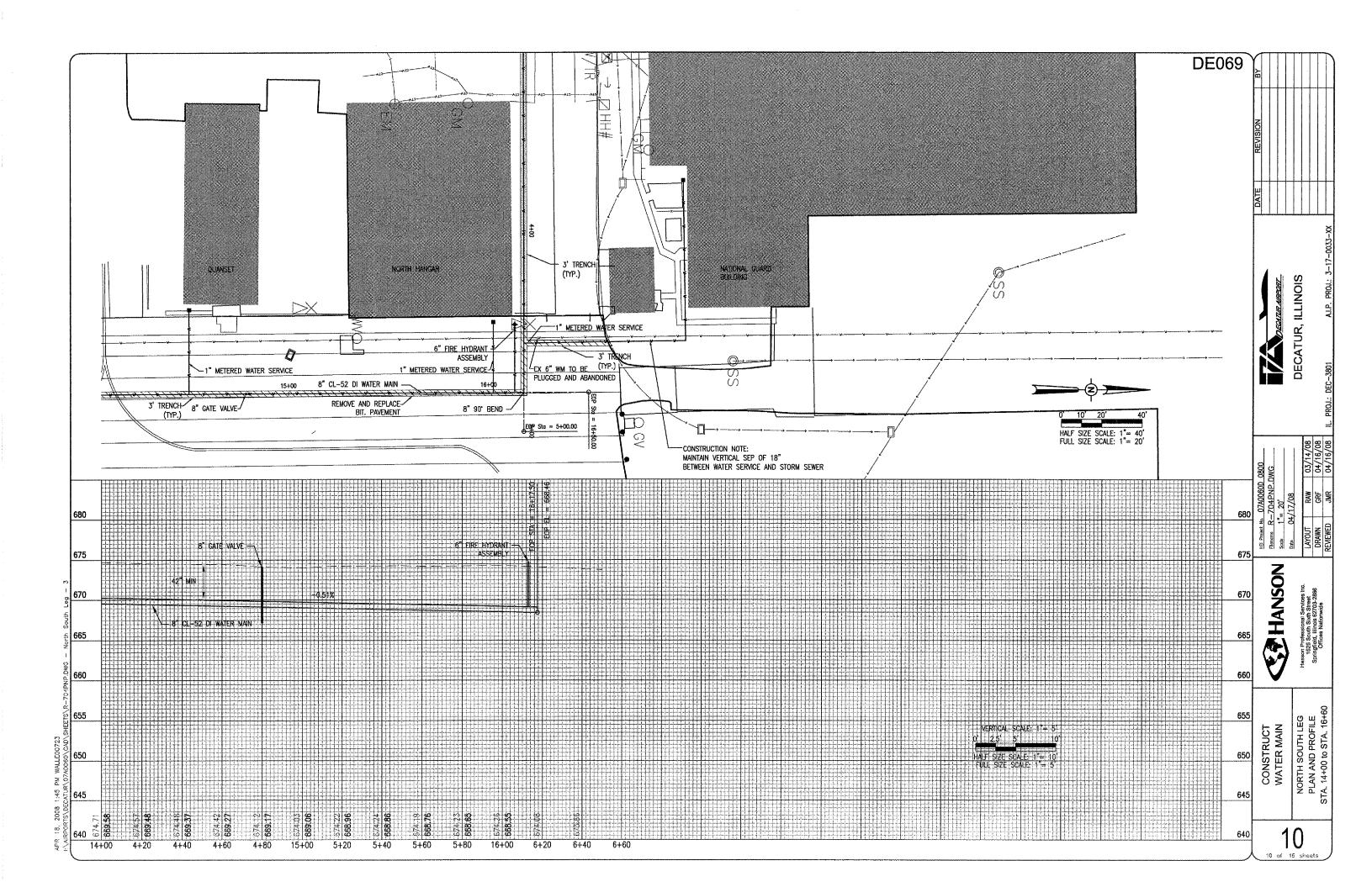


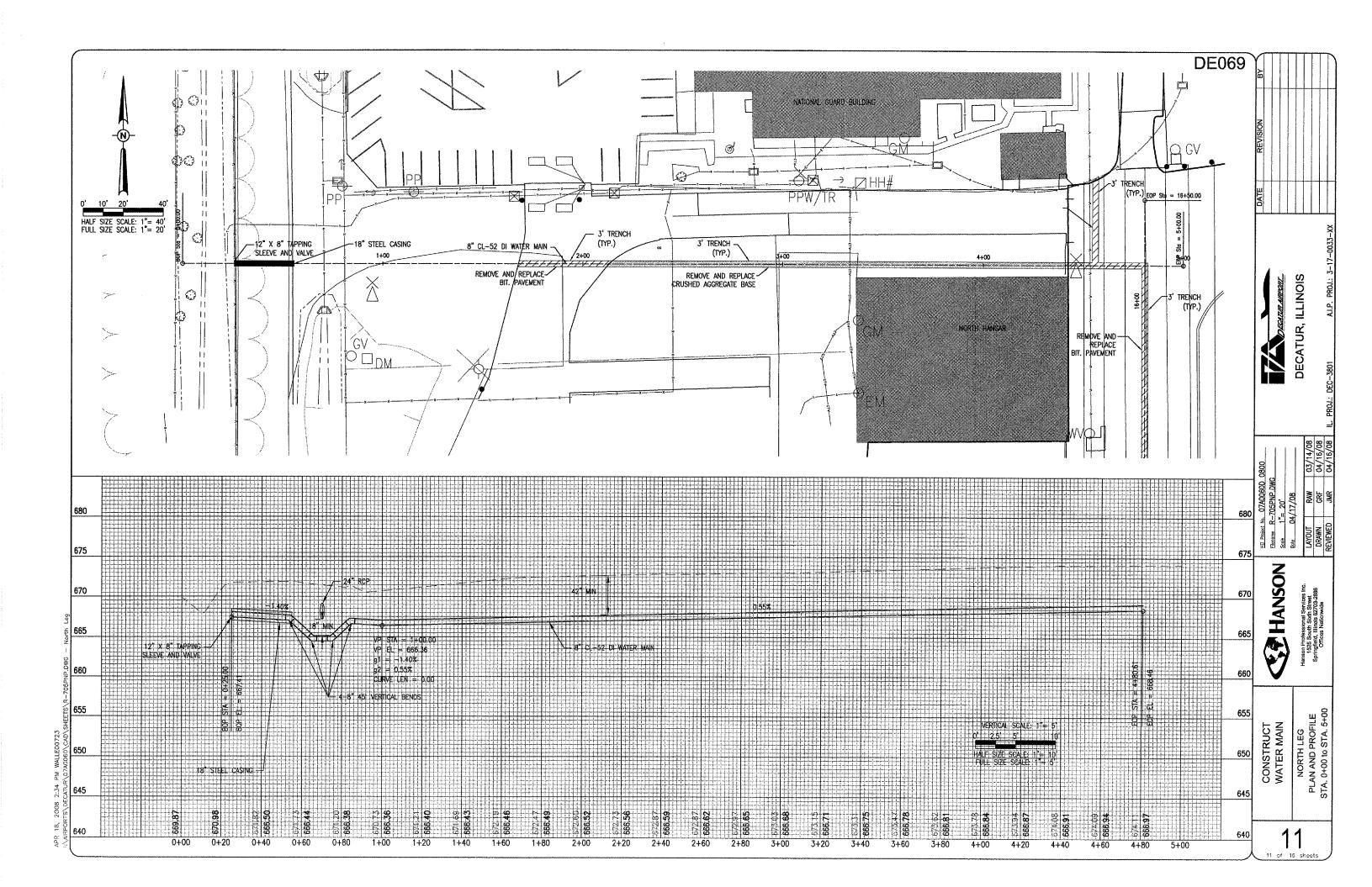
6 of 15 sheets

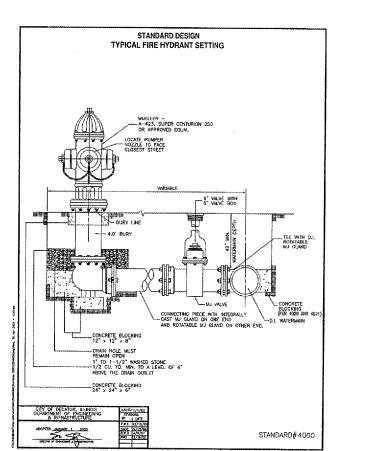


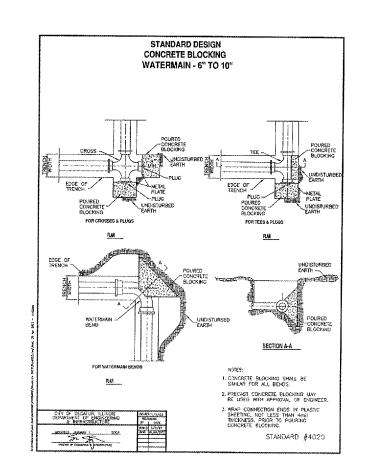


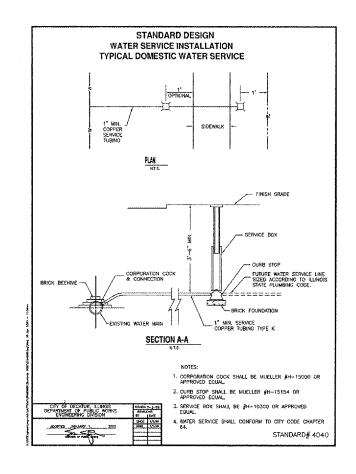


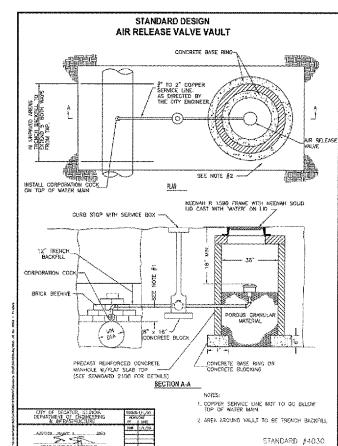












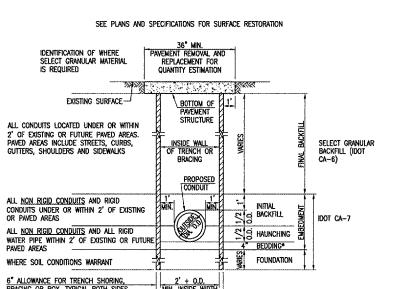
DECATUR, ILLINOIS

HANSON See Park

CONSTRUCT
WATER MAIN
PROPOSED
WATER MAIN

12

12 of 15 sheets

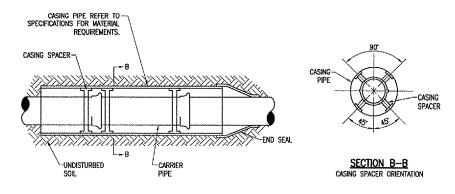


\*BEDDING REQUIRED FOR PVC PIPE AND FOR DUCTILE IRON PIPE WITH RESTRAINED JOINTS.

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.

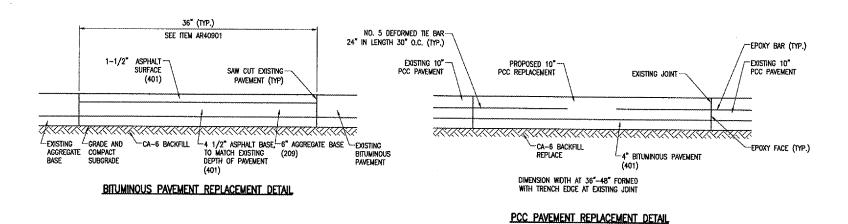
#### TRENCH DETAIL UNDER PAVEMENT

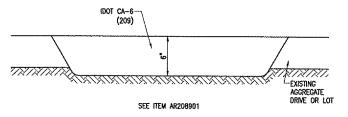


#### CASED PIPE

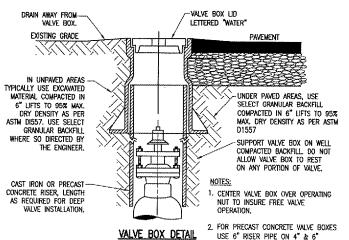
NOTES:
1. CASING PIPE SIZE SHOWN IN PLANS ACCOMMODATES PUSH-ON JOINT. LARGER DIAMETER MAY BE REQUIRED FOR MECHANICAL JOINTS. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4" LARGER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE (JOINTS OR COUPLINGS).

- 2. ESTIMATED CASING LENGTH IS SHOWN ON PLANS. CASING LENGTH MAY BE ADJUSTED WITH APPROVAL OF ENGINEER.
- 3. THE TOP OF THE CASING PIPE SHALL BE A MINIMUM OF 3.5' BELOW THE TOP OF PAVEMENT.
- 4. Use casing spacers (see detail) to move carrier PIPE into Casing PIPE. Spacing of Casing spacers will be dictated by the manufacturer.
- 5. MINIMUM OF 2 SPACERS PER JOINT OF PIPE.

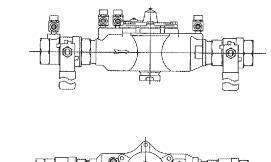


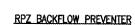


AGGREGATE SURFACE DETAIL



USE 6" RISER PIPE ON 4" & 6"
VALVES. USE 8" RISER PIPE ON 8"





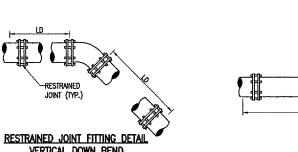
NOTE: RPZ BACKFLOW PREVENTION DEVICE AND METER PER CITY OF DECATUR SPECIFICATIONS

DECATUR, ILLINOIS

HANSON

CONSTRUCT WATER MAIN

13 of 15 shee

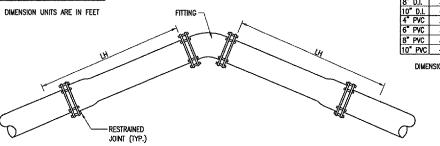


VERTICAL DOWN BEND

LD = LENGTH OF RESTRAINED PIPE REQUIRED IN

LF. ON EACH SIDE OF BEND

PIPE	LD LD							
SIZE	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. 4" PVC	6	12	25					
4" PVC	5	10	21					
6" PVC	7	15	31					
8" PVC	9	19	40					
10" PVC	12	23	49					



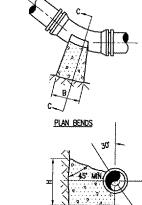
RESTRAINED JOINT (TYP.)

RESTRAINED JOINT FITTING DETAIL VERTICAL UP BEND

VEKTICAL OF BEND LUB-LH (SEE HORIZONTAL BEND TABLE).
FOR VERTICAL OFFSETS, IF PIPE LENGTH BETWEEN DOWN BEND AND UP BEND IS LESS THAN LD+LH, RESTRAN ENTIRE LENGTH BETWEEN FITTINGS AND PROVIDE LO AND LH ON HORIZONTAL RUINS BEYOND DOWN BEND AND UP BEND FITTINGS, RESPECTIVELY.

PIPE	L		л	
SIZE	11.25*	22.5	45'	80.
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" PVC	4	7	15	34
	2	4	7	16
6" PVC	3	5	10	22
8" PVC	3	6	12	28
10" PVC	4	7	15	34

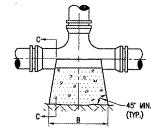
DIMENSION UNITS ARE IN FEET



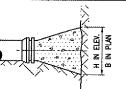
#### SECTION C-C BENDS & TEES

PIPE	11.25			22.5'		45"			907			TEE OR PLUG			
SIZE	SF.	B	H	A SF	F	H	SF	F	H	A. Sŧ	B	H	A SE	H	H
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.
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.

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



PLAN TEE, SADDLE OR SLEEVE



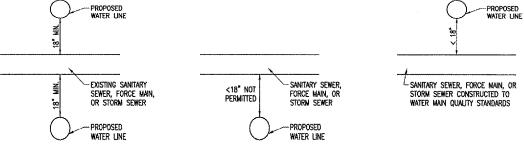
PLAN & ELEV. PLUGS

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.
- 3. BLOCKING WIDTH (B) SHALL BE APPROXIMATELY TWICE THE BLOCKING HEIGHT (H).
- 4. BLOCKING SHALL NOT ENCROACH ON FITTING JOINT.

HORIZONTAL THRUST BLOCK DETAILS

## RESTRAINED JOINT FITTING DETAIL HORIZONTAL BENDS



VERTICAL SEPERATION REQUIREMENTS

CASE I - VERTICAL SEPERATION ≥ 18"

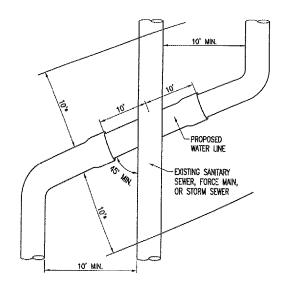
SEWER PIPE SHALL BE
SUPPORTED TO PREVENT SETTLING
AND BREAKING THE WATER MAIN.
 BOTH WATER MAIN AND SEWER
SHALL BE CONSTRUCTED OF
SUP-ON OR MECHANICAL JOINT
CAST IRON OR DUCTILE IRON PIPE,
PRESTRESSED CONCRETE PIPE, OR
PVC PIPE EQUIVALENT TO WATER
MAIN STANDARDS OF CONSTRUCTION
WHEN WATER PASSES UNDER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

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

CASE III - WATER LINE < 18" ABOVE SEWER

1. BOTH WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SUP-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 SEPARATION IS LESS THAN 18" AND ABOVE SEWER

NOTE
VERTICAL SEPERATION
REQUIREMENTS MUST BE
SATISFIED FOR ALL WATER
LINE WITHIN 10' OF
SANITARY SEWER, FORCE
MAIN, OR STORM SEWER.



#### HORIZONTAL SEPERATION REQUIREMENTS

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

APR 18, 2008 1:30 PM WALLE00723

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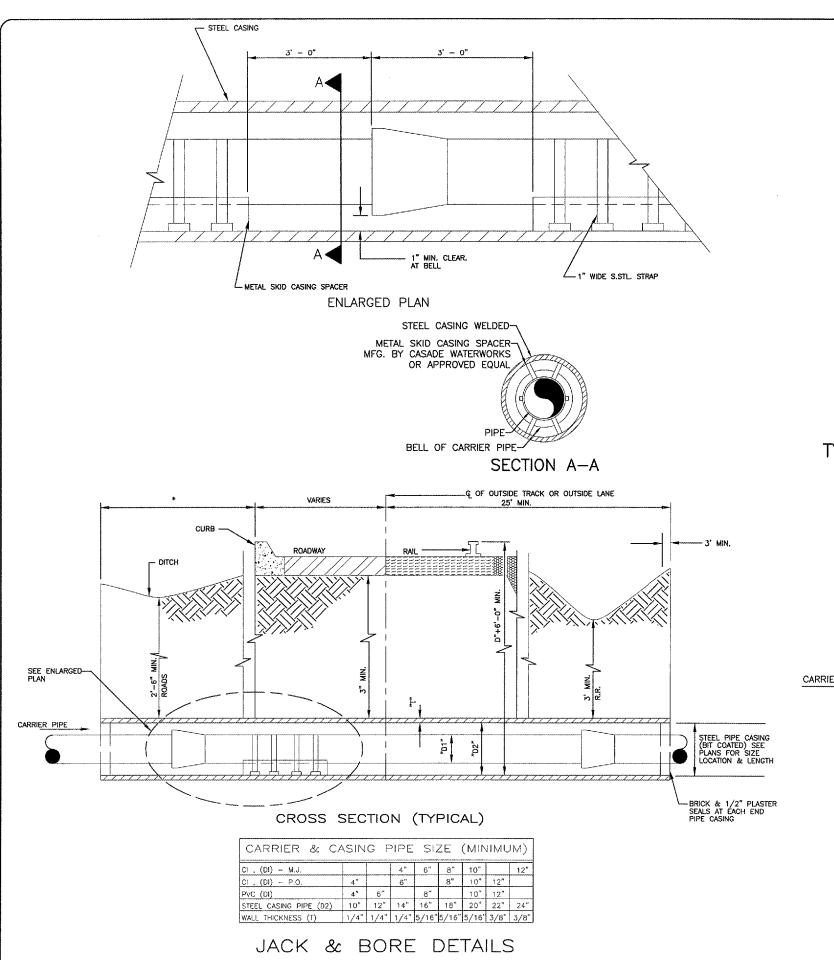
PROPOSED WATER MAIN DETAIL SHEET 3

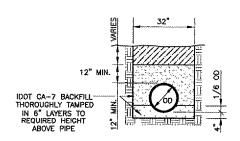
DECATUR, ILLINOIS

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SA HANSON

CONSTRUCT WATER MAIN





#### GRANULAR BEDDING

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.

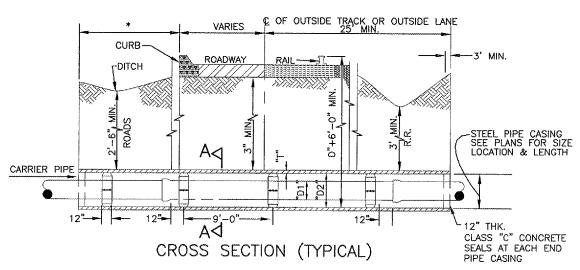
OD = OUTSIDE DIAMETER

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.

WATERMAINS TO BE INSTALLLED W/A MIN. OF 42" COVER.

### TYPICAL TRENCH SECTION DETAIL IN TURF AREAS



### 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
- 2 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.

**DE069** 

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